

SOΦΦIA

Philosophy of Education Collection

Issue 41 / July-December 2026

Print ISSN 1390-3861 / Electronic ISSN 1390-8626



UNIVERSIDAD POLITÉCNICA SALESIANA DEL ECUADOR

SOPHIA, Collection of Philosophy of Education is a philosophical-scientific publication of the Salesian Polytechnic University (UPS), has a bi-annual periodicity, whose first number appeared in June of 2006. The objective of SOPHIA is to theorize the education from a philosophical point of view, with data from individual and collective psychology, teaching-learning experiences, sociology, culture and the development of the empirical sciences, to renew, update and better articulate the conceptual, procedural and experiential level of the education sciences. The journal promotes the dissemination of monographic articles that are unpublished, scientifically constructed, with a method that adequately articulates analysis and synthesis; that are propositive, in the nucleus of the Philosophy of Education. It is published in printed version (ISSN: 1390-3861) and electronic (ISSN: 1390-8626).

The management of SOPHIA is performed through the following parameters:

The journal uses anti-plagiarism systems  **Crossref**
Similarity Check
Powered by iThenticate  **URKUND**
 **turnitin**

The articles have identification code (*Digital Object Identifier*)



The editorial process is managed through the *Open Journal System*  **OJS**
Open Journal Systems

It is an *Open Access* publication with a
Creative Commons license



The *copyright* and *post-print* policies are published in the *SHERPA/ROMEO* Auto-archive Policy Repository.

The articles of the present edition can be consulted in:

- <https://revistas.ups.edu.ec/index.php/sophia>
- <http://www.ensayistas.org/critica/revistas.htm>
- <https://www.redib.org>
- <http://www.iisue.unam.mx/iresie>
- <http://iresie.unam.mx>
- <http://clase.unam.mx>

Sophia is indexed in the following
Databases and scientific information systems

SELECTIVE DATABASES

Scopus®

SciELO Ecuador



BASE

Clarivate Analytics

C.I.R.C.
EC3metrics

Google scholar

OCLC WorldCat®

CLASE
Citas Latinoamericanas en
Ciencias Sociales y Humanidades

THE Philosopher's INDEX

EBSCOhost

JOURNAL EVALUATION PLATFORMS

MIAR

SELECTIVE DIRECTORIES

latindex

Journal Seeker
Research Bible

SELECTIVE PERIODICALS AND NEWSPAPERS LIBRARIES

UAEM
reDalyc.org 3.0

REDIB
Red Iberoamericana
de Investigación y Docencia Científica

OPEN ACCESS SCIENTIFIC LITERATURE SEARCH ENGINES

DOAJ

EXALEAD

AUTO-ARCHIVE OF EDITORIAL COPYRIGHT POLICIES

SHERPA/ROMEO

OTHER BIBLIOGRAPHIC DATABASES

Dialnet

Portal de Difusión de la Producción Científica

Journal
TOCs
The latest Journal Tables of Contents

biblat
Bibliografía Latinoamericana

CATALOG OF INTERNATIONAL UNIVERSITY LIBRARIES

CLAREMONT
MCKENNA
COLLEGE

University
of Victoria

UNIVERSITY
OF THE WEST

UNIVERSITY OF
Nebraska
Omaha

AUT
UNIVERSITY

DEPAUL
UNIVERSITY
COLLEGE OF LAW

TEXAS A&M UNIVERSITY
SAN ANTONIO

University
of Regina

SIMPSON
UNIVERSITY



Southwestern
University

FRANKLIN
COLLEGE



Wageningen University



Maastricht University



SOCIAL AND ACADEMIC NETWORKS



Facebook: <https://www.facebook.com/SophiaUPS/>



X: @revista_sophia



LinkedIn: <https://www.linkedin.com/in/revista-sophia-ups-150108132?trk=hp-identity-name>



Academia.edu: <https://independent.academia.edu/SophiaColeccióndeFilosofíadelaEducación>



ResearchGate: https://www.researchgate.net/profile/Sophia_Ups



Instagram: revista_sophia

IMPACT FACTOR



Sophia: Colección de Filosofía de la Educación, bi-annual publication, N.º 41, July-December 2026. Responsible Editor: Dra. Floralba del Rocío Aguilar Gordón.

Place of publication: Salesian Polytechnic University of Ecuador. Postbox: 2074, Cuenca-Ecuador. Telephone: (+593 7) 2831745, Cuenca-Ecuador. E-mail: revista-sophia@ups.edu.ec

© SOPHIA. Collection of Philosophy of Education.

Printed in Ecuador

The concepts expressed in the articles are the responsibility of the authors. It is allowed to reproduce the texts by citing the source.

EDITOR-IN-CHIEF / EDITORA JEFA

Dra. Floralba del Rocío Aguilar-Gordón
Universidad Politécnica Salesiana, Quito/Ecuador

ASSOCIATE EDITORS / EDITORES ASOCIADOS

Dr. José Manuel Touriñán López
Profesor Emérito de la Universidad de Santiago
de Compostela, Galicia/España

Dr. Lorenzo García Aretio
Profesor Emérito de la Universidad Nacional
de Educación a Distancia (UNED), Madrid/España

INTERNATIONAL COEDITORS / COEDITORES INTERNACIONALES

Dr. Javier Collado Ruano, Centre International de Recherches et études Transdisciplinaires,
París/Francia

Dr. Carlos Jesús Delgado Díaz, Universidad de La Habana, La Habana/Cuba

Dr. Javier Gracia Caladín, Universidad de Valencia, España

Dra. Virginia Gonfiantini, Universidad Nacional de Rosario, Rosario/Argentina

Dr. Mauro Mantovani, Universidad Pontificia Salesiana de Roma, Roma/Italia

Dr. Julio Alberto Márquez Landa, Grupo Qualinet, Universidad Edgar Morín y Tecnológico
de Monterrey, Monterrey/México

Dr. Dulio Oseda Gago, Universidad Nacional de Cañete, Lima/Perú

Dr. Rigoberto Pupo Pupo, Universidad José Martí de Latinoamérica, Monterrey/México; Mul-
tiversidad: Mundo Real Edgar Morin, Hermosillo/México y Universidad de La Habana, La
Habana/Cuba

Dr. Darwin Joaquín Robles, Corporación Universitaria Minuto de Dios (UNIMINUTO)
Pitalito, Colombia

Dr. Héctor Marcelo Rodríguez Mancilla, Universidade Federal do Rio de Janeiro, Río de
Janeiro/Brasil.

Dr. Jaime Yanes Guzmán, Academia de Estudios e Investigación Complexus Edgar Morin
(AEICEM), Santiago/Chile

SCIENTIFIC COMMITTEE / CONSEJO CIENTÍFICO

Dr. Rómulo Ignacio Sanmartín García, Universidad Politécnica Salesiana, Quito/Ecuador

Dr. Giuseppe Abbá, Universidad Pontificia Salesiana de Roma, Roma/Italia

Dr. Fernando Acevedo Calamet, Universidad de la República, Montevideo/Uruguay

Dr. Jorge Antonio Balladares Burgos, Universidad Andina Simón Bolívar, Quito/Ecuador

Dr. Esteban Bara Francisco, Universidad de Barcelona, Barcelona/España

Dr. Antonio Bernal Guerrero, Universidad de Sevilla, Sevilla/España

Dr. Luis Antonio Hermosa Andújar, Universidad de Sevilla, Sevilla/España

Dra. Aurora Bernal Martínez De Soria, Universidad de Navarra, Navarra/España

Dr. Mauricio Hardie Beuchot Puente, Universidad Nacional Autónoma de México, Ciudad de
México/México

Dra. Patricia Cecilia Bravo Mancera, Universidad Nacional de Chimborazo, Riobamba/Ecuador
Dr. Fabián Castiglione, Instituto Superior de Formación Docente Espíritu Santo, Quilmes/Argentina
Dra. Ana Castro Zubizarreta, Universidad de Cantabria, Cantabria/España
Dr. José Cavalcante Lacerda Junior, Universidad del Estado de Amazonas (UEA), Manaus/Brasil
Dr. Jesús Conill Sancho, Universidad de Valencia, Valencia/España
Dr. Carlos A. Cullen Soriano, Universidad de Buenos Aires, Buenos Aires/Argentina
Dr. Raimundo De Teixeira Barradas, Universidad del Estado de Amazonas (UEA), Manaus/Brasil
Dr. José Ramón Fabelo Corzo, Universidad Autónoma de Puebla, Puebla/México
Dr. Ramón F. Ferreiro, Nova Southeastern University (NSU), Florida/Estados Unidos
Dra. María García Amilburu, Universidad Nacional de Educación a Distancia, Madrid/España
Dr. Fernando Gil Cantero, Universidad Complutense de Madrid, Madrid/España
Dr. José Enrique Gómez Álvarez, Universidad Panamericana y Asociación Filosófica, Ciudad de México/México
Dr. José Luis Gómez Martínez, Universidad de Georgia, Athens/Estados Unidos
Dr. Vicent Gozávez Pérez, Universidad de Valencia, Valencia/España
Dr. José Luis Guzón Nestar, Centro Educativo Salesiano Don Bosco, adscrito a la Universidad Complutense de Madrid, Madrid/España
Dr. Pablo Manuel Guadarrama González, Universidad Central de las Villas, Santa Clara/Cuba
Dr. Samuel Madrid Guerra Bravo, investigador independiente, Quito/Ecuador
Dra. Lucila Gutiérrez Santana, Universidad de Colima, Colima/México
Dra. Ruth Heilbronn, Sociedad de Filosofía de la Educación de Gran Bretaña, Wycombe/ Gran Bretaña y UCL Institute of Education, London, London/United Kindom
Dr. Pádraig Hogan, National University of Ireland, Maynooth/Irlanda
Dr. Gonzalo Jover Olmeda, Universidad Complutense de Madrid, Madrid/España
Dr. Sebastián Kaufmann Salinas, Universidad Alberto Hurtado, Santiago/Chile
Dr. José Antonio Lago Formoso, Universidad Pedagógica Experimental Libertador, Venezuela
Dr. Jorge Luis León González, Universidad de Cienfuegos “Carlos Rafael Rodríguez”, Cienfuegos/Cuba
Dr. Ramón Lucas Lucas, Pontificia Universidad Gregoriana de Roma, Italia
Dr. Walter Marcelo Madueña, Instituto Superior Don Bosco, Unidad orgánica de la Universidad Católica de Angola, Luanda/Angola/Costa Atlántica de África
Dr. Jair Miranda De Paiva, Universidad Federal de Espíritu Santo (UFES) Centro Universitario Norte de Espíritu Santo, San Mateo/Brasil
Dr. Agustín Domingo Moratalla, Universidad de Valencia, Valencia/España
Dr. Juan Antonio Nicolás Marín, Universidad de Granada, Granada/España
Dra. Nancy Ochoa Antich, Investigadora Independiente, Quito/Ecuador
Dr. Dieudonné Otekpó Olabiyi Eniyankitan, Institut Supérieur de Philosophie et des sciences humaines Don Bosco. Instituto Superior de Filosofía y de Ciencias Humanas Don Bosco, Togo/ República Togolesa/África
Dra. Cruz Pérez Pérez, Universidad de Valencia, Valencia/España
Dr. Luis Porta, Universidad Nacional de Mar de la Plata, Buenos Aires/Argentina
Dr. Rafael Repiso Caballero, Universidad Internacional de la Rioja (UNIR), Logroño/España
Dr. Luis Rosón Galache, Universidad Pontificia Salesiana de Roma, Roma/Italia
Dr. Damian Salcedo Megales, Universidad Complutense de Madrid, Madrid/España
Dr. Pier Cesare Rivoltella, Universidad Católica de S. Cuore di Milano é CREMIT, Milán/Italia
Dr. Miguel Ángel Santos Rego, Universidad de Santiago de Compostela, Compostela/España
Dr. Santiago De Pablo Contreras, Universidad de País Vasco, Bilbao/España
Dr. Ralph Weber, Universidad de Basilea, Basilea/Suiza

Dr. Alejandro José De Oto, Consejo Internacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires/Argentina

Dr. Babu Thaliath, Jawaharlal Nehru University, New Delhi/India

Dra. Teresa Yurén, Universidad Autónoma del Estado de Morelos, Morelos/México

Dr. Haibo Zeng, Communication University of China, Beijing /China

INTERNATIONAL REVIEWERS BOARD / CONSEJO INTERNACIONAL DE REVISORES

Dr. Jorge Alarcón Leiva, Universidad de Talca, Maule/Chile

Dr. Mauricio Albornoz Olivares, Universidad Católica del Maule, Maule/Chile

Dr. Miguel Aldama Del Pino, Universidad de Matanzas, Matanzas/Cuba

Dr. José Rolando Alegría Morán, Universidad Católica de Temuco, Araucanía /Chile

Dra. Harlene Anderson, International Summer Institute, Estados Houston/Unidos

Dra. Ximena Del Consuelo Andrade Cáceres, Universidad Politécnica Salesiana, Quito/Ecuador

Dr. José Antonio Antón Amiano, IES Jiménez de Quesada de Santa Fe, Granada/España

Dr. Abel Aravena Zamora, Universidad de Barcelona, Barcelona/España

Dr. Carlos Ángel Arboleda Mora, Universidad Pontificia Bolivariana, Medellín/Colombia

Dr. Carlos Arturo Arias Sanabria, Pontificia Universidad Javeriana, Bogotá/Colombia

Dra. María Elena Arriagada Arriagada, Universidad Metropolitana de Ciencias de la Educación, Ñuñoa/Chile

Mstr. Jorge Aros Vega, Pontificia Universidad Católica de Valparaíso, Valparaíso/Chile

Dr. Alfonso Ávila Del Palacio, Universidad Autónoma de México, Ciudad de México/México

Dr. Lorena Basualto Porra, Universidad Católica Silva Henríquez, Santiago/Chile

Dra. Dulce María Bautista Luzardo, Universidad Central de Colombia, Bogotá/Colombia

Dr. Cristian Eduardo Benavides, Universidad de Cuyo, Mendoza/Argentina

Dr. Rodolfo Mauricio Bicocca, Universidad Nacional de Cuyo, Mendoza/Argentina

Dra. Alcira Beatriz Bonilla, Consejo Internacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires/Argentina

Dr. Carmen Gloria Burgos Videla, Universidad Autónoma de México (UNAM), Ciudad de México/México

Dra. Martha Burguet Arfelis, Universidad de Barcelona, Barcelona/España

Dra. Elizabeth Cabalé Miranda, Universidad de La Habana, La Habana/Cuba

Dr. Isaac Augusto Caicedo Vera, Unidad Educativa Santo Domingo de Guzmán, Guayaquil/Ecuador

Dra. Olga Rosa Cabrera Elejalde, Universidad de Ciencias Pedagógicas Enrique José Varona, La Habana /Cuba

Dra. Isabel Cantón Mayo, Universidad de León, León/España

Dra. María José Caram, Universidad Católica de Córdoba, Córdoba/España

Dra. Elsa Beatriz Cárdenas Sempértegui, Universidad Técnica Particular de Loja, Loja/Ecuador

Dr. Pablo Carranza, Universidad Nacional de Río Negro, Río Negro/Argentina

Dr. Yerson Yismendy Carrillo Ardila, Universidad del Cauca, Cauca/Colombia

Dr. Carlos Augusto Casanova Guerra, Centro de Estudios Tomistas, Universidad Santo Tomás, Santiago/Chile

Dra. María Inés Castellaro, Centro de Estudios Filosóficos y Teológicos, Córdoba/Argentina

Dr. Demian Casaubon, Universidad de Buenos Aires, Buenos Aires/Argentina

Mstr. José Antonio Castorina, Universidad de Buenos Aires, Buenos Aires/Argentina

Dr. Francisco De Borja Castro Serrano, Universidad Andrés Bello, Santiago /Chile
Dr. Juan H. Cepeda, Universidad Santo Tomás, Bogotá/Colombia
Dr. Mauricio Chaspal Escudero, Universidad de Santiago de Chile, Santiago/Chile
Dr. Francisco Alonso Chica Cañas, Universidad Santo Tomás, Santiago/Chile
Dr. Maximiliano Basilio Cladakis, Universidad de San Martín, Buenos Aires /Argentina
Dr. Javier Corona Fernández, Universidad de Guanajuato, Guanajuato/México
Dr. Antonio Correa Iglesias, Universidad de Miami, Miami/Estados Unidos
Dr. Antonio Cremades Begines, Universidad de Sevilla, Sevilla/España.
Dr. Miguel Francisco Crespo, Escuela Latinoamericana de Pensamiento y Diseños Sistémicos, Coahuila/México
Dr. Janice Defehr, The Taos Institute, Winnipeg/Canada
Dr. Balaganapathi Devarakonda, Dravidian University, Kuppam/India
Dr. Jorge Aurelio Díaz, Universidad Católica de Colombia, Bogotá/Colombia
Dra. Andrea Alejandra Díaz, Universidad Nacional del Centro de la Provincia de Buenos Aires, Buenos Aires/Argentina
Dr. Gonzalo Andrés Donoso Gormaz, Universidad Católica Silva Henríquez, Santiago /Chile
Dr. Javier Echenique Sosa, Universidad Andrés Bello, Santiago/Chile
Dr. Javier Echeverría, Universidad Politécnica de Madrid, Madrid/España
Dr. Omar Escalona Vivas, Universidad Nacional Experimental de los Llanos Occidentales Ezequiel Zamora, Barinas/Venezuela
Dra. Chaxiraxi María Escuela Cruz, Universidad de La Laguna, Tenerife/España
Dr. Luciano Espinoza Rubio, Universidad de Salamanca, Salamanca/España
Dr. Javier Alejandro Espinoza San Juan, Universidad Católica de la Santísima Concepción, Concepción/Chile
Dr. Francisco Farnum Castro, Universidad de Panamá, Bella Vista/Panamá
Dr. Andrés Fernando Forero Gómez, Universidad del Norte, Barranquilla/Colombia
Dra. Inés Fernández Mouján, Universidad de Buenos Aires, Buenos Aires/Argentina
Dr. Horacio Ademar Ferreyra, CONICET, Buenos Aires/Argentina
Dr. Rodrigo Figueroa Weitzman, Universidad Andrés Bello, Santiago/Chile
Dr. Ernesto Flores Sierra, Pontificia Universidad Católica del Ecuador, Quito/Ecuador
Dr. Cristóbal Friz Echeverría, Universidad de Santiago de Chile, Santiago/Chile
Dr. Roberto Agustín Follari, Universidad Nacional de Cuyo, Mendoza/Argentina
Dr. Dante Augusto Galeffi, Universidad Federal de Bahía, Salvador/Brasil
Dr. José Miguel Garay Rivera, Universidad Santo Tomás, La Serena/ Chile
Dr. Jonathan García Campos, Universidad Juárez del Estado de Durango, Durango/México
Dra. Teresa Gargiulo, Universidad de Congreso, Mendoza/Argentina
Dr. Fabián Giménez Gatto, Instituto de Profesores Artigas, Montevideo/Uruguay
Dr. Facundo Giuliano, Universidad de Buenos Aires, Buenos Aires/Argentina
Dr. Juan David Gómez Osorio, Universidad de Antioquia, Antioquia/Colombia
Dr. José Domingo Gómez Rozas (Txomin), Universidad de País Vasco, Bilbao/España
Dr. José Luis González Geraldo, Universidad de Castilla - La Mancha, Toledo/España
Dra. Lucero González, Universidad Nacional Autónoma de México, Ciudad de México/México
Dr. Javier González Solas, Universidad Complutense de Madrid, Madrid/España
Dr. Arturo González Torres, Instituto Tecnológico de Milpa Alta, México
Dra. Yuliana Gómez Zapata, Tecnológico de Antioquia, Antioquia/Colombia
Dra. Cristiane María Cornelia Gottschalk, Universidade de São Paulo, São Paulo/Brasiló
Dra. Gabriela Grajales García, Universidad Autónoma de Chiapas (UNACH), Chiapas/México

Dr. Javier Guardado Mendoza, Instituto de Investigaciones en Educación de la Universidad Veracruzana, Veracruz/México

Dr. Jónas Gustafsson, Investigador Independiente, Dinamarca

Dr. Edgar Gutiérrez Gómez, Universidad Nacional Autónoma de Huanta, Departamento de Ayacucho/Perú

Dr. Francisco Javier Herrero Hernández, Universidad Pontificia de Salamanca (UPSA), Salamanca/España

Dr. José Ramón Holguín Brito, Asociación de Rectores de Universidades del Caribe y América, ARCA, Santo Domingo/República Dominicana

Dr. André Hubert Robinet, Universidad Católica del Norte-Antofagasta, Antofagasta/Chile

Dr. Felipe Martín Huete, Universidad de Granada, Granada/España

Dr. Damián Islas Mondragón, Universidad Juárez del Estado de Durango, Durango/México

Dr. (c) Asaad David Jiménez Plaza, Universidad de las Fuerzas Armadas ESPE, Guayaquil / Ecuador

Dr. John Christopher Kommalapudi, Ethiopian Civil Service University, Adís Adebá/Etiopía

Dr. Roberto Lagos Hernández, Universidad Autónoma de Chile, Temuco/Chile

Dr. Xavier Laudo, Universitat Oberta de Catalunya, Catalunya/España

Dr. Heber Leal Jara, Universidad de Concepción, Concepción/Chile

Dra. Natalia Lerussi, Universidad de Buenos Aires, Buenos Aires/Argentina

Dr. Orlando Lima, Universidad Autónoma de México (UNAM), Ciudad de México/México

Dr. Idalmis López Sanchez, Instituto Latinoamericano y Caribeño, La Habana/Cuba

Dr. Julio López Saco, Universidad Central de Venezuela, Caracas/Venezuela

Dra. Inmaculada López Francés, Universidad de Valencia, Valencia/España

Dr. Samuel López Olvera, Universidad Pedagógica Nacional, Ciudad de México/México

Dra. Mara Del Mar Lorenzo Moledo, Universidad de Santiago de Compostela, Coruña/España

Dra. María Luján Christiansen, Universidad de Guanajuato, Guanajuato/México

Dra. Gloria Luque Moya, Universidad de Málaga, España

Dra. Delia Manzanero, Red Europea de Alumni, Madrid/España

Dra. Josseilin Jasenka Marcano Ortega, Instituto Universitario de Tecnología de Puerto Cabello, Carabobo/Venezuela

Dra. Inés Márquez, Universidad Federal de Bahía, Salvador/Brasil

Dr. Xicotécatl Martínez Ruiz, Revista Innovación Educativa, Ciudad de México/México

Dr. Jethro Masís, Universidad de Costa Rica, San Pedro/Costa Rica

Dr. Eloy Maya Pérez, Universidad de Guanajuato, Campus Celaya-Salvatierra, Guanajuato/México

Dr. Itzel Mayans, Universidad Autónoma de México (UNAM), Ciudad de México/México

Dr. Aquiles José Medina Marín, Universidad Bolivariana de Venezuela, Caracas/Venezuela

Dr. Oscar Mejía Quintana, Universidad Nacional de Colombia, Bogotá/Colombia

Dra. Juliana Merçon, Universidad Veracruzana, Veracruz/México

Dra. Paula Cristina Mira Bohórquez, Universidad de Antioquia, Antioquia/Colombia

Dr. Jesús Molina, Universidad de Murcia, Murcia/España

Dr. Mauricio Molina Gallardo, Universidad de Costa Rica, San Pedro/ Costa Rica

Dr. Eduardo Gabriel Molino, Instituto Alicia M. de Justo, Buenos Aires/Argentina

Dr. Jefferson Alexander Moreno Guaicha, Universidad de Investigación de Tecnología Experimental Yachay, Ecuador

Dr. Juan Diego Moya, Universidad de Costa Rica, San Pedro/ Costa Rica

Dr. Enrique V. Muñoz Pérez, Universidad Católica de Maule, Maule/Chile

Dr. Rafael Niño De Zepeda G., Universidad Católica Silva Henríquez, Santiago/Chile

Dr. Matías Oroño, Universidad de Buenos Aires, Buenos Aires/Argentina

Dra. Andrea Paula Orozco, Corporación Universitaria Minuto de Dios, Bogotá/Colombia

Dr. Delfin Ortega Sánchez, Universidad de Burgos, Burgos/España
 Dra. Dorys Noemi Ortiz Granja, Pontificia Universidad Católica del Ecuador, Quito/Ecuador
 Dr. José Manuel Osorio, Universidad San Ignacio de Loyola, La Molina/Perú
 Dra. Yanet Padilla Cuellar, Universidad Central “Marta Abreu”, Santa Clara/Cuba
 Dr. Daniel Vicente Pallares Domínguez, Universitat Jaime I, Castelló/España
 Dra. Diana Melisa Paredes Oviedo, Universidad de Antioquia, Antioquia/Colombia
 Dr. Álvaro Julio Peláez Cedrés, Universidad Autónoma Metropolitana, Ciudad de México/México
 Dr. Luigi Pellegrino, Diócesis de Zacapa, Guatemala
 Dr. Sergio Pérez Cortés, Universidad Autónoma de México, Iztapalapa/México
 Dra. Andrea Verónica Pérez, Universidad Nacional de Quilmes, Quilmes/Argentina
 Dr. Alipio Omar Pérez Jacinto, Universidad de Ciencias Pedagógicas Rubén Martínez Villena de La Habana, La Habana/Cuba
 Dr. Antonio Pérez, Universidad Nacional Experimental Simón Rodríguez de Venezuela, Caracas/Venezuela
 Dra. Michael A. Peters, University of Waikato, Hamilton/Nueva Zelanda
 Dr. Edgar Osvaldo Pineda, Universidad Santo Tomas de Villavicencio, Villavicencio/Colombia
 Dr. Iván Alfonso Pinedo Cantillo, Universidad Nacional de Colombia, Bogotá/Colombia
 Dr. Edward Andrés Posada Gómez, Pontificia Universidad Bolivariana, Antioquia/Colombia
 Dra. Miriam Prieto, Universidad Autónoma de Madrid, Madrid/España
 Dr. Xavier Puig Peñalosa, Universidad del País Vasco, Bilbao/España
 Dr. Luis Guillermo Quijano Restrepo, Universidad Tecnológica de Pereira, Pereira/Colombia
 Dr. Pablo Hernando José Quintanilla Pérez, Universidad Católica del Perú, San Miguel/Perú
 Dr. Ciro Diego Radicelli García, Universidad Nacional de Chimborazo, Riobamba/Ecuador
 Dr. Vicente Raga Rosaleny, Universidad de Antioquia, Antioquia/Colombia
 Dr. José Antonio Ramírez Díaz, Centro Universitario de Ciencias Sociales y Humanidades, Guadalajara/México
 Dr. Francisco Felizardo Reluz Barturén, Universidad Nacional Pedro Ruíz Gallo Lambayeque, Lambayeque /Perú
 Dra. Eva Reyes Gacitúa, Universidad Católica del Norte, Antofagasta/Chile
 Dr. Javier Gustavo Río, Universidad Nacional de San Martín, Buenos Aires/Argentina
 Dra. Ruth Selene Ríos Estrada, Universidad Autónoma Metropolitana Unidad Xochimilco, Xochimilco/México
 Dr. Wilfrido Estuardo Ríos Torres, Investigador independiente, Quito, Ecuador
 Dra. Susie Riva Mossman, Creighton University, Omaha/United States
 Dr. José Alberto Rivera Piragaula, Universidad Rovira i Virgili de Tarragona, Tarragona/España
 Dra. Angélica María Rodríguez Ortiz, Universidad Autónoma de Manizales, Manizales/Colombia
 Dr. Mariano Luis Rodríguez González, Universidad Complutense de Madrid, Madrid/España
 Dr. Pedro Rodríguez Rojas, Universidad Simón Rodríguez, Caracas/Venezuela
 Dra. Laura Graciela Rodríguez, Universidad Nacional de La Plata, La Plata/Argentina
 Dr. Javier Romero, Universidad de Salamanca, Salamanca/España
 Dra. Clara Romero Pérez, Universidad de Sevilla, Sevilla
 Dr. Julio Ernesto Rubio Barrios, Tecnológico de Monterrey, Monterrey/México
 Dr. Adelman Sabogal Padilla, Academir Charter School Miami, Miami/Estados Unidos
 Dr. Thomas Schmitt, Universidad de La Rioja, Logroño /España
 Dr. Carlos Skliar, Facultad Latinoamericana de Ciencias Sociales (FLACSO) y Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires/Argentina
 Dr. Sergio Luis Sánchez Rengifo, Corporación Universitaria Remington, Medellín/Colombia
 Dr. Carlos Sanhueza, Universidad de Chile, Santiago/Chile

Dr. Freddy Orlando Santamaría Velasco, Pontificia Universidad Bolivariana, Medellín/Colombia
Dr. Jacir Sansón Junior, Universidad Espírito Santo, San Mateo/Brasil
Dra. Nancy Santana, Revista Ágora-Trujillo, Trujillo/Venezuela
Mstr. Dalia Santa Cruz Vera, Universidad Católica de Colombia, Bogotá/Colombia
Dr. Ricardo Florentino Salas Astraín, Universidad Católica de Temuco, Temuco/Chile
Dr. Ángel Alonso Salas, Colegio de Ciencias y Humanidades Plante Azcapotzalco de la Universidad Nacional Autónoma de México, Ciudad de México/México
Dr. Raúl Francisco Sebastián Solanes, Universidad de Valencia, Valencia/España
Dr. Vicente Serrano Marín, Universidad Autónoma de Chile, Providencia/Chile
Dra. Natalia Sgreccia, Universidad Nacional de Rosario, Rosario/Argentina
Dr. José Emilio Silvaje Aparisi, Universidad de Valencia, Valencia/España
Mstr. Sandra Siqueira, Facultad Salesiana Don Bosco Manaus –Amazonas-, Manaus/Brasil
Dr. Orlando Solano Pinzón, Pontificia Universidad Javeriana, Bogotá/Colombia
Dr. David Alfonso Solís Nova, Universidad Católica de la Santísima Concepción, Concepción/Chile
Dra. Carol Del Carmen Terán González, Universidad de Los Andes, Mérida/Venezuela
Dr. Iván Gregorio Torres Pacheco, Universidad de Carabobo, Carabobo/Venezuela
Dr. Jesús Turiso Sebastián, Universidad Veracruzana, Veracruz/México
Dr. Mariano Ernesto Ure, Universidad Católica Argentina, Buenos Aires/Argentina
Dr. Iván Daniel Valenzuela Macareno, Universidad Libre, Bogotá/Colombia
Dr. Carlos Eduardo Valenzuela, Universidad Pedagógica Nacional de Colombia, Bogotá/Colombia
Dr. Jesús Valverde Berrocoso, Universidad de Extremadura, Badajoz/España
Dr. Sergio Octavio Valle Mijangos, Universidad Tecnológica de Tabasco, Tabasco/México
Mstr. Mirta Ala Vargas Pérez, Universidad del Valle de Puebla, Puebla/México
MBA. Cristhian Andrés Vásquez Aguilar, University of Southern Indiana, Evansville (Indiana), United States of America
Mstr. Anabella Beatriz Vázquez Morales, Universidad de la República, Montevideo/Uruguay
Dra. Victoria Vásquez Verdadera, Universidad de Valencia, Valencia/España
Dra. Dolores Vélez Jiménez, Universidad Villa del Carbón UDECIC, México y Universidad Iberoamericana UNIBE, Asunción, Paraguay
Dra. Marcela Venebra Muñoz, Universidad Autónoma del Estado de Toluca/México
Dra. Carmen Villora Sánchez, Centro de Enseñanza Superior en Humanidades y Ciencias de la Educación Don Bosco, Madrid/España
Dr. Juan Pablo Viola, Universidad de Piura, Piura/Perú
Dr. Ricardo Vivas Reyes, Universidad de Cartagena, Cartagena/Colombia
Dr. José María Zamora Calvo, Universidad Autónoma de Madrid, Madrid/España

THE BOARD OF MANAGEMENT / CONSEJO TÉCNICO

OJS Technician: Dr. Ángel Luis Torres-Toukoudidis

Marcalyc Technician: Lcda. María José Cabrera Coronel

Community Manager Coordinator: Lcdo. Christian Gabriel Arpi Fernández

Publications and divulgation assistant: Lcda. Gioconda Patricia Proaño Argüello

PUBLICATIONS SERVICE / SERVICIO DE PUBLICACIONES

Abya-Yala Coordination: Hernán Hermosa Mantilla

Editing and style: Paulina Torres Proaño, Paul Miño Armijos

Layout: Martha Vinueza Manosalvas

Cover image: Imagen creada con inteligencia artificial

Cover design: Marco Gutiérrez Campos

Translation: Adriana Curiel

PUBLISHING BOARD / CONSEJO DE PUBLICACIONES

Dr. Juan Cárdenas, sdb
PRESIDENT

Dr. José Juncosa Blasco (Abya-Yala)

Dr. Esteban Inga Ortega (Vice Rector for Research)

Dr. Ángel Torres-Toukoudidis (Universitas Editor)

Dra. Floralba Aguilar-Gordón (Sophia Editor)

Msc. Jessica Jazmín Rivadeneria Peñafiel (Alteridad Interim Editor)

Dr. John Calle Sigüencia (Ingenius Editor)

Dra. Sheila Serrano Vincenti (La Granja Editor)

MSc. Jorge Cueva Estrada (Retos Editor)

Dra. Betty Rodas Soto (Utopía Editor)

MSc. Mónica Ruiz Vásquez (Noti-UPS Editor)

MSc. Jorge Altamirano Sánchez (Revista Cátedra Unesco Editor)

MSc. David Armendáriz González (Web Editor)

Dr. Ángel Torres-Toukoudidis
GENERAL EDITOR

SALESIAN POLYTECHNIC UNIVERSITY OF ECUADOR

Juan Cárdenas, sdb

Rector

© Salesian Polytechnic University
Turuhuayco 3-69 and Calle Vieja
Cuenca, Ecuador.
Telephone: (+593 7) 2 050 000
E-mail: srector@ups.edu.ec

EXCHANGE

Exchange is accepted with other periodicals.

Address to:

Technical Secretariat for Communication and Culture
Salesian Polytechnic University
Av. Turuhuayco 3-69 y Calle Vieja
Cuenca, Ecuador.
PBX: (+593 7) 2 050 000 - Ext. 1182
E-mail: publicaciones@ups.edu.ec
www.ups.edu.ec
Cuenca - Ecuador

Sophia: Collection of Philosophy of Education, bi-annual publication,
N.º 41, July-December 2026.

Chief Editors:

Dra. Floralba del Rocío Aguilar-Gordón

Design: Abya-Yala University Press.

Av. 12 de Octubre N22-22 and Wilson UPS-Bloque A.

Tel.: (+593 2) 2 506 247, Quito-Ecuador.

E-mail: editorial@abyayala.org

Print: Centro Gráfico Salesiano (Antonio Vega Muñoz 10-68 and General Torres).

Tel.: (+593 7) 2 831 745, Cuenca-Ecuador.

E-mail: centrograficosalesiano@lms.com.ec

CODE OF CONDUCT

«Sophia» as a publication that seeks the highest international excellence, is inspired by the ethical code of the Committee on Publications Ethics (COPE), aimed at publishers, reviewers and authors.

Authors' commitments

- **Originality and fidelity of the data:** The authors of original manuscripts submitted to «SOPHIA» attest that the work is original and unpublished, which does not contain parts of other authors or other fragments of works already published by the authors. In addition they confirm the veracity of the data, that is, that the empirical data have not been altered to verify hypotheses.
- **Multiple and/or repetitive publications:** The author should not publish articles in which the same results are repeated in more than one scientific journal or any other non-academic publication. The simultaneous proposal of the same contribution to multiple scientific journals is considered an ethically incorrect and reprehensible practice.
- **Attributions, quotations and references:** The author must always provide the correct indication of the sources and contributions mentioned in the article.
- **Authorship:** The authors guarantee the inclusion of those people who have made a significant scientific and intellectual contribution in the conceptualization and planning of the work as in the interpretation of the results and in the writing of it. At the same time the order of appearance of the authors has been ranked according to their level of responsibility and involvement.
- **Access and retention:** If the members of the Editorial Board consider it appropriate, the authors of the articles should also make available the sources or data on which the research is based, which can be kept for a reasonable period of time after publication and possibly becoming accessible.

- **Conflict of Interest and Disclosure:** All authors are required to state explicitly that there are no conflicts of interest that may have influenced the results obtained or the proposed interpretations. Authors should also indicate any funding from agencies and/or projects from which the research article arises.
- **Errors in published articles:** When an author identifies an important error or inaccuracy in his/her article, he/she should immediately inform the editors of the journal and provide them with all the information necessary to list the relevant corrections at the bottom of the article (always in a Note to the margin, not to alter the publication).
- **Responsibility:** The responsibility of the content of the articles published in «SOPHIA» is exclusive of the authors. The authors also commit themselves to a review of the most current and relevant scientific literature on the analyzed subject, taking into accounts in a plural form the different streams of knowledge.



Commitments of reviewers

- **Contribution to editorial decision:** Peer review is a procedure that helps publishers make decisions about proposed articles and also allows the author to improve the quality of articles submitted for publication. The reviewers undertake a critical, honest, constructive and unbiased review of both the scientific quality and the literary quality of writing in the field of their knowledge and skills.
- **Respect of review times:** The reviewer who does not feel competent in the subject to review or who cannot finish the evaluation in the scheduled time must notify the publishers immediately. The reviewers commit to evaluate the manuscripts in the shortest possible time in order to comply with the deadlines, since in «Sophia» the limits of custody of the waiting manuscripts are limited and inflexible due to respect of the authors and their work.
- **Confidentiality:** Each assigned manuscript must be considered confidential. Therefore, these texts should not be discussed with other people without the express consent of the publishers.
- **Objectivity:** Peer review should be done objectively. Reviewers are required to give sufficient reasons for each of their as-

sessments, always using the review template. The reviewers will submit a complete critical report with appropriate references according to the «Sophia» revision protocol and the public guidelines for the reviewers; especially if it is proposed that the work be rejected. They are required to advise editors if substantial portions of the work have already been published or are under review for another publication.

- **Text visualization:** The reviewers commit to indicate precisely the bibliographic references of fundamental works possibly forgotten by the author. The reviewer should also inform editors of any similarity or overlap of the manuscript with other published works.
- **Anonymity:** To ensure that the review process is as objective, unbiased and as transparent as possible, the identity of the authors is deleted before the papers are submitted for peer review. If, for any reason, the identity of the authors, their institutional affiliations or any other information that jeopardizes the anonymity of the document has been compromised, the reviewer must notify the publishers immediately.

Commitment of publishers

- **Decision of publication:** The editors will guarantee the selection of the most scientifically qualified reviewers and specialists to express a critical and expert appreciation of the work, with the least possible biases. «Sophia» chooses between 2 and 3 reviewers for each work so as to ensure greater objectivity in the review process.
- **Honesty:** Publishers evaluate articles submitted for publication on the basis of scientific merit of the contents, without discrimination of race, gender, sexual orientation, religion, ethnic origin, nationality, and political opinion of the authors.
- **Confidentiality:** Publishers and members of the working group agree not to disclose information relating to submitted articles for publication to persons other than authors, reviewers and publishers. The editors and the Editorial Committee commit themselves to the confidentiality of the manuscripts, their authors and reviewers, so that anonymity preserves the intellectual integrity of the whole process.

- **Conflict of interests and disclosure:** publishers commit not to use in their own research content of articles submitted for publication without the written consent of the author.
- **Respect of the review times:** Publishers are responsible for compliance with the time limits for revisions and publication of accepted manuscripts, to ensure a rapid dissemination of their results. They commit themselves to complying with published times (maximum of 60 days in the estimation/rejection from receipt of the manuscript in the Review Platform) and a maximum of 150 days from the beginning of the scientific review process by experts).



**«Sophia» adheres to the Code of Conduct
Committee on Publication Ethics (COPE):**
<http://publicationethics.org/resources/code-conduct>

CÓDIGO ÉTICO

«Sophia» como publicación que busca la máxima excelencia internacional, se inspira en el código ético del Comité de Ética de Publicaciones (COPE), dirigido tanto a editores como a revisores y autores.

Compromisos de los autores

- **Originalidad y fidelidad de los datos:** Los autores de documentos originales enviados a «Sophia» atestiguan que el trabajo es original e inédito, que no contiene partes de otros autores o de otros fragmentos de trabajos ya publicados por los autores. Además confirman la veracidad de los datos, esto es, que no se han alterado los datos empíricos para verificar hipótesis.
- **Publicaciones múltiples y/o repetitivas:** El autor no debe publicar artículos en los que se repitan los mismos resultados en más de una revista científica o cualquier otra publicación de carácter o no académica. La propuesta simultánea de la misma contribución a múltiples revistas científicas es considerada una práctica éticamente incorrecta y reprochable.
- **Atribuciones, citas y referencias:** El autor debe suministrar siempre la correcta indicación de las fuentes y los aportes mencionados en el artículo.
- **Autoría:** Los autores garantizan la inclusión de aquellas personas que han hecho una contribución científica e intelectual significativa en la conceptualización y la planificación del trabajo como en la interpretación de los resultados y en la redacción del mismo. Al mismo tiempo se ha jerarquizado el orden de aparición de los autores conforme a su nivel de responsabilidad e implicación.
- **Acceso y retención:** Si los miembros del Consejo Editorial lo consideran apropiado, los autores de los artículos deben poner a disposición también las fuentes o los datos en que se basa la investigación, que puede conservarse durante un período razonable de tiempo después de la publicación y posiblemente hacerse accesible.



- **Conflicto de intereses y divulgación:** Todos los autores están obligados a declarar explícitamente que no hay conflictos de intereses que puedan haber influido en los resultados obtenidos o las interpretaciones propuestas. Los autores también deben indicar cualquier financiación de agencias y/o de proyectos de los que surge el artículo de la investigación.
- **Errores en los artículos publicados:** Cuando un autor identifica en su artículo un importante error o una inexactitud, deberá inmediatamente informar a los editores de la revista y proporcionarles toda la información necesaria para listar las correcciones pertinentes en la parte inferior del mismo artículo (siempre en nota al margen, para no alterar la publicación).
- **Responsabilidad:** La responsabilidad del contenido de los artículos publicados en «Sophia» son exclusivas de los autores. Los autores se comprometen también a que se ha realizado una revisión de la literatura científica más actual y relevante del tema analizado, teniendo presente de forma plural las diferentes corrientes del conocimiento.

Compromisos de los revisores

- **Contribución a la decisión editorial:** La revisión por pares es un procedimiento que ayuda a los editores para tomar decisiones sobre los artículos propuestos y también permite al autor mejorar la calidad de los artículos enviados para su publicación. Los revisores asumen el compromiso de realizar una revisión crítica, honesta, constructiva y sin sesgo, tanto de la calidad científica como de la calidad literaria del escrito en el campo de sus conocimientos y habilidades.
- **Respeto de los tiempos de revisión:** El revisor que no se sienta competente en la temática a revisar o que no pueda terminar la evaluación en el tiempo programado, deberá notificar de inmediato a los editores. Los revisores se comprometen a evaluar los trabajos en el menor tiempo posible para respetar los plazos de entrega, dado que en «Sophia» los límites de custodia de los manuscritos en espera son limitados e inflexibles por respeto a los autores y sus trabajos.
- **Confidencialidad:** Cada manuscrito asignado debe ser considerado como confidencial. Por lo tanto, estos textos no se deben

discutir con otras personas sin el consentimiento expreso de los editores.

- **Objetividad:** La revisión por pares debe realizarse de manera objetiva. Los revisores están obligados a dar razones suficientes para cada una de sus valoraciones, utilizando siempre la plantilla de revisión. Los revisores entregarán un informe crítico completo con referencias adecuadas según protocolo de revisiones de «Sophia» y las normativas públicas para los revisores; especialmente si se propone que el trabajo sea rechazado. Están obligados a advertir a los editores si partes sustanciales del trabajo ya han sido publicadas o están bajo revisión para otra publicación.
- **Visualización de texto:** Los revisores se comprometen a indicar con precisión las referencias bibliográficas de obras fundamentales posiblemente olvidadas por el autor. El revisor también debe informar a los editores de cualquier similitud o solapamientos del manuscrito con otros trabajos publicados.
- **Anonimidad:** Para garantizar que el proceso de revisión sea lo más objetivo, imparcial y transparente posible, la identidad de los autores se suprimen antes de ser enviados los trabajos a revisión por pares. Si se da el caso de que por alguna causal se ha visto comprometida la identidad de los autores, sus filiaciones institucionales o algún otro dato que ponga en riesgo la anonimidad del documento, el revisor debe notificar de inmediato a los editores.

Compromiso de los editores

- **Decisión de publicación:** Los editores garantizarán la selección de los revisores más cualificados y especialistas científicamente para emitir una apreciación crítica y experta del trabajo, con los menores sesgos posibles. «Sophia» opta por seleccionar entre 2 y 3 revisores por cada trabajo de forma que se garantice una mayor objetividad en el proceso de revisión.
- **Honestidad:** Los editores evalúan los artículos enviados para su publicación sobre la base del mérito científico de los contenidos, sin discriminación de raza, género, orientación sexual, religión, origen étnico, nacionalidad, opinión política de los autores.
- **Confidencialidad:** Los editores y los miembros del grupo de trabajo se comprometen a no divulgar información relativa a

los artículos enviados a la publicación a otras personas que no sean autores, revisores y editores. Los editores y el Comité Editorial se comprometen a la confidencialidad de los manuscritos, sus autores y revisores, de forma que el anonimato preserve la integridad intelectual de todo el proceso.

- **Conflicto de intereses y divulgación:** Los editores se comprometen a no utilizar en sus investigaciones contenidos de los artículos enviados para su publicación sin el consentimiento por escrito del autor.
- **Respeto de los tiempos:** Los editores son responsables máximos del cumplimiento de los límites de tiempo para las revisiones y la publicación de los trabajos aceptados, para asegurar una rápida difusión de sus resultados. Se comprometen fehacientemente a cumplir los tiempos publicados (máximo de 60 días en la estimación/desestimación desde la recepción del manuscrito en la Plataforma de Revisión) y máximo 150 días desde el inicio del proceso de revisión científica por expertos).



«Sophia» se adhiere a las normas de código de conductas
del **Commitee on Publication Ethics (COPE)**:
<http://publicationethics.org/resources/code-conduct>

TAXONOMY OF COLLABORATOR ROLES (CRediT)

In the context of research and scientific publications, the CRediT Taxonomy (Contributor Roles Taxonomy) is a standardized system used to classify and acknowledge the specific contributions of authors and collaborators in the research process and the development of scientific articles. The aim of this system is to promote transparency, equity, and proper recognition of the roles performed by each collaborator in scientific production.

Contributions

The author and their collaborators must explain the contributions made during the research process and the results achieved, in accordance with the guidelines outlined in the CRediT Taxonomy.



The CRediT Taxonomy includes 14 roles that can be used to determine the specific actions performed by researchers in the process, structuring, and presentation of research results.

Distribution of participation roles through which an author can receive recognition in the publication (CRediT Taxonomy)*

Criterion	Description	Identification
1. Conceptualization	Ideas, formulation, or evolution of research goals and objectives.	https://credit.niso.org/contributor-roles/conceptualization/ ID: 8b73531f-db56-4914-9502-4cc4d4d8ed73
2. Data Curation	Management activities for annotating (producing metadata), cleaning data, and maintaining research data (including <i>software</i> code when necessary for data interpretation) for initial and later reuse.	https://credit.niso.org/contributor-roles/data-curation/ ID: f93e0f44-f2a4-4ea1-824a-4e0853b05c9d
3. Formal Analysis	Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data.	https://credit.niso.org/contributor-roles/formal-analysis/ ID: 95394cbd-4dc8-4735-b589-7e5f9e622b3f
4. Funding Acquisition	Acquisition of financial support for the project leading to this publication.	https://credit.niso.org/contributor-roles/funding-acquisition/ ID: 34ff6d68-132f-4438-a1f4-fba61ccf364a
5. Investigation	Conducting a research and exploration process, specifically performing experiments or collecting data/evidence.	https://credit.niso.org/contributor-roles/investigation/ ID: 2451924d-425e-4778-9f4c-36c848ca70c2
6. Methodology	Development or design of methodology; creation of models.	https://credit.niso.org/contributor-roles/methodology/ ID: f21e2be9-4e38-4ab7-8691-d6f72d5d5843
7. Project Administration	Responsibility for oversight, management, coordination, and leadership of the planning and execution of research activities, including external mentoring of the central team if applicable.	https://credit.niso.org/contributor-roles/project-administration/ ID: a693fe76-ea33-49ad-9dcc-5e4f3ac5f938
8. Resources	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analytical tools.	https://credit.niso.org/contributor-roles/resources/ ID: ebd781f0-bf79-492c-ac21-b31b9c3c990c

Criterion	Description	Identification
9. Software	Programming, <i>software</i> development; design of <i>software</i> programs; implementation of computer code and supporting algorithms; testing of existing code components.	https://credit.niso.org/contributor-roles/software/ ID: f89c5233-01b0-4778-93e9-cc7d107aa2c8
10. Supervision	Responsibility for supervision and leadership in planning and executing research activities, including external mentoring of the central team.	https://credit.niso.org/contributor-roles/supervision/ ID: 0c8ca7d4-06ad-4527-9cea-a8801fcb8746
11. Validation	Verification, either as part of the activity or separately, of the general replication/reproducibility of results/experiments and other research outputs.	https://credit.niso.org/contributor-roles/validation/ ID: 4b1bf348-faf2-4fc4-bd66-4cd-3a84b9d44
12. Visualization	Preparation, creation, and/or presentation of the published work, specifically visualization/presentation of data.	https://credit.niso.org/contributor-roles/visualization/ ID: 76b9d56a-e430-4e0a-84c9-59c11be343ae
13. Writing – Original Draft	Preparation, creation, and/or presentation of the published work, specifically writing the initial draft (includes substantial translation).	https://credit.niso.org/contributor-roles/writing-original-draft/ ID: 43ebbd94-98b4-42f1-866b-c930cef228ca
14. Writing – Review & Editing	Preparation, creation, and/or presentation of the published work by members of the original research group, specifically critical review, commentary, or editing (includes pre- or post-publication stages).	https://credit.niso.org/contributor-roles/writing-review-editing/ ID: d3aead86-f2a2-47f7-bb99-79de6421164d

*The CRediT Taxonomy is applied to cases of documents or publications created by multiple authors; its purpose is to specify the type and extent of each collaborator's contribution in a multidisciplinary and collective work.

By consensus, the authors of the document declare that the proposed article has not been previously submitted or published in other media outlets.

The authors give credit without omission of any author and specify their contributions according to the CRediT Taxonomy (CRediT Taxonomy).

TAXONOMÍA DE ROLES DE LOS COLABORADORES (CRediT)

En el contexto de la investigación y las publicaciones científicas, la Taxonomía Credit (CRediT, siglas de *Contributor Roles Taxonomy*) es un sistema estandarizado para clasificar y reconocer las contribuciones específicas de los autores y colaboradores en los procesos de investigación y en la elaboración de artículos científicos. Este sistema tiene como objetivo promover la transparencia, la equidad y el reconocimiento adecuado de los roles desempeñados por cada uno de los colaboradores en la producción científica.

29



Contribuciones

El autor y sus colaboradores deben explicar las contribuciones que efectuaron en el proceso de la investigación y en los resultados alcanzados considerando la normativa expuesta en la Taxonomía CRediT.

**La Taxonomía CRediT, incluye 14 roles,
que se puede utilizar para determinar las acciones
específicas que desempeñan los investigadores
dentro del proceso, estructuración y presentación
de los resultados de la investigación.**

Distribución de los roles de participación mediante la que un autor puede tener el reconocimiento en la publicación (Taxonomía CRediT)*

Criterio	Descripción	Identificación
1. Conceptualización	Ideas, formulación o evolución de metas y objetivos generales de investigación.	https://credit.niso.org/contributor-roles/conceptualization/ ID: 8b73531f-db56-4914-9502-4cc4d4d8ed73
2. Curación de datos	Actividades de gestión para anotar (producir metadatos), depurar datos y mantener datos de investigación (incluido el código de <i>software</i> , cuando sea necesario para interpretar los datos) para su uso inicial y posterior reutilización.	https://credit.niso.org/contributor-roles/data-curation/ ID: f93e0f44-f2a4-4ea1-824a-4e0853b05c9d
3. Análisis formal	Aplicación de técnicas estadísticas, matemáticas, computacionales u otras técnicas formales para analizar o sintetizar datos de estudios.	https://credit.niso.org/contributor-roles/formal-analysis/ ID: 95394cbd-4dc8-4735-b589-7e5f9e622b3f
4. Adquisición de financiación	Adquisición del apoyo financiero para el proyecto que conduce a esta publicación.	https://credit.niso.org/contributor-roles/funding-acquisition/ ID: 34ff6d68-132f-4438-a1f4-fba61ccf364a
5. Investigación	Llevar a cabo un proceso de investigación y exploración, específicamente realizando los experimentos o la recopilación de datos/evidencias.	https://credit.niso.org/contributor-roles/investigation/ ID: 2451924d-425e-4778-9f4c-36c848ca70c2
6. Metodología	Desarrollo o diseño de metodología; creación de modelos.	https://credit.niso.org/contributor-roles/methodology/ ID: f21e2be9-4e38-4ab7-8691-d6f72d5d5843
7. Administración de proyecto	Responsabilidad de supervisión, gestión, coordinación y liderazgo de la planificación y ejecución de las actividades de investigación, incluyendo la tutoría externa al equipo central en el caso de existir.	https://credit.niso.org/contributor-roles/project-administration/ ID: a693fe76-ea33-49ad-9dcc-5e4f3ac5f938
8. Recursos	Provisión de materiales de estudio, reactivos, materiales, pacientes, muestras de laboratorio, animales, instrumentación, recursos informáticos u otras herramientas de análisis.	https://credit.niso.org/contributor-roles/resources/ ID: ebd781f0-bf79-492c-ac21-b31b9c3c990c

Criterio	Descripción	Identificación
9. Software	Programación, desarrollo de <i>software</i> ; diseño de programas informáticos; implementación del código informático y algoritmos de soporte; pruebas de componentes de código existentes.	https://credit.niso.org/contributor-roles/software/ ID: f89c5233-01b0-4778-93e9-cc7d107aa2c8
10. Supervisión	Responsabilidad de supervisión y liderazgo para la planificación y ejecución de la actividad de investigación, incluida la tutoría externa al equipo central.	https://credit.niso.org/contributor-roles/supervision/ ID: 0c8ca7d4-06ad-4527-9cea-a8801fcb8746
11. Validación	Verificación, ya sea como parte de la actividad o por separado, de la replicación/reproducibilidad general de los resultados/experimentos y otros productos de la investigación.	https://credit.niso.org/contributor-roles/validation/ ID: 4b1bf348-faf2-4fc4-bd66-4cd-3a84b9d44
12. Visualización	Preparación, creación y/o presentación del trabajo publicado, específicamente visualización/presentación de datos.	https://credit.niso.org/contributor-roles/visualization/ ID: 76b9d56a-e430-4e0a-84c9-59c11be343ae
13. Redacción – borrador original	Preparación, creación y/o presentación del trabajo publicado, concretamente, la redacción del borrador inicial (incluye la traducción sustantiva).	https://credit.niso.org/contributor-roles/writing-original-draft/ ID: 43ebbd94-98b4-42f1-866b-c930cef228ca
14. Redacción – revisión y edición	Preparación, creación y/o presentación del trabajo publicado por parte de los integrantes del grupo de investigación original, específicamente revisión crítica, comentario o revisión (incluye las etapas previas o posteriores a la publicación).	https://credit.niso.org/contributor-roles/writing-review-editing/ ID: d3aead86-f2a2-47f7-bb99-79de6421164d

* La Taxonomía CRediT se aplica para los casos de documentos o publicaciones elaborados por múltiples autores; tiene por finalidad especificar el tipo y la magnitud de la contribución de cada colaborador en un trabajo multidisciplinario y colectivo. En consenso, los autores del documento declaran que, el artículo propuesto no ha sido presentado ni publicado con anterioridad en otros medios de divulgación. Los autores tributan sin omisión de ningún autor e indican la contribución según Taxonomía CRediT (taxonomía CRediT).

OPEN SOCIAL POLICY

«Sophia» Is an open access journal entirely free for readers and authors that encourage the re-use and self-archiving of articles in databases, repositories, directories and international information systems. In this sense, «Sophia» has a Creative Commons 3.0 License of Non-Commercial Recognition and is included in the directory of Open Access DOAJ. The magazine only retains the rights to publish the works, both in print and digital formats.



1. Copyright

The work published in the «Sophia» Journal are subject to the following terms:

- 1.1. The Universidad Politécnica Salesiana (RUC: 0190151530001) Preserves the copyrights of the published works, and favors and allows their re-use under the Creative Commons Attribution-Non-commercial-No Derivative Works 3.0 Ecuador license, for which they may be copied, used, distributed, transmitted And publicly display, provided that:
 - 1.1.a. The authorship and original source of their publication is cited (magazine, editorial, URL and DOI of the work).
 - 1.1.b. Do not use for commercial or onerous purposes.
 - 1.1.c. The existence and specifications of this license are mentioned.
- 1.2. The publication will grant each item a Digital Object Identifier (DOI). Example: Valdés-Pérez, D. (2016). Incidencia de las Técnicas de Gestión en la mejora de las decisiones administrativas. Sophia, 6(12), 199-213. <https://doi.org/10.17163/ret.n12.2016.05>

2. Open Access policy

- 2.1. «Sophia» Is an open access journal, available in open access with no time restrictions, and is included in the Directory of Open Access Journals (DOAJ).

- 2.2. Self-archiving conditions: Authors are allowed to re-use published works, that is, post-print (or the final post-peer review or PDF version of the publisher) may be archived for non-commercial purposes, including their deposit in institutional repositories, thematic or personal web pages. Color Sherpa/Romeo: Blue.

3. Right of readers

Readers have the right to read all of our articles for free immediately after publication. This publication does not have any economic charge for the publication or for access to the material.



4. Automatic publishing

«Sophia» Makes its articles available in trusted third-party repositories (for example: Redalyc, Latindex, institutional repositories...) immediately after publication.

5. Archiving

This journal uses different national and international repositories such as Redalyc, Latindex, Dialnet, REDIB... The Portico repository and the Institutional Repository of the Universidad Politécnica Salesiana (Ecuador) are digitally archived and indexed.

6. Machine readability and interoperability

Full text, metadata, and citations of articles can be traced and accessed with permission. Our open social policy also allows the readability of the files and their metadata, facilitating interoperability under the OAI-PMH protocol of open data and open source. Files from both full-length publications and their article segmentation are available in open HTML, XML, but also PDF, E-Pub and ISSUU formats, making it easy to read on any device and computing platform.

POLÍTICA SOCIAL ABIERTA

«Sophia» es una revista de acceso abierto enteramente gratuita para lectores y autores que favorece la reutilización y el auto-archivado de sus artículos en bases de datos, repositorios, directorios y sistemas de información internacionales. En este sentido, «Sophia» cuenta con una Licencia Creative Commons 3.0 de Reconocimiento No-Comercial y se encuentra incluida en el directorio de Acceso Abierto DOAJ. La revista solo conserva los derechos de publicación de las obras, tanto de la versión impresa como las digitales.



1. Derechos de autor

Las obras que se publican en la Revista «Sophia» están sujetas a los siguientes términos:

- 1.1. La Universidad Politécnica Salesiana (RUC: 0190151530001) conserva los derechos patrimoniales (copyright) de las obras publicadas, y favorece y permite la reutilización de las mismas bajo la licencia Creative Commons Reconocimiento-No-Comercial-Sin Obra Derivada 3.0 Ecuador, por lo cual se pueden copiar, usar, difundir, transmitir y exponer públicamente, siempre que:
 - 1.1.a. Se cite la autoría y fuente original de su publicación (revista, editorial, URL y DOI de la obra).
 - 1.1.b. No se usen para fines comerciales u onerosos.
 - 1.1.c. Se mencione la existencia y especificaciones de esta licencia de uso.
- 1.2. La publicación otorgará a cada artículo un Digital Object Identifier (DOI). Ejemplo: Valdés-Pérez, D. (2016). Incidencia de las Técnicas de Gestión en la mejora de las decisiones administrativas. Sophia, 6(12), 199-213. <https://doi.org/10.17163/ret.n12.2016.05>

2. Política de Acceso Abierto

- 2.1. «Sophia» es una revista de Acceso Abierto, disponible en acceso libre (open Access) sin restricciones temporales, y se en-

cuenta incluida en el Directorio de Revistas de Acceso Abierto (Directory of Open Access Journals-DOAJ).

- 2.2. Condiciones de auto-archivo: Se permite a los autores la reutilización de los trabajos publicados, es decir, se puede archivar el post-print (o la versión final posterior a la revisión por pares o la versión PDF del editor), con fines no comerciales, incluyendo su depósito en repositorios institucionales, temáticos o páginas web personales. Color Sherpa/Romeo: Azul.

3. Derecho de los lectores

Los lectores tienen el derecho de leer todos nuestros artículos de forma gratuita inmediatamente posterior a su publicación. Esta publicación no efectúa cargo económico alguno para la publicación ni para el acceso a su material.



4. Publicación automática

«Sophia» hace que sus artículos estén disponibles en repositorios confiables de terceros (por ejemplo: Redalyc, Latindex, repositorios institucionales...) inmediatamente después de su publicación.

5. Archivado

Esta revista utiliza diferentes repositorios nacionales como internacionales donde se aloja la publicación, tales como Redalyc, Latindex, Dialnet, REDIB... El repositorio Portico y el Repositorio Institucional de la Universidad Politécnica Salesiana (Ecuador) archivan digitalmente y garantizan a su vez la indización.

6. Legibilidad en las máquinas e interoperabilidad

El texto completo, los metadatos y las citas de los artículos se pueden rastrear y acceder con permiso. Nuestra política social abierta permite además la legibilidad de los archivos y sus metadatos, propiciando la interoperabilidad bajo el protocolo OAI-PMH de open data y código abierto. Los archivos, tanto de las publicaciones completas, como su segmentación por artículos, se encuentran disponibles en abierto en formatos HTML, XML, pero también en PDF, E-Pub e ISSUU, lo que facilita la lectura de los mismos en cualquier dispositivo y plataforma informática.

SOΦΦIA

FUNDAMENTAL CATEGORIES
FOR UNDERSTANDING THE PHILOSOPHY
OF EDUCATION IN CONTEMPORARY SOCIETY
CATEGORÍAS FUNDAMENTALES
PARA LA COMPRENSIÓN DE LA FILOSOFÍA
DE LA EDUCACIÓN EN LA SOCIEDAD ACTUAL

SUMMARY / SUMARIO

Editorial 41-48

ARTICLES/ARTÍCULOS

ARTICLES RELATED TO THE CENTRAL THEME

Artículos relacionados con el tema central

EPISTEMOLOGICAL AND ONTOLOGICAL FOUNDATIONS

FOR A TRANSDISCIPLINARY TEACHER TRAINING

Fundamentos epistemológicos y ontológicos

para una formación transdisciplinar de los docentes

Javier Collado Ruano y Florent Pasquier 51-77

PURPOSE IN LIFE IN ADOLESCENTS AFTER

A LEARNING EXPERIENCE

El sentido vital de los adolescentes tras

una experiencia de aprendizaje

María Milagros Armas Arráez 79-110

CULTIVATING DEMOCRATIC SKILLS

IN THE 21ST CENTURY SOCIETY

El cultivo de competencias democráticas

en la sociedad del siglo XXI

Isabel Tamarit López 111-136

PEDAGOGICAL BIAS AND THE VALIDITY OF PEDAGOGY

El sesgo pedagógico y la vigencia de la pedagogía

Óscar Julián Cuesta Moreno y Rafael Reyes Galindo 137-175

THE PARADOX OF HEUTAGOGY AND ARTIFICIAL INTELLIGENCE

La paradoja de la heutagogía y la inteligencia artificial

Luis Alberto Triana Llano 177-212



MISCELLANEOUS / MISCELÁNEOS

TOWARDS A DISCONTINUIST APPROACH TO SCIENTIFIC LITERACY

Hacia un enfoque discontinuista de la alfabetización científica

Karina Silvana Giomi 215-243

ETHICAL COMPASSION IN EDUCATION

TO OVERCOME HATRED AND HATE SPEECH

La compasión ética en la educación para la superación
del odio y sus discursos

Maria Orts García 245-273

THE DECLINE OF REASON UNDER THE ALGORITHMIC POWER OF CONTEMPORARY DEMOCRACY

El declive de la razón bajo el poder algorítmico
en la democracia contemporánea

Van Hanh Nguyen 275-303

THE LOGICAL GAPS IN CONTEMPORARY NEOSTOICISM

Las lagunas lógicas en el neoestoicismo contemporáneo

José Barrientos Rastrojo 305-336

THE ROLE OF INDUCTION AND PROBABILITY IN THE DEVELOPMENT OF SCIENCE AND PHILOSOPHY

Función de la inducción y la probabilidad
en el desarrollo de ciencia y filosofía

William Orlando Cárdenas Marín y Rómulo Ignacio San Martín . . . 337-368

EDITORIAL GUIDELINES / NORMAS EDITORIALES 371-429

AUTHORSHIP STATEMENT – CREDiT /

DECLARACIÓN DE AUTORÍA-CREDiT 430-433

DECLARATION OF USE OF ARTIFICIAL INTELLIGENCE /

DECLARATORIA DE USO DE INTELIGENCIA ARTIFICIAL 434-437

CALL FOR PAPERS 2026-2030 /

CONVOCATORIAS 2026-2030 441-455



EDITORIAL

Sophia: twenty years as a journal

For *Sophia*, reaching twenty years of uninterrupted publication represents much more than a chronological milestone; it is the validation of an intellectual vocation sustained over time and of an enduring commitment to philosophical and educational reflection across Latin America and the world. Two decades of editorial work have allowed the journal to consolidate an academic space dedicated to critical dialogue, the rigorous production of knowledge, and the construction of ethical and humanistic horizons capable of addressing the complexities of our time.

From its origin, *Sophia* was founded on the conviction that philosophy cannot remain detached from the historical, cultural, and educational problems facing contemporary societies. Over the course of these two decades, the journal has welcomed a multitude of voices, perspectives, and traditions of thought that, drawing from diverse epistemological and geographical contexts, have contributed to strengthening a pluralistic, critical, and interdisciplinary academic community. Each published issue bears witness to a constant quest to understand the human condition, education, politics, science, culture, and societal transformations from a reflective and deeply ethical perspective.

This anniversary also invites us to recognize the collective effort that sustains the life of a scholarly journal: authors, reviewers, editorial boards, proofreaders, translators, technical staff, communicators, readers, and institutions that, through their dedication and trust, have made *Sophia*'s continuity and growth possible. Thanks to this shared effort, the journal has succeeded in gaining international recognition, strengthening its standards of academic quality, and consolidating networks of research and thought that transcend borders.

Celebrating twenty years also means renewing our responsibility toward the future; it entails a genuine connection of knowledge, cultures, and perspectives to reflect on the present and shape the future, promoting a philosophy of education grounded in ethics, critical thinking, and

human transformation. In an era marked by rapid technological advancement, social, environmental, and cultural crises, as well as the challenges facing contemporary education, *Sophia* reaffirms its commitment to remaining a space open to rigorous analysis, interdisciplinary dialogue, and the defense of critical thinking as indispensable conditions for democratic life and human dignity.

These twenty years, marked in June 2026, represent, in short, both memory and horizon. A memory of a path forged with perseverance and academic rigor; a horizon of new questions, innovative challenges, and novel possibilities to continue reflecting on the present and the future through the lens of philosophy and education.

42



About Sophia 41

In the contemporary context, the philosophy of education is called upon to constantly rethink its fundamental categories, its horizons of understanding, and its potential to influence a society marked by profound cultural, technological, political, and epistemological transformations. The complexity of current scenarios demands that we conceive of education not merely as an institutional practice or a mechanism for transmitting knowledge, but as a privileged sphere for the formation of the subject, the shaping of meaning, and the critical construction of reality. In this context, Issue 41 of *Sophia, Philosophy of Education Collection*, aims to open a space for reflection focused on analyzing the fundamental categories necessary for understanding the philosophy of education in today's society, bringing together theoretical, critical, and methodological perspectives that allow us to question the very foundations of education. Indeed, it falls to the philosophy of education to “rethink and propose mechanisms for the appropriate use of technology, media, tools, and their derivatives” (Aguilar Gordón, 2020, p. 24).

Contemporary education faces tensions that go beyond traditional frameworks of interpretation. The new spaces for human development are inherently complex, “and it is education’s responsibility to invigorate them by generating strategies that enable an understanding of the new emerging realities” (Aguilar Gordón, 2020, p. 24). One of the vital tasks of education today is to broaden horizons of understanding by fostering innovation and creating “stimulating and motivating environments that encourage individual freedom, creativity, and constructive criticism” (Aguilar Gordón, 2020, p. 24). For its part, the philosophy of education fosters

a sense of coexistence and respect for ideas, individuals, and cultures; it promotes the essence of cooperation, collaboration, teamwork, and other core values necessary in today's education. The expansion of instrumental rationality, the acceleration of technology, the fragmentation of subjectivities, the crisis of modern narratives, and the redefinition of learning environments create scenarios that demand a profound reexamination of the ontological, epistemological, and axiological assumptions upon which human formation is based. For this reason, this issue brings together research that actively engages with educational theory, the ontic and ontological categories of the philosophy of education, critical theory, emancipatory pedagogies, critical methodologies, and the interdisciplinary implications of philosophy for understanding educational processes.

The contributions presented here demonstrate that the philosophy of education remains an essential field for examining the ways in which the individual learns, relates to knowledge, and is embedded within social structures—frequently shaped by relations of power, exclusion, and inequality. Philosophical reflection allows us to understand that education is never neutral: every educational practice presupposes a distinct conception of the human being, of society, of rationality, and of the future. From this perspective, ontological and ontic categories take on renewed relevance by enabling an inquiry into the meaning of human existence within specific educational contexts and into the conditions that make the holistic formation of the person possible.

Furthermore, this volume emphasizes the continued relevance of the critical theory of education and critical pedagogies as essential frameworks for analyzing the contradictions and paradoxes present in contemporary educational institutions. The dynamics of the commodification of knowledge, the subordination of education to productivist logics, and the instrumentalization of educational processes challenge the traditional role of schools, universities, and various pedagogical spaces in fostering critical citizenship and ethical awareness. Thus, the articles gathered in this issue reaffirm the importance of approaching education from emancipatory perspectives that promote dialogue, autonomy, social justice, and the transformation of structures that reproduce domination.

As such, the content presented in this issue should critically guide the reader toward the exploration of newly situated issues and generative themes that foster awareness, personal change, and social transformation. These generative themes should be understood as “challenges for action and have the potential to branch out into other themes [...] thus, it is possible to speak of themes of a universal [...] continental, national, or



regional nature” (Freire, 1980, p. 42). In this vein, philosophers, educators, and critical researchers must create the necessary conditions to establish theoretical and practical pathways that allow for the strengthening of multidisciplinary knowledge capable of overcoming irrationality, one-sidedness, or intellectual reductionism.

Similarly, the studies included here examine the nature of learning and the possibilities for methodological innovation. The incorporation of metacognitive strategies, reflection on self-concept, and the analysis of the subjective conditions of learning demonstrate that education involves complex processes of self-reflection, identity construction, and the development of critical thinking skills. These approaches help us understand that learning does not merely mean acquiring information but rather developing distinct ways of thinking capable of interpreting, questioning, and reinterpreting human experience.

Finally, a key aspect of this issue is its openness to interdisciplinary dialogue. The relationship between philosophy, psychology, pedagogy, and other disciplines demonstrates that educational problems require comprehensive approaches that transcend epistemological reductionism and foster broad, critical interpretations of reality.

We extend our sincere gratitude to all the authors, reviewers, readers, and contributors who have made the publication of this issue possible. Their contributions strengthen the contemporary debate on the philosophy of education and enrich the collective construction of knowledge aimed at understanding and transforming educational reality. We hope that the reflections gathered here will spark new questions, diverse dialogues, and varied ways of thinking about education as a critical, human, and emancipatory practice.

On the Structure of This Volume

Sophia 41 brings together contributions from researchers across the Americas, Europe, and Asia who reflect on some of the most significant challenges facing contemporary education: teacher training, the meaning of life, democracy, artificial intelligence, scientific literacy, public ethics, and the epistemological foundations of science and philosophy. These articles engage in dialogue from philosophical, pedagogical, and critical perspectives, offering a broad overview of 21st-century educational challenges.

The ten articles accepted for this issue are divided into two sections: five dedicated to the main theme of the call for papers, and five in the miscellaneous section.

The first section opens with the article “Epistemological and Ontological Foundations for a Transdisciplinary Teacher Training” written by Javier Collado Ruano, a researcher at the National University of Education (Ecuador), and Florent Pasquier, a scholar at Sorbonne University (France). The authors present a philosophical reflection on the need to rethink teacher education from a transdisciplinary perspective, examining the transition from the paradigms of classical science to the sciences of complexity to demonstrate how this transformation requires new epistemological and ontological foundations for education. Their proposal highlights the interconnection among complex thinking, transdisciplinarity, and critical pedagogy as a path to training teachers capable of addressing the educational and social challenges of the 21st century.

The following manuscript, “Purpose in Life in Adolescents after a Learning Experience” by María Milagros Armas Arráez, a professor and researcher at the International University of La Rioja (Spain), explores the relationship between education and the development of a purpose in life during adolescence. Through empirical research involving more than 1,000 completions of the Purpose in Life inventory, she demonstrates that competency-based learning experiences can significantly strengthen young people’s existential purpose. The study provides evidence of the importance of an education oriented toward the holistic development of the individual, beyond the mere acquisition of knowledge.

Next, the paper titled “Cultivating Democratic Skills in 21st-Century Society,” authored by Isabel Tamarit López of the University of Valencia (Spain), analyzes the threats facing contemporary democracies in contexts marked by polarization, radicalism, and the influence of digital technologies. Her work advocates for ethical and civic education as an essential tool to strengthen democratic citizenship. The author proposes pedagogical strategies centered on critical thinking, emotional education, dialogue, and peaceful conflict resolution, aiming to shape citizens who can participate responsibly in complex and pluralistic societies.

Following is the article “Pedagogical Bias and the Validity of Pedagogy,” written by Óscar Julián Cuesta Moreno and Rafael Reyes Galindo, researchers at the Pontificia Universidad Javeriana (Colombia). They critically examine certain widely accepted educational discourses that, far from strengthening education, end up distorting it. Through the concept of “pedagogical bias,” they identify erroneous interpretations related to

teaching, schools, teachers, and pedagogy. The authors defend the relevance of pedagogy as an independent field of critical reflection and challenge trends that reduce education to criteria of efficiency or immediate student satisfaction.

This section concludes with the essay “The Paradox of Heutagogy and Artificial Intelligence”, written by Luis Alberto Triana Llano, a scholar at the Pontifical Bolivarian University (Colombia). This work addresses one of the most current topics in the educational debate: the relationship between artificial intelligence and self-directed learning. His analysis raises a fundamental paradox: while artificial intelligence can enhance student autonomy, it can also generate new forms of technological dependence. The author proposes the concept of “heutagotIA” to reflect on this tension and concludes that the emancipatory potential of AI depends on pedagogical frameworks capable of promoting critical thinking and cognitive autonomy.

The second section (Miscellaneous) opens with the article “Toward a Discontinuist Approach to Scientific Literacy,” by Karina Silvana Giomi, a researcher at the National University of Tierra del Fuego (Argentina). The text challenges traditional conceptions of scientific literacy based on a cumulative and linear view of science. Drawing inspiration from thinkers such as Bachelard, Badiou, and Lacan, she proposes a discontinuist approach that acknowledges the epistemological ruptures and processes of subjective transformation involved in the production of scientific knowledge. Her work invites us to reconsider science education as a process of unlearning, creation, and the ongoing reconstruction of knowledge.

Meanwhile, the study “Ethical Compassion in Education to Overcome Hate and Hate Speech,” by Maria Orts García of the University of Valencia (Spain), analyzes the contemporary phenomenon of hate speech from an ethical and educational perspective. Drawing particularly on the thought of Martha Nussbaum, she examines the role of fear and revulsion as emotions that generate hatred, arguing that empathy alone is insufficient to counteract them. In response, she proposes ethical compassion as a fundamental virtue to promote justice, recognition of the other, and democratic coexistence. The article highlights the decisive role of emotional education and critical thinking in building more inclusive societies.

Likewise, “The Decline of Reason Under Algorithmic Power in Contemporary Democracy”, by Van Hanh Nguyen, a researcher at the Academy of Journalism and Communication (Vietnam), examines the philosophical and political consequences of the growing power of algorithms in democratic life. The author argues that critical reason is threat-

ened by forms of instrumental rationality geared toward prediction, efficiency, and control. From a critical perspective, he analyzes how this transformation affects autonomy, moral responsibility, and public deliberation, concluding by advocating for an education centered on ethical reflection and the strengthening of epistemic agency as prerequisites for preserving digital democracy.

Similarly, the article “The Logical Gaps in Contemporary Neo-Stoicism”, by José Barrientos Rastrojo, a professor at the University of Seville (Spain), offers a rigorous critique of the contemporary resurgence of Stoicism. The author argues that many current versions of neo-Stoicism simplify and distort essential aspects of this philosophical tradition, especially its logical dimension. Through an analysis of classical and contemporary sources, he shows how certain reinterpretations oriented toward personal, business, or therapeutic development omit fundamental components of Stoic thought. His work calls for a more comprehensive and rigorous understanding of this philosophical school.

This volume concludes with the article “The Role of Induction and Probability in the Development of Science and Philosophy,” by William Orlando Cárdenas Marín and Rómulo Ignacio San Martín, researchers at the Salesian Polytechnic University (Ecuador). They address one of the classic problems of epistemology: the relationship between induction and probability. The authors examine how the development of probability theory helped strengthen the inductive method against the limitations of the traditional deductive model. Their analysis shows that incorporating uncertainty and the notion of possibilities broadens our understanding of scientific and philosophical knowledge, moving it away from absolutist positions toward a more open and dynamic view of reality.

Taken together, the articles collected in this issue of *Sophia* demonstrate the continued relevance of the philosophy of education as a privileged space to critically reflect on the cultural, scientific, and technological transformations of our time. From the transdisciplinary training of teachers to the ethical challenges of artificial intelligence —encompassing democracy, compassion, science, and contemporary rationality— the authors offer contributions that enrich the educational debate and help build an education system that is more critical, humane, and committed to the challenges of the 21st century.



Bibliography

AGUILAR GORDÓN, Floralba

- 2020 Filosofía de la innovación e innovación en la filosofía. En: Autora (coord.), *Filosofía de la innovación y de la tecnología educativa* (tomo I, pp. 21-62). Quito: Abya-Yala. <https://bit.ly/4eyDFq1>

FREIRE, Paulo

- 1980 *La educación como práctica de la libertad*. México DF: Siglo XXI.

Floralba del Rocío Aguilar-Gordón
Editora



EPISTEMOLOGICAL AND ONTOLOGICAL FOUNDATIONS FOR A TRANSDISCIPLINARY TEACHER TRAINING¹

Fundamentos epistemológicos y ontológicos para una formación transdisciplinar de los docentes

JAVIER COLLADO RUANO*

Universidad Nacional de Educación, Azogues, Ecuador
<https://ror.org/01yg1g961>
javier.collado@unae.edu.ec
<https://orcid.org/0000-0003-0063-6642>

FLORENT PASQUIER**

Universidad de la Sorbona, París, France
<https://ror.org/02en5vm52>
florent.pasquier@espe-paris.fr
<https://orcid.org/0000-0001-5603-4419>

Suggested citation: Collado Ruano, Javier & Pasquier, Florent. (2026). Epistemological and Ontological Foundations for a Transdisciplinary Teacher Training. *Sophia, Colección de Filosofía de la Educación*, (41), pp. 51-77.

* Professor of Philosophy of Education at the National University of Education (UNAE), where he was the dean of Educational Innovation and Entrepreneurship for four years. He is a historian, environmentalist, educator, journalist, philosopher, filmmaker, museologist, and designer of educational video games. He is an international expert for the United Nations program “Harmony with Nature.” He holds a Ph.D. in Philosophy and a Ph.D. in Knowledge Dissemination, both awarded *cum laude*.

h-index i10: 45, h-index: 25.

** He holds a Ph.D. in Education from the University of Paris VII. He is a tenured professor authorized to supervise research at Sorbonne Université and at the INSPÉ of the Paris Academy. His professional work focuses on teacher education and serving as president of the International Center for Transdisciplinary Research and Studies (CIRET). His main areas of research include the digital humanities, educational computing, and the development of an integrative and holistic pedagogy that connects new technologies with personal and spiritual development and transdisciplinarity.

h-index: 9.

Abstract

The article aims to reflect on the epistemological and ontological foundations to improve teacher training in a transdisciplinary way. Framed in the field of the philosophy of education, the paper contributes to the social sciences debate on teacher training from an innovative perspective that integrates epistemic and ontological complexity. The research uses a qualitative, analytical, exploratory and descriptive methodology to identify the characteristics of the historical evolution of science. First, this evolution is explored and described with the advances of modern science based on the logical postulates derived from classical or Newtonian physics. Subsequently, the epistemic and ontological postulates of the sciences of complexity, based on the Quantum Revolution, are addressed. Then, the formative dimensions of transdisciplinary education are presented as an opportunity to rethink pedagogical theories from a critical educational philosophy. As a result, the construction and management of knowledge resulting from the dialogue between the pedagogy of complexity and transdisciplinary education is discussed. This philosophical dialogue allows theorizing the practice and practicing the theory about the challenges of teacher training in the 21st Century. Finally, it concludes with humanist and educational philosophical perspectives that promote the development of educators through the exercise of critical, complex, philosophical and creative thinking.

Keywords

Philosophy of education, History of science, Humanism, Social sciences, Complexity, Transdisciplinarity.

Resumen

Este artículo tiene como objetivo reflexionar sobre los fundamentos epistemológicos y ontológicos para mejorar la formación docente de forma transdisciplinar. Enmarcado en el campo de la filosofía de la educación, el trabajo busca contribuir al debate de las ciencias sociales sobre la formación docente desde una perspectiva innovadora que integra la complejidad epistémica y ontológica. La investigación utiliza una metodología cualitativa, analítica, exploratoria y descriptiva, para identificar las características de la evolución histórica de la ciencia. En primer lugar, esta evolución se explora y describe con los avances de la ciencia moderna basados en los postulados lógicos derivados de la física clásica o newtoniana. Posteriormente, se abordan los postulados epistémicos y ontológicos de las ciencias de la complejidad, fundamentadas en la revolución cuántica. Después se presentan las dimensiones formativas de la educación transdisciplinar como una oportunidad para repensar las teorías pedagógicas desde una filosofía educativa crítica. Como resultado, se discute la construcción y gestión del conocimiento resultante del diálogo entre la pedagogía de la complejidad y la educación transdisciplinar. Este diálogo filosófico permite teorizar la práctica y practicar la teoría sobre los retos y desafíos de la formación docente en el siglo XXI. Finalmente, se concluye con perspectivas filosóficas educativas humanistas que promueven el desarrollo de los educadores a través del ejercicio del pensamiento crítico, complejo, filosófico y creativo.

Palabras clave

Filosofía de la educación, historia de la ciencia, humanismo, ciencias sociales, complejidad, transdisciplinariedad.

Introduction

In the context of the contemporary civilizational crisis —characterized by profound socio-environmental, epistemological, and cultural transformations— it is essential to rethink the professional orientation of teacher-training processes through the lens of a transdisciplinary educa-

tional philosophy. The current global landscape demands a critical revision of the teacher profile, aimed at fostering a global citizenry capable of understanding and addressing the complexity of 21st-century socio-environmental challenges (Luong and Nguyen, 2026). As Morin (2015) suggests, an unfolding planetary crisis is exposing the limits of the Western, modern, industrial, and capitalist paradigm, thereby necessitating a radical rethinking of the relationships between humanity, nature, and knowledge. Within this context, disruptions in ecological equilibrium reveal a profound environmental crisis, wherein global systemic shifts trigger complex chain reactions (WWF, 2014). Concurrently, we are witnessing a crisis of thought that demands new ways of understanding reality through integrative approaches in dialogue with emerging currents in humanism and the social sciences. The relevance of this research lies in the urgency of transitioning toward a regenerative culture that enables educational institutions to respond ethically and effectively to the limits of modernity.

According to Norgaard (2006), these alterations in ontological reality² have transformed the continuum of matter, energy, and information that co-evolutionarily interconnects natural and social systems. Consequently, Collado (2017) emphasizes that teacher training must instill the premise that nature possesses an intrinsic right to exist, and that schools must actively restore ecosystems through a regenerative culture. For this reason, Morin (1999) argues that a comprehensive reform of thought, education, and politics is required. Aligning with this perspective, the present study delineates the historical evolution of science and explores the formative dimensions of teacher education from a transdisciplinary philosophical standpoint.

While the history of education encompasses diverse schools of thought and universities have adopted a wide array of theoretical and philosophical frameworks (Danvers, 2020; Nicolas, 2018), this study specifically adopts Morin's philosophical vision of complexity and transdisciplinarity. In *Seven Complex Lessons in Education for the Future*, Morin (2000) asserts that the scientific paradigm directly correlates with the epistemological paradigm, which subsequently shapes schooling practices for children and adolescents. Therefore, this article draws upon Morin's (2000) complex thinking to explore how the professionalization of teacher training requires the integration of theoretical advances in complexity, thereby enriching the pedagogical, epistemological, and scientific dimensions of teacher education (Lagemann, 2000). From this perspective, the study aims to examine the limits of



traditional teacher training through a reorganization of the ecology of knowledge, linking the complexity of thought with an ethic of interdependence that enables educators to co-evolve alongside 21st-century socio-environmental challenges.

In this regard, this study integrates the philosophy of education with humanism and the social sciences to understand how the epistemological and ontological foundations of complexity can enhance teacher education in addressing contemporary socio-environmental challenges. The research begins by recognizing a persistent problem: the prevalence of fragmented educational models that hinder a comprehensive understanding of socio-environmental phenomena and limit teachers' capacity to address the complexity of contemporary reality (Capra, 2010). This issue manifests as a disconnect between traditional teacher training and the demands for interdependence that characterize modern ecosystems.

In response to this situation, it is argued that transdisciplinary teacher education, inspired by complex thinking, enables the integration of knowledge, the overcoming of traditional dichotomies, and the promotion of a more holistic understanding of the world (Wilson, 1998). Thus, the study advocates that transdisciplinary training allows educators to move beyond educational reductionism, fostering a teaching practice capable of navigating global uncertainty. The relevance of this approach lies not only in the urgency of addressing current global socio-environmental challenges, but also in the need to rethink the foundations of educational knowledge during a historical moment defined by uncertainty and interdependence. Consequently, this article is structured around a review of the historical evolution of science, followed by an analysis of the contributions of the complexity sciences, and concludes with a reflection on their implications for teacher education from a transdisciplinary educational philosophy.

Method

From this philosophical perspective on education, a qualitative, analytical, exploratory, and descriptive methodology is used to identify the evolution of the epistemological and ontological foundations that have historically shaped teacher education processes. Through a review of the specialized literature on teacher training, this study demonstrates that enhancing the education of children and adolescents requires training

teachers within a critical paradigm—one that remains open to the complexity of knowledge (Piéron, 1951; Piaget, 1970). To this end, a dialogue is established between the pedagogy of complexity and transdisciplinary education, aiming to delineate the epistemological and ontological foundations that ought to be integrated into teacher education programs, particularly within the social sciences and humanities.

This approach implies the necessity of exploring forms of knowledge that elude evaluation by classical scientific methods centered on reproducibility, measurement, quantification, commensurability, or standardized assessment. To design a holistic education that integrates distinct epistemic and ontological levels, a transdisciplinary dialogue is developed between scientific knowledge and ancestral, spiritual, artistic, and emotional ways of knowing. Far from neglecting the breakthroughs and discoveries of contemporary scientific methods, this perspective seeks the opposite. The transdisciplinary methodology aims to reconcile the subject-object relationship, which has historically been bifurcated by the traditional scientific approach of logical positivism. As illustrated in Figure 1, discoveries in quantum physics demonstrate that the subject and their environment are inseparable realities within an interdependent network structured by multiple ontological levels (Bohm and Hiley, 2009).

Consequently, the methodological process seeks to define the skills, abilities, aptitudes, and training methods required by contemporary educators. From this viewpoint, the orientation of professional teaching profiles is intrinsically linked to the evolution of science, which simultaneously implies the evolution of epistemology itself (Larsen, 2012). According to Essen and Rogers (2003), teachers play a fundamental role in social transformation and technological innovation, as they actively shape the ideas, actions, and attitudes of future professionals, including engineers, architects, entrepreneurs, artists, and politicians. Finally, the history of science is examined alongside the evolution of scientific thought to discuss the design of curricula dedicated to the transdisciplinary pedagogical training of teachers.

History of Science and the Evolution of Thought

The origins of modern science date back to the 17th century, when intellectuals sought to distance themselves from the dogmatic stance of religious authorities, who dictated the nature of ontological reality

without empirical foundation. Naturally, scientific perspectives during this era were far from monolithic. While Galileo and Newton maintained that philosophy and theology remained vital frameworks for understanding reality, other pioneers of the modern scientific method, such as Bacon and Descartes, adopted a different posture. Descartes, in particular, posited that all material phenomena should be studied independently of the spiritual realm, thereby discarding subjectivity in favor of rigorous objectivity. Subsequently, European Enlightenment thinkers and positivists began to structure knowledge in a hyper-specialized manner, isolating the parts from the whole to analyze them in abstraction (Daston, 2017).

By the 19th century, positivism had solidified as an epistemological school rooted strictly in empirical experience, systematically rejecting any form of knowledge that eluded quantification, measurement, or commensurability via the scientific method. Consequently, philosophical, theological, spiritual, artistic, and emotional dimensions were marginalized from scientific discourse for centuries. This paradigm culminated during the first half of the 20th century with the “logical positivism” of the Vienna Circle—an epistemological movement that reacted sharply against idealist and speculative philosophy by asserting that true knowledge derives exclusively from the empirical analysis of facts through scientific verification (Kuhn, 1970).

Over time, modern science became deeply anchored in this reductionist framework of separation and analysis. Although this approach catalyzed unprecedented technological and material breakthroughs, it simultaneously sidelined dimensions incompatible with empirical verification, including the arts, emotions, spirituality, and indigenous ways of knowing (Malo et al., 2024; Staddon, 2018). As Leff (2001) argues, this positivist epistemology objectified nature, reducing it to a mere supplier of raw materials for industrial exploitation in perfect alignment with the *laissez-faire* ideology of speculative markets.

Almeida (2017) notes that between the 17th and 19th centuries, modern science consolidated the schism between the individual and nature—the subject-object dichotomy—by establishing three foundational postulates:

- The existence of universal laws expressed through mathematics.
- The elucidation of these laws via controlled experimentation.
- The absolute reproducibility of experimental data.

Consequently, mathematics emerged as the definitive language of this empirical-rational ideology, rapidly becoming dominant within

academic circles tasked with formulating objective theories of knowledge (Bachelard, 1977).

In broader terms, Capra (2010) underscores that the birth of modern science was inextricably linked to a philosophical evolution that culminated in an extreme formulation of mind-matter dualism. A quintessential manifestation of this positivist ethos is the analytical method articulated by René Descartes in his *Discourse on the Method* (1637). His foundational principle—*cogito ergo sum* (“I think, therefore I am”)—laid the groundwork for a substantial dualism separating body (*res extensa*) from soul (*res cogitans*), subject from object, spirit from matter, feeling from reason, and freedom from determinism (Firode, 2008).

Within the historiography of science, Lakatos (1971) explains that classical physics provided the epistemological bedrock for organizing modern scientific knowledge, conceiving the universe as a mechanistic, predictable clockwork governed by the principles of continuity³, local causality⁴, and determinism.⁴ In his critique of scientific orthodoxy, Feyerabend (1975) points out that the apparent simplicity of these three axioms captivated generations of Western rationalist intellectuals. This widespread enthusiasm drove a reconfiguration of knowledge that Morin (1990) terms the “mechanistic paradigm” or “simplification paradigm,” characterized by the fracturing of knowledge into increasingly specialized disciplines that address progressively smaller fragments of reality.

Paradoxically, Nicolescu (1996) observes that the hyper-specialization of modern science has ended up challenging the conceptual boundaries of its own reductionism. After decades under this rigid framework, disciplinary knowledge has reached its intrinsic limitations—which have reverberated into cultural and educational spheres. As Morin et al. (2003) highlight, this reductionist mindset became the axis for paradigm formulation, giving rise to the cognitive fallacy of unlimited progress fueled by the “science-industry-economy-technology” quadrimotor. These shortcomings underscore the urgency of restructuring teacher education through transdisciplinary approaches capable of overcoming knowledge fragmentation, particularly in the humanities and social sciences.

While Western epistemological reductionism undeniably facilitated significant material development, Shiva (2020) contends that the globalization of this epistemic paradigm has engendered unprecedented levels of exclusion. According to an Oxfam report (2022) published during COVID-19 pandemic, “the 10 richest men in the world possess more wealth than the 3,100 million poorest people” (p. 10)—a socioeconomic disparity that Riechmann (2014) describes as a form of “planetary apart-

heid.” Concurrently, the exponential escalation of environmental crises makes it imperative to rethink the training of 21st-century teachers, who must act as vital agents of socio-environmental transformation (UNESCO, 2015).

To address this crisis, De Sousa Santos (2010) proposes decolonizing Western thought to pave the way for “other possible worlds” that integrate a plurality of epistemes—such as ancestral practices, indigenous wisdom, arts, spirituality, and emotional dimensions—which are inherently unverifiable by standard scientific metrics. Likewise, Latour (1996) introduced the concept of “interobjectivity” to redistribute and reassemble the interaction between subject and object, correcting the artificial separation imposed by traditional methodology.

Furthermore, Cahour and Lancry (2011) note that replicating this reductionist scientific framework within educational settings has marginalized everyday human activities that cannot be experimentally tested. A stark manifestation of this systemic exclusion is the history of indigenous resistance against racist practices in Latin American and Caribbean schooling (Marker, 2009). Consequently, 21st-century educators face the challenge of revaluing and reintegrating those holistic dimensions previously relegated to the periphery of school curricula (Moignard, 2018)—a reorientation that is foundational to a transdisciplinary philosophy of education.

From a critical sociological perspective, Bourdieu and Passeron (1970) challenge the historical rigidity separating scientific knowledge from academic knowledge, viewing both as socially and psychologically constructed phenomena. Similarly, Cardon and D’Enfert (2017) argue that the history of school disciplines demonstrates they are not merely passive modes of knowledge transmission or cognitive formation, but active structures of power. According to Martin (1993), the reductionist paradigm birthed an epistemic illusion that led Western societies to revere scientific knowledge as the sole path to truth, institutionalizing its supremacy within the academic world.

Nevertheless, rather than merely devaluing positivism for its reductionist constraints, it is necessary to transition toward a complex paradigm that offers a holistic, systemic approach. Galeffi (2017) suggests that a plurality of epistemological conceptions demands a “polylogical” vision where diverse representational models coexist. While positivism isolates and fragments knowledge, transdisciplinarity builds bridges to integrate diverse dimensions (Pasquier and Nicolescu, 2019), allowing for a theo-



retical and methodological coexistence where the whole and its constituent parts are analyzed simultaneously in their reciprocal relationships.

Ultimately, Wilson (1998) suggests that the ontological complexity of human thought evolves through diverse models of knowledge management, noting that addressing reality's complexity *with* reductionist tools constitutes science, whereas doing so *without* them constitutes art. Remarkably, just as abstract art emerged concurrently with quantum mechanics, transdisciplinarity has crystallized within the historical epoch of the Anthropocene (Crutzen, 2006). Within this contemporary context, transdisciplinarity assumes critical relevance by enabling us to confront multifaceted global crises that elude isolated disciplinary fields. Consequently, the development of a transdisciplinary educational model becomes paramount for equipping future educators to navigate the complex socio-environmental challenges of the 21st century.



Epistemological and Ontological Foundations in Teacher Education

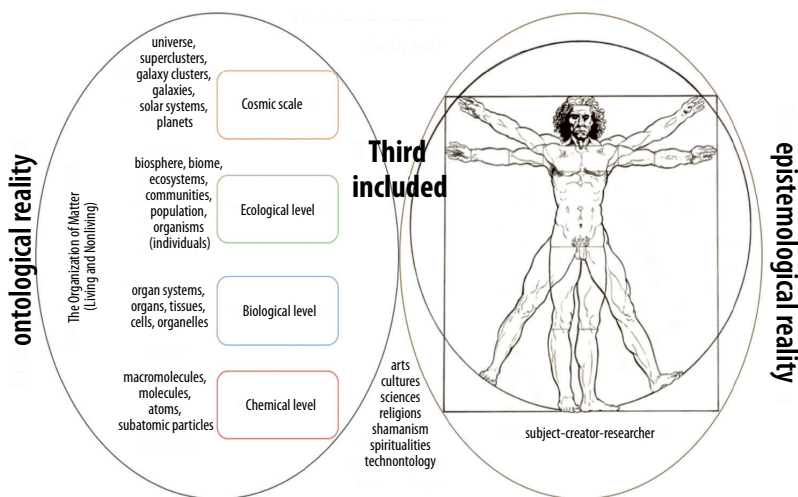
Amidst the coexistence of diverse epistemological frameworks, the complexity sciences emerge with a systemic and holistic methodological vision that complements the reductionist and specialized paradigms of modern science (Rury and Tamura, 2019). This coexistence becomes imperative in light of the structural limitations underscored by numerous contemporary intellectuals. Dussel (2006), for instance, criticizes modern science for its Eurocentric tendency to trace the origins of knowledge exclusively back to Ancient Greece, thereby marginalizing the rich intellectual heritage of other ancient civilizations, such as the Chinese, Indian, Egyptian, Babylonian, Mesopotamian, Mayan, and Incan cultures. Similarly, Popper (2005) dismantled the linear assumptions of logical positivism and the inductive method, demonstrating the inherent fallibilism of deriving universal laws from the observation of isolated fragments of reality. Concurrently, the absolute validity of the deductive method was destabilized by the incompleteness demonstrated in Kurt Gödel's mathematical theorems and Alfred Tarski's semantic logic (Morin and Le Moigne, 1999).

Consequently, no scientific theory can be regarded as definitive or complete; rather, each constitutes a phenomenological approximation of an ontological reality that is inherently transdimensional and dynamic. In this vein, the transdisciplinary theorist McGregor (2015) notes that the reductionist view of modern science historically validated only a single

level of phenomenological reality—that governed by classical physics. As illustrated in Figure 1, a comprehensive, multilevel approach bridges this dualistic divide, which traditionally conceptualized the subject's spirit and the concrete dimension of matter as independent components of reality (Jahn and Dunne, 2009). For Morin (2000), this “scientific blindness” (*aveuglement scientifique*) fails to recognize the distinct ontological and epistemological strata mediating the relationship between subject and object, thereby obstructing the appreciation of their diverse spaces of interaction (Lotrecchiano, 2012; Nicolescu, 1996).

Furthermore, Moraes (2017) argues that the evolution of scientific knowledge experienced a profound paradigm shift during the quantum revolution, which demonstrated that this specific stratum of ontological reality is actively perturbed by the observer. Indeed, the double-slit experiment illustrates that the act of conscious observation modifies wave-particle behavior and collapses the wave function, thereby materializing the particle⁶. For this reason, the complexity sciences must be understood through a non-linear epistemological lens that demands the ontological unification of subject and object. These epistemological and ontological pillars are foundational for 21st-century teacher education, as they instill a nuanced understanding of a dynamic, multidimensional reality.

Figure 1
Models representing ontological and epistemological reality



As illustrated in Figure 1, the traditional tools, postulates, and mechanisms of modern science are insufficient to grasp the full complex-

ity of coexisting ontological strata. To account for this complexity, they must be complemented by frameworks from the complexity sciences that encompass the totality of both epistemological and ontological levels of reality. Vedral (2018) explains that reality is structured across distinct tiers of organization in living and non-living matter, conceptually designated as levels of reality.

At the microscopic scale, microphysical and quantum realities operate. Microphysics is characterized by the non-separability of spacetime, simultaneity, instantaneity, indeterminacy, and overdetermination. At the quantum level, subatomic particles exhibit spatial and temporal indeterminacy, the uncertainty principle, the wave-particle dichotomy, and the instantaneous unity of the whole. Conversely, on the macrocosmic scale, the cosmic level of reality is defined by entropy, homogeneity, and continuous spacetime. Intermediary levels —specifically the biological and ecological spheres— are characterized by negentropy and the evolution of a spacetime that remains sensitive to the positioning of the subject-observer-creator (Lima and Gómez, 2024).

The discontinuous transition from one level of reality to another is governed by the logic of the “included third” formulated by Lupasco (1960). This logical principle reconciles the distinct levels of reality bifurcated by the mechanistic logic of modern science, which artificially separates waves from particles. By conceptualizing the quantum state as a simultaneous superposition of wave and particle, new logical, epistemic, and philosophical formulations of ontological reality emerge. In this sense, Nicolescu (2014) explains that the “included third” operates precisely within the intermediary space bridging ontological and epistemological reality. In other words, the logic of the included third enables the emergence of historical, representational models through which humanity constructs meaning about its environment, integrating artistic, cultural, spiritual, religious, shamanic, and scientific frameworks, alongside virtual environments and other expressive modalities.

Furthermore, it is essential to introduce a fourth decisive element in this conceptualization of reality: the observing subject. Far from being an external or neutral entity, the subject actively participates in the configuration of phenomena. As developments in quantum physics demonstrate, the relationship between energy and matter cannot be decoupled from the act of observation, given that the very process of observing alters the manifestation of that reality. This breakthrough of the quantum revolution catalyzed the emergence of the complexity sciences, prompting a radical reconsideration of the classical subject-object dichotomy



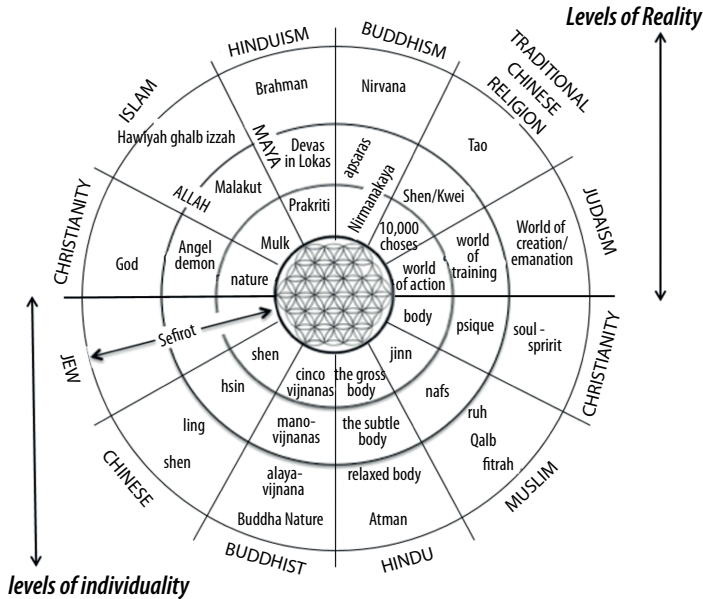
championed by positivist schools and anchored in classical mechanics. Nevertheless, the complexity sciences do not supplant the modern scientific method; rather, both paradigms operate within a shared process of co-constitution (Capra, 2010; Nicolescu, 2014).

From this philosophical perspective, knowledge ceases to be a passive representation and transforms into a situated, contextual, relational, and open experience. In the educational sphere, this shift assumes paramount relevance, compelling us to rethink teacher training beyond the fragmented frameworks inherited from modernity. Consequently, a transdisciplinary education inspired by complexity becomes indispensable within the teaching-learning processes of the social sciences and humanities. This approach equips educators with the capacity to interpret, problematize, and inhabit a multiparadigmatic, multifaceted, dynamic, and deeply interdependent reality (Collado, 2017).

Accordingly, the right-hand image in Figure 1 —derived from Leonardo da Vinci's *Vitruvian Man*— depicts human perception and agency through the distinct epistemological strata that structure and give form to ontological complexity (Sartre and Elkaïm-Sartre, 2012). Other philosophers of education, such as Krishnamurti (2012) and Montessori (2004), similarly addressed the ontological dimensions of teacher training, aiming to foster a critical awareness of a dynamic, multilevel, and multireferential reality. In a similar vein, Smith (2003) conducted an in-depth comparative study of the world's major religions, synthesized in Figure 2. This diagram features four concentric circles that illustrate the dynamics of spiritual transformation, progressing from the material substrate to the most subtle dimensions—encompassing both the levels of reality and the inner individuality of the religious practitioner.

Figure 2 takes the form of a diagrammatic mandala, featuring the Flower of Life at its center to symbolize the ancient wisdom of ancestral cultures. This conceptual framework has been expanded to encompass both epistemic (individuality) and ontological (reality) strata, revealing the interdependent and symmetrical relationships between these distinct dimensions. This configuration demonstrates that numerous cultural and religious traditions delineate analogous structures to conceptualize the spirit-matter relationship within the fabric of reality. Consequently, ontological reality manifests simultaneously within and outside the individual, given that the subject transforms their environment and vice versa (Nicolescu, 1996). This interreligious dialogue provides further theoretical support for integrating these foundational epistemological and ontological pillars into the professional development of 21st-century educators.

Figure 2
The World's Major Religions Complemented
by Levels of Reality and Individuality



Source: adapted from Smith (2003).

This integrative educational philosophy stands in stark contrast to the hegemonic positivist paradigm that currently prevails in scientific, academic, and educational institutions. It is within this restrictive context that Foucault (1975) conceptualizes schools as spaces of social and psychological confinement. Herein lies the significance of training teachers upon diverse epistemological and ontological foundations, thereby transforming schools, colleges, and universities into complex, co-evolving eco-systems (Salgado, 2021). As Heylighen (2011) explains, the recursive interactions among order, disorder, and organization generate increasingly complex systems, prompting the emergence of more sophisticated epistemic frameworks to represent ontological complexity. Hence, it becomes essential to integrate the logical, epistemic, and philosophical postulates derived from quantum physics to examine representational models of reality through a transdisciplinary lens.

In this vein, Pineau (2004) and Paul (2009) propose transdisciplinary models of human formation aimed at unifying ontological and

epistemological levels. On the one hand, Pineau (2004) explores the methodology of life histories, establishing three interconnected dimensions of human formation: *self-formation* (in relation to oneself), *hetero-formation* (in relation to others), and *eco-formation* (in relation to the natural world). On the other hand, Paul (2009) introduces *ontoformation*, arguing that human formation constitutes “the global and general process (at once particular and singular, yet also social and collective)” (p. 28). These models of transdisciplinary formation offer a multilevel framework that clarifies the epistemological and ontological foundations required to confront the planetary unsustainability facing 21st-century humanity. In this sense, a transdisciplinary approach to education facilitates a nuanced comprehension of the continuous material, energetic, and informational co-evolution that defines ontological reality.



To operationalize these constituent principles of complexity, Galvani (2002) examined popular education from an emancipatory perspective, proposing that transdisciplinary teacher training account for the history of human interactions and structural couplings within physical, social, and ecological environments. Within this framework, three distinct modalities of formative interaction between the individual and their environment are identified: a *practical* dimension linked to gesture, a *symbolic* dimension associated with the imaginary, and an *epistemic* dimension related to conceptual construction. Consequently, these three axes of interaction correspond to three levels of representational meaning: *gesture* as a sense of orientation, *image* as a sense of perception, and *concept* as a sense of meaning. Synthesized, these structural couplings shape human agency, generating representations of the world, of others, and of the self.

Ultimately, these epistemological and ontological foundations indicate that the professional profile of 21st-century educators must evolve toward a transdisciplinary educational philosophy. Within this context, a transdisciplinary model for teacher training is proposed, anchored upon:

- The integration of epistemological and ontological strata.
- A rigorous dialogue between scientific knowledge and alternative ways of knowing.
- The integration of complex thinking within educational practice.

Accordingly, research within the epistemological domain of teacher training should embrace this holistic vision, which elucidates the multidimensionality and interconnectivity of structural couplings and real-world phenomena. In this regard, universities bear a profound ethical responsibility; given their pivotal role in the production and dissemination

tion of knowledge, they serve as vital catalysts for transforming contemporary educational models through transdisciplinary approaches.

Discussion on Transdisciplinary Teacher Education

Strengthening the philosophical foundations of education through a transdisciplinary teacher-training approach requires integrating the aforementioned epistemological and ontological pillars to comprehend the diverse levels of interaction between individuals and their environment (Galvani, 2016). According to Holzkamp (1981), it is imperative to reconceptualize teacher training and critical thinking in light of the complexity sciences. From the perspective of ergonomic psychology, Leplat and Terssac (1990) similarly assert that knowledge of complex systems plays a pivotal role in transforming educational structures and enhancing critical thinking across childhood, youth, and adulthood. Within this framework, the present proposal advocates the gradual incorporation of transdisciplinary methodologies from the complexity sciences into teacher-training curricula. By integrating knowledge from the social sciences and humanities, this approach aims to overcome disciplinary fragmentation and foster a situated understanding of educational phenomena.

Grounded in this vision of educator training, Walsh (2013) argues that postcolonial and decolonial pedagogies provide critical frameworks to rethink global governance through intercultural educational practices that facilitate both material and intellectual unlearning and relearning. This professional orientation operates concurrently as a “political-social-epistemic-ethical project and a pedagogical tool, both of which eagerly seek an educational praxis oriented toward decolonization” (p. 156). Such a decolonial pedagogical praxis draws upon the inter-epistemological dialogue emerging from the multifaceted representational models that human beings employ in relation to their reality. Consequently, teacher education must cultivate complex thinking capable of recognizing multilevel phenomena in constant interaction across local, regional, national, and global strata (Pasquier, 2019). From this perspective, it is proposed that teacher education programs systematically incorporate training opportunities focused on the critical analysis of socio-environmental issues, intercultural dialogue, and the development of reflective competencies, thereby enabling educators to position themselves as mediators between distinct levels of reality and diverse systems of knowledge.



According to Godemann (2008), integrating these diverse models of knowledge representation requires transdisciplinary cooperation. Consequently, transforming the school and academic becomes a matter of urgency, given that disciplinary hyper-specialization and fragmentation are rooted in a dichotomous understanding, a compartmentalized epistemology, and a reductionist strategy. In this regard, Guimaraes and Funtowicz (2015) underscore that a purely reductionist, positivist framework is structurally incapable of addressing either the current socio-environmental crisis or burgeoning socioeconomic inequalities. These pedagogical practices demand an intercultural political-educational commitment aimed at transforming social structures, institutional frameworks, and the objectified relationships between humanity and nature (Pasquier, 2019). Hence, the transdisciplinary approach must not be reduced to a mere integration of curricular content; rather, it entails a profound transformation of educational practices wherein knowledge is constructed relationally, structurally incorporating ethical, social, cultural, and humanistic dimensions.

Although positivist science dismantled the conception of nature as a sacred entity—a worldview central to many indigenous traditions—Kauffman (2010) argues that the quantum revolution paved the way for the complexity sciences, wherein science and spirituality can be reconciled to reinvent the sacred. As Morin and Le Moigne (1999) elucidate, the intelligence of complexity thrives on a dialogue among order, disorder, and organization. This perspective does not advocate replacing order with chaos, substituting separation for uncritical interconnection, or abandoning classical logic in favor of frameworks devoid of rationality. Instead, it involves complementing the intelligible principles of classical thought—traditionally anchored in a paradigm of simplification, univocity, and exclusion—with the generative principles of complexity, integration, and transversality (Barroso, 2018). In this sense, transdisciplinary teacher education necessitates a paradigm shift in how knowledge is conceived, moving from a logic of content accumulation to an epistemology of articulated meanings, where educators recognize themselves as active agents in the co-construction of socio-educational reality.

While reductionist thinking interprets reality by fracturing it into its most basic elements through hyper-specialized approaches, complex thinking integrates scientific knowledge with alternative ways of knowing from a transdisciplinary perspective to comprehend systemic phenomena. Similarly, transdisciplinarity draws upon specific disciplines without opposing them, choosing instead to expand and transcend their

boundaries; in like manner, complex thinking situates phenomena within a global framework without obscuring the particular, the concrete, and the individual. For Harvey and Lemire (2001), this paradigm coexistence is foundational to establishing a new model of transdisciplinary education that weaves together the intelligible principles of classical reductionism with the systemic principles of complexity. This articulation anchors teaching practice within a broader horizon, ensuring that education transcends the passive transmission of knowledge and is oriented toward the holistic development of individuals capable of critically interpreting their social, cultural, and ecological contexts.

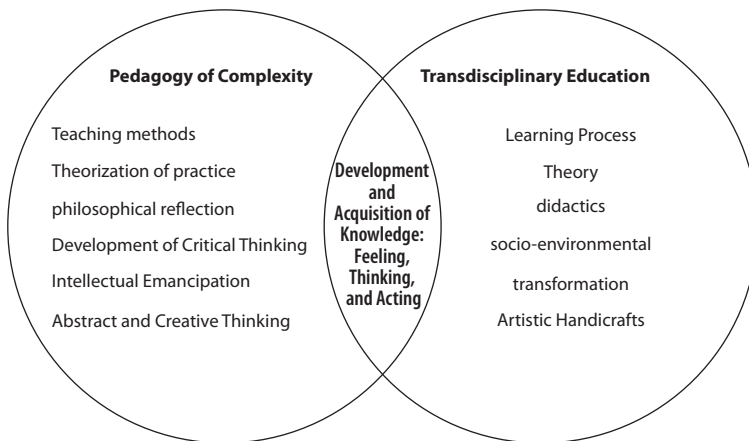
It is precisely within this integrative matrix of epistemological paradigms that transdisciplinary education emerges as an ontological phenomenon for educator training through the pedagogy of complexity (Gibbs, 2017). Transdisciplinary education functions as a principle of human formation that unifies diverse strata of ontological reality. This implies a pedagogy of complexity that harmonizes scientific reason with inner spiritual self-knowledge, indigenous worldviews, and other cognitive, perceptual, affective, rhetorical, poetic, and philosophical dimensions of the human condition (Collado, 2017). From this perspective, the educational proposal assumes a profoundly humanistic character, recognizing the multidimensional nature of human existence and the necessity of integrating ways of knowing historically marginalized by the positivist paradigm, particularly within the social and experimental sciences.

As illustrated in Figure 3, the pedagogy of complexity constitutes the theoretical-epistemological matrix for operationalizing transdisciplinary education, wherein the individual interacts interdependently with ontological reality. This interaction positions the teacher as an active agent in the co-construction of meaning, capable of articulating distinct levels of reality within their pedagogical practice. Consequently, the present proposal transcends a merely theoretical framework, highlighting the imperative to reconfigure teacher-training models through a transdisciplinary lens—incorporating a complex approach that synthesizes diverse epistemologies and ontologies to respond effectively to contemporary global challenges.

According to Dravet et al. (2019), education constitutes the pragmatic act of teaching, whereas pedagogy theorizes educational practice. Although conceptualized as distinct dimensions, they are inherently complementary; educational actions operationalize pedagogical frameworks, while pedagogy recursively theorizes upon that very practice. Ex-

tending this reasoning, the pedagogy of complexity can be defined as the systemic study and theorization of educational practice through a multi-dimensional lens, integrating the diverse elements and phenomena that constitute coexisting ontological strata. While pedagogy must leverage specialized techniques and teaching methods to facilitate specific processes—such as literacy development, reading comprehension, or mathematical logic—this complex vision enables a comprehensive education that synthesizes the ontological and epistemological dimensions of the subject-reality framework (Moraes, 2017).

Figure 3
Integration of the Pedagogy of Complexity
and Transdisciplinary Education



These philosophical reflections on education carry profound implications for teacher training, given that transdisciplinary education can be defined as an educational process that synthesizes scientific knowledge with diverse communal, artistic, and contemplative practices (Hagège, 2014). However, it is critical to avoid treating transdisciplinary educator training as a passing academic trend or reducing it to a mere superficial curricular innovation. On the contrary, the present proposal demands a paradigm shift in how knowledge is conceptualized, recognizing that teaching entails engaging with the inherent complexity of reality rather than reducing it. In this sense, preparing teachers from a transdisciplinary perspective ultimately means fostering individuals capable of thinking, feeling, and acting within a world that can no longer be explained through the fragmentation of knowledge. Consequently, this framework embraces complexity in

teacher education by conceptualizing knowledge not as a closed, static system, but as an open, relational, and continuously evolving process.

Conclusion

In conclusion, an exploration of Morin's (2000) complex thinking facilitates the integration of the epistemological and ontological foundations of the complexity sciences into professional teacher training and the humanities. Consequently, educator training must be reconceptualized through a transdisciplinary educational philosophy centered on the recognition of ontological and epistemological strata. This approach enables a comprehensive understanding of reality, a specific comprehension of localized phenomena and relationships, and the articulation of analytical-reductionist thought within a complex, holistic vision, thereby clarifying the recursive dynamics between the parts and the whole. These foundations illuminate the inseparability of subject and object—a realization carrying direct implications for teacher training by weaving ontological and epistemological tiers into pedagogical processes. For this reason, educator preparation must transcend epistemically fragmented models, orienting itself instead toward a relational, dynamic, and situated ontology of knowledge, particularly within the social sciences and humanities.

Accordingly, the pedagogy of complexity complements the reductionist epistemology of classical science by integrating the diverse strata that constitute the ontological phenomena of all living beings. In turn, transdisciplinary education—grounded in an inter-epistemological dialogue where opposing yet complementary realities coexist—enables individuals to feel, think, and act in harmony with nature and the cosmos, unifying scientific knowledge of the external universe with the wisdom of the inner spiritual realm (Collado, 2017). Within this framework, the present proposal serves as an essential pathway for reconfiguring educational models, recognizing that the complexity of reality demands equally sophisticated forms of knowledge. This epistemic posture acknowledges that fragmentation is a cognitive illusion, and that the indivisible totality of a holographic universe can be interpreted by the brain of the subject-observer, which functions as a hologram. Thus, the educator ceases to be a passive transmitter of content and becomes an active subject who interprets, mediates, and co-constructs meaning across multiple, interdependent contexts.

According to Gobat and Berger (2018), teacher training and pedagogical experience shape a professional identity that directly governs the



quality of student learning. By anchoring teacher education within this philosophical framework, the objective is to guide the evolution of critical thinking toward complex, transdisciplinary scientific horizons that actively explore learning processes, intelligence, creativity, and personality (Fürst, 2016). In this sense, transdisciplinary training represents a necessary condition for strengthening an educational model that is critical, ethical, and committed to contemporary systemic crises. Looking ahead, the educational sciences must prepare teachers who can equip citizens to confront climate change and the unfolding sixth mass extinction (Leakey and Lewin, 1996). This task demands an epistemological perspective open to breakthroughs in neuroscience (Damasio, 2018), psychosomatic intelligence (Núñez, 2011), transpersonal psychology (Weil, 2003), shamanic perspectivism (Viveiros de Castro, 1998), and the trans-knowledge of dream ontology (Job, 2013). Far from constituting a scattered eclecticism, this openness responds to the vital necessity of articulating distinct levels of understanding within a coherent framework of human formation.

Ultimately, the 21st century imposes multifaceted challenges upon the educational domain, making it imperative to sustain the philosophical debate surrounding teacher education, pedagogical innovation, and social transformation. How will contemporary educational institutions confront the socio-environmental crises of our time? How will teacher-training programs operationalize the epistemological and ontological advances of the complexity sciences? These questions must remain at the forefront of the philosophy of education to facilitate a transition toward an authentic culture of peace. Consequently, revisiting educator training through the lens of complexity is not a mere theoretical option; it is a historical imperative for constructing more just, democratic, and regenerative societies.

Notes

1. This article was developed as a result of a Research Fellowship conducted at Sorbonne University, Paris, France, and approved by the National University of Education of Ecuador (UNAE) within the framework of the research project "Philosophy of Education: Reflections for Transdisciplinary Teacher Education", under Project Code VIP-UNAE-2019-1.
2. This article adopts the Anglo-Saxon meaning of the term "ontology," understood as the branch of philosophy that deals with the nature of being and its place within the cosmophysical and bioenergetic dimensions. It is understood as a discipline that studies being, centered on understanding material and energetic phenomena in their inseparable interrelation.

3. From the perspective of human sensory perception, it is impossible to conceive of a movement from point A to point B without passing through the intermediate points that separate them.
4. Physical phenomena are interpreted as the result of a continuous sequence of causal relationships.
5. If the position and velocity of an object are known, it is possible to determine its behavior in spacetime.
6. See the explanation of the double-slit experiment in quantum physics by García Orduña (2012).

Bibliography

ALMEIDA, Maria

2017 *Ciências da complexidade e educação. Razão apaixonada e politização do pensamento*. Curitiba: Appris editora.

BACHELARD, Gaston

1977 *La formation de l'esprit scientifique: contribution à une psychanalyse de la connaissance objective*. Paris: Librairie Philosophique J. Vrin.

BARROSO, João

2018 A transversalidade das regulações em educação: modelo de análise para o estudo das políticas educativas em Portugal. *Educação & Sociedade*, 39(145), 1075-1097. <https://doi.org/10.1590/es0101-73302018214219>

BOHM, David & HILEY, Basil

2009 *The Undivided Universe. An ontological interpretation of quantum theory*. Nueva York: Routledge.

BOURDIEU, Pierre & PASSERON Jean Claude

1970 *La reproduction: éléments pour une théorie du système d'enseignement*. Paris: De Minuit.

CAHOUR, Beatrice & LANCERY, Alain

2011 Émotions et activités professionnelles et quotidiennes. *Le travail humain*, 74, 97-106. <https://doi.org/10.3917/th.742.0097>

CAPRA, Fritjof

2010 *The Tao of Physics. An exploration of the parallels between modern physics and Eastern mysticism*. Londres: Harper.

CARDON, Clémence & D'ENFERT, Renaud

2017 L'histoire des disciplines: un champ de recherche en mutation. *Revue Française de Pédagogie*, 199(2), 5-22. <https://bit.ly/4wJXWzI>

COLLADO, Javier

2017 Reflexiones filosóficas y sociológicas de la educación: un abordaje paradigmático. *Sophia, Colección de Filosofía de la Educación*, (23), 35-62. <https://doi.org/10.17163/soph.n23.2017.01>

CRUTZEN, Paul

2006 The "Anthropocene". En: Eckart Ehlers & Thomas Krafft (eds.), *Earth System Science in the Anthropocene* (pp. 13-18). Berlín: Springer. https://doi.org/10.1007/3-540-26590-2_3





- DAMASIO, Antonio
2018 *En busca de Spinoza: neurobiología de la emoción y los sentimientos*. Barcelona: Destino.
- DANVERS, Francis
2020 Carré, P. & Mayen, P.-Psychologies pour la formation. *L'orientation Scolaire et Professionnelle*, 49(2), 367-370. <https://doi.org/10.4000/osp.12262>
- DASTON, Lorraine
2017 The History of Science and the History of Knowledge. *Know: A Journal on the Formation of Knowledge*, 1(1), 131-154. <https://bit.ly/4u0sviq>
- DE SOUSA SANTOS, Boaventura
2010 *Para descolonizar el Occidente: más allá del pensamiento abismal*. Buenos Aires: CLACSO.
- DRAVET, Florence, PASQUIER, Florent, COLLADO, Javier & DE CASTRO, Gustavo (coords.)
2019 *Transdisciplinariedade e Educação do Futuro*. Brasília: UNESCO; Universidade Católica de Brasília.
- DUSSEL, Enrique
2006 *Ética de la liberación en la edad de la globalización y de la exclusión* (5ª ed.). Madrid: Trotta.
- ESSEN, Mineke & ROGERS, Rebecca
2003 Ecrire l'histoire des enseignants, *Histoire de L'éducation*, (98), 5-35. <https://doi.org/10.4000/histoire-education.990>
- FEYERABEND, Paul
1975 *Against Method*. Londres: Verso.
- FIRODE, Alain
2008 Le cartésianisme dans le cours de philosophie au début du XVIIIe siècle, *Histoire de L'éducation*, (120), 55-76. <https://doi.org/10.4000/histoire-education.1832>
- FOUCAULT, Michel
1975 *Surveiller et punir: naissance de la prison*. París: Gallimard.
- FÜRST, Guillaume
2016 Créativité, apprentissage, intelligence et personnalité. *Revue Française de Pédagogie*, 197(4), 23-34. <https://bit.ly/43DZEV7>
- GALEFFI, Dante
2017 *Recriação do Educar: epistemologia do educar transdisciplinar*. Saarbrücken: Novas Edições Acadêmicas.
- GALVANI, Pascal
2002 A autoformação, uma perspectiva transpessoal, transdisciplinar etranscultural. En: Américo Sommerman, Maria F. de Mello & Vitória M. de Barros (orgs.) *Educação e transdisciplinaridade II* (pp.93-122). São Paulo: Triom. <https://bit.ly/4tVjU01>
- 2016 Quelle formation pour les formateurs transdisciplinaires? Éléments pour une méthodologie réflexive et dialogique. *Présences*, 9, 1-25. <https://bit.ly/42Whpzj>
- GARCÍA ORDUÑA, Aaron Omar
2012 *Mecánica cuántica, experimento de la doble rendija*. YouTube, publicado el 6 de agosto de 2012. <https://bit.ly/376SU9b>

GIBBS, Paul

- 2017 Transdisciplinary Thinking: Pedagogy for Complexity. En: Autor, *Transdisciplinary Higher Education* (pp.45-56). Cham: Springer. https://doi.org/10.1007/978-3-319-56185-1_4

GOBAT, Elodie & BERGER, Jean

- 2018 Les croyances pédagogiques et identitaires des enseignants de la formation professionnelle: le rôle de l'expérience d'enseignement et de la formation pédagogique. *Canadian Journal of Education*, 41(2), 441-471. <https://bit.ly/3Q67tk8>

GODEMANN, Jasmin

- 2008 Knowledge Integration: A Key Challenge for Transdisciplinary Cooperation. *Environmental Education Research*, 14(6), 625-641. <https://doi.org/10.1080/13504620802469188>

GUIMARAES, Angela & FUNTOWICZ, Silvio

- 2015 *Science, Philosophy and Sustainability: The End of the Cartesian Dream*. Nueva York: Routledge.

HAGÈGE, Hélène

- 2014 Des modèles du sujet pour éduquer à la responsabilité: Rôles de la conscience et de la méditation. *Éducation et Socialisation*, (36). <https://doi.org/10.4000/edso.1068>

HARVEY, Léonard & LEMIRE, Guilles

- 2001 *La nouvelle éducation. NTIC, transdisciplinarité et communautaire*. Québec: Les Presses de l'Université Laval.

HEYLIGHEN, Francis

- 2011 Self-organization of Complex, Intelligent Systems: An Action Ontology for Transdisciplinary Integration. *Integral Review*, 1-39. <https://bit.ly/4dNcC8q>

HOLZKAMP, Klaus

- 1981 *Theorie und experiment in der Psychologie*. Berlín: Water der Gruyter.

JAHN, Robert & DUNNE, Brenda

- 2009 *Margins of Reality. The role of Consciousness in the Physical World*. Princeton: ICRL Press.

JOB, Nelson

- 2013 *Confluências entre magia, filosofia, ciência e arte: a ontologia onírica*. Río de Janeiro: Cassará.

KAUFFMAN, Stuart

- 2010 *Reinventing the Sacred. A New View of Science, Reason, and Religion*. Nueva York: Basic Books.

KRISHNAMURTI, Jiddu

- 2012 *De l'éducation*. París: Presses du Chatelet.

KUHN, Thomas

- 1970 *The Structure of Scientific Revolutions*. Chicago: The University of Chicago.

LAGEMANN, Ellen

- 2000 *An Elusive Science. The Troubling History of Education Research*. Chicago: The University of Chicago.

LAKATOS, Imre

- 1971 History of Science and its Rational Reconstructions. En: Roger Buck & Robert Cohen (eds.), *PSA 1970: Boston Studies in the Philosophy of Science* (vol.



8, pp.91-136). Dordrecht: Springer. https://doi.org/10.1007/978-94-010-3142-4_7

LARSEN, Jesper (ed.)

2012 *Knowledge, Politics and the History of Education*. Berlín: LIT Verlag.

LATOUR, Bruno

1996 On interobjectivity. *Mind, Culture, and Activity*, 3(4), 228-245. https://doi.org/10.1207/s15327884mca0304_2

LEAKEY, Richard & LEWIN, Roger

1996 *The Sixth Extinction: Biodiversity and Its Survival*. Nairobi: Phoenix Books.

LEFF, Enrique

2001 *Racionalidad ambiental: la reapropiación social de la naturaleza*. México DF: Siglo XXI.

LEPLAT, Jaques & TERSSAC, Gilbert

1990 *Les facteurs humains de la fiabilité dans les systèmes complexes*. Marsella: Octares.

LIMA, Raira & GÓMEZ, Pedro

2024 Analogía entre diferencia de potencial eléctrico y diferencia de potencial gravitacional en la enseñanza de la física. *Sophia, Colección de Filosofía de la Educación*, (37), 103-129. <https://doi.org/10.17163/soph.n37.2024.03>

LOTRECCHIANO, Gaetano

2012 *Social Mechanisms of Team Science: A Descriptive Case Study Using a Multilevel Systems Perspective Employing Reciprocating Structuration Theory*. Washington DC: George Washington University.

LUONG, Hoai & NGUYEN, Viet

2026 La educación ambiental para el fortalecimiento de la conciencia ecológica, el desarrollo sostenible, la prosperidad y el bienestar humano. *Sophia, Colección de Filosofía de la Educación*, (40), 329-356. <https://doi.org/10.17163/soph.n40.2026.10>

LUPASCO, Stéphane

1960 *Les trois matières*. París: Julliard.

MALO, Antonio, AMBORSI, Marco, COLLADO, Javier & GALLARDO, Luis

2024 Transcending the Nature-Society dichotomy: A dialogue between the Sumak Kawsay and the epistemology of complexity. *Ecological Economics*. 216, 108044. <https://doi.org/10.1016/j.ecolecon.2023.108044>

MARKER, Michael

2009 Indigenous resistance and racist schooling on the borders of empires: Coast Salish cultural survival. *Paedagogica Historica*, 45(6), 757-772. <https://doi.org/10.1080/00309230903335678>

MARTIN, Brian

1993 The Critique of Science Becomes Academic. *Science, Technology & Human Values*, 18(2), 247-259. <https://doi.org/10.1177/016224399301800208>

McGREGOR, Sue

2015 Transdisciplinary Knowledge Creation. En: Paul Gibbs (ed.), *Transdisciplinary Professional Learning and Practice*. Cham: Springer. <https://doi.org/10.1007/978-3-319-11590-0>

MOIGNARD, Benjamin

2018 Les “nouvelles” problématiques éducatives: construction de l'objet. *Revue Française de Pédagogie*, 202(1), 65-75. <https://bit.ly/4e9ATac>

- MONTESSORI, María
 2004 *Para educar o potencial humano*. Campinas: Papirus.
- MORAES, Maria Cândida
 2017 *Transdisciplinaridade, criatividade e educação. Fundamentos ontológicos e epistemológicos*. São Paulo: Papirus.
- MORIN, Edgar
 1990 *Science avec conscience*. Paris: Seuil.
 1999 *La tête bien faite. Repenser la réforme, réformer la pensée*. Paris: Seuil.
 2000 *Les sept savoirs nécessaires à l'éducation du futur*. Paris: Seuil.
 2015 *Penser global: L'homme et son univers*. Paris: MSH.
- MORIN, Edgar & LE MOIGNE, Jean
 1999 *L'intelligence de la complexité*. Paris: L'Harmattan.
- MORIN, Edgar, CIURANA, Emilio & MOTTA, Raúl
 2003 *Eduquer pour l'ère planétaire, la pensée complexe comme méthode d'apprentissage dans l'erreur et l'incertitude humaine*. Paris: Balland.
- NICOLAS, Serge
 2018 Maurice Reuchlin et son histoire de la psychologie. *L'orientation Scolaire et Professionnelle*, 47(1). <https://doi.org/10.4000/osp.5566>
- NICOLESCU, Basarab
 1996 *La transdisciplinarité: manifeste*. Monaco: Rocher.
 2014 *From modernity to cosmernity: Science, culture, and spirituality*. Nueva York: State University of New York Press.
- NORGAARD, Richard
 2006 *Development Betrayed. The end of progress and a coevolutionary revisioning of the future*. Londres: Taylor & Francis.
- NÚÑEZ, María Cristina
 2011 Sustainability and Spirituality: A Transdisciplinary Perspective. *Transdisciplinary Journal of Engineering & Science*, 2. <https://doi.org/10.22545/2011/00013>
- OXFAM
 2022 *Las desigualdades matan: se requieren medidas sin precedentes para acabar con el inaceptable aumento de las desigualdades por la COVID-19*. Informe de OXFAM, enero 2022. <https://bit.ly/4f8vgKx>
- PASQUIER, Florent
 2019 Évolutions des structures sociales et conséquences sur les métiers de l'enseignement, *Empan, Prendre la Mesure de L'humain*, (113), 101-108. <https://bit.ly/4wTL5Lv>
- PASQUIER, Florent & NICOLESCU, Basarab
 2019 To be or Not to be Transdisciplinary, That is the New Question. So, How to be Transdisciplinary? *The Atlas, Transdisciplinary Journal of Engineering & Science*, 10, 1-7. <https://doi.org/10.22545/2019/0110>
- PAUL, Patrick
 2009 *Formação do sujeito e transdisciplinaridade: história de vida profissional e imaginal*. São Paulo: Triom.
- PIAGET, Jean
 1970 *Psychologie et épistémologie*. Paris: Denoël.



- PIÉRON, Henri
 1951 *Les problèmes fondamentaux de la Psychophysique dans la science actuelle*. París: Hermann.
- PINEAU, Gaston
 2004 *Temporalidades na formação*. São Paulo: Triom.
- POPPER, Karl
 2005 *The Logic of Scientific Discovery*. Nueva York: Taylor & Francis.
- RIECHMANN, Jorge
 2014 *Un buen encaje en los ecosistemas*. Madrid: Catarata.
- RURY, Jhon & TAMURA, Eileen (eds.)
 2019 *The Oxford Handbook of the History of Education*. Oxford: Oxford University Press.
- SALGADO, Juan Pablo
 2021 *Un ecosistema llamado Universidad*. Quito: UPS; Abya-Yala.
- SARTRE, Jean Paul & ELKAÏM-SARTRE, Arlette
 2012 *L'être et le néant : Essai d'ontologie phénoménologique*. París: Gallimard.
- SHIVA, Vandana
 2020 *Reclaiming the Commons: Biodiversity, Traditional Knowledge, and the Rights of Mother Earth*. Nuevo México: Synergetic Press.
- SMITH, Huston
 2003 *Why Religion Matters. The Fate of the Human Spirit in an Age of Disbelief*. Nueva York: Harper Collins.
- STADDON, John
 2018 *Scientific Method. How Science Works, Fails to Work, and Pretends to Work*. Nueva York: Routledge.
- UNESCO
 2015 *Forum mondial sur l'éducation 2015: rapport final*. París: UNESCO. <https://bit.ly/4uDM016>
- VEDRAL, Vlatko
 2018 *From Micro To Macro: Adventures Of A Wandering Physicist*. Londres: Oxford University Press.
- VIVEIROS DE CASTRO, Eduardo
 1998 Cosmological deixis and Amerindian perspectivism. *Journal of the Royal Anthropological Institute*, 4(3), 469-488. <https://doi.org/10.2307/3034157>
- WALSH, Catherine
 2013 *Pedagogías decoloniales: prácticas insurgentes de resistir, (re)existir y (re)vivir* (vol. 1). Quito: Abya-Yala.
- WEIL, Pierre
 2003 *L'art de vivre la vie*. Mónaco: Éditions du Rocher.
- WILSON, Edward
 1998 *Consilience: The Unity of Knowledge*. Nueva York: Random House.
- WWF (WORLD WILDLIFE FUND)
 2014 *Living Planet Report 2014. Species and Spaces, People and Places*. 7 de noviembre. <https://bit.ly/43wqgbs>

Authorship Statement—CRediT Taxonomy	
Authors	Contributions
Javier Collado Ruano	Conceptualization, research, project management, fund-raising, writing, review, and editing.
Florent Pasquier	Research, methodology, writing, review and editing, validation, formal analysis, and conceptualization.

Statement on the Use of Artificial Intelligence
The authors, Javier Collado Ruano and Florent Pasquier, of the article titled “Epistemological and Ontological Foundations for Transdisciplinary Teacher Training,” submitted to the OJS of the journal <i>Sophia, Philosophy of Education Collection</i> , for review and evaluation as part of the editorial process, declare that the preparation of the document was supported by artificial intelligence (AI) at a level of 0%.

Date of receipt: October 16, 2022

Review date: January 20, 2023

Date of approval: March 26, 2023

Publication date: July 15, 2026

PURPOSE IN LIFE IN ADOLESCENTS AFTER A LEARNING EXPERIENCE

El sentido vital de los adolescentes tras una experiencia de aprendizaje

MARÍA MILAGROS ARMAS ARRÁEZ*

Universidad Internacional de La Rioja, Logroño, Spain

<https://ror.org/029gnnp81>

mariamilagrosarmas@unir.net

<https://orcid.org/0000-0003-2977-4838>

Suggested citation: Armas Arráez, María Milagros. (2026). Purpose in Life in Adolescents after a Learning Experience. *Sophia, Colección de Filosofía de la Educación*, (41), pp. 79-110.

Abstract

Adolescents focused on *having* instead of *being* immerse themselves in dissatisfaction and a life full of emotional deficiencies and problem-solving skills, highlighting the need to enhance their sense of purpose and maturity for learning. Therefore, a competency-based learning experience is developed and applied, and the sense of purpose is measured before and after the application. This is an empirical and experimental study, where the objectives are: firstly, to verify the psychometric characteristics of the Purpose In Life (PIL) inventory, and secondly, to assess whether the intervention of a competency-based learning experience can increase the sense of purpose in adolescents. A longitudinal, quantitative, descriptive, and comparative research is conducted. The construct of sense of purpose is measured in 1068 applications of the inventory, and the characteristics of the adolescents are collected using an *ad hoc* questionnaire. The data were analyzed with Cronbach's Alpha, factor analysis, and the T-test were used. The results showed high reliability of the PIL inventory in adolescents, and its validity reveals four intervening factors in the life meaning of adolescents. The research highlights students' interest in the experience of competency-based learning, due to the increase in participation. Education in vital skills is intended to contribute to personal well-being and develop the self.

Keywords

Adolescent, Education, Moral values, Well-being, Skills, Lifelong learning.

* Ph.D. *cum laude* in Psychology and a Bachelor's degree in Psychology from UPSA; Ph.D. *cum laude* in Education from ULL; a degree in Early Childhood Education from UNIR; a Ph.D. and a research qualification from UNED; and various master's degrees, specialist certifications, and expert certifications in different fields. She works primarily as a clinical psychologist in private practice and at Santa Cruz Hospital, a forensic psychologist in the Canary Islands courts, and a mediator; she is also a tenured professor at UNIR and a researcher pursuing various lines of research.

h-Index: 5.

Resumen

Los adolescentes dirigidos al *tener* en lugar de al *ser*, se sumergen en la insatisfacción y en una vida llena de carencias afectivas y habilidades resolutorias, lo que pone de relieve la necesidad de aumentar su sentido vital y madurez para el aprendizaje. Por ello, se desarrolla y aplica una experiencia de aprendizaje competencial y se mide el sentido vital pre- y postaplicación. Es un estudio empírico y experimental, donde los objetivos son: comprobar las características psicométricas del inventario Purpose In Life (PIL) y valorar si la intervención de una experiencia de aprendizaje competencial puede aumentar el sentido vital en adolescentes. La investigación es longitudinal, cuantitativa, descriptiva y comparativa. Se mide el constructo “sentido vital” en 1068 aplicaciones del inventario y se recogen las características de los adolescentes con un cuestionario *ad hoc*. Los datos se analizaron con el alfa de Cronbach, el análisis factorial y la prueba T. Los resultados muestran la alta fiabilidad del inventario PIL en adolescentes y su validez revela cuatro factores intervinientes en el sentido vital de los adolescentes. La investigación pone de relieve el interés del alumnado en la experiencia de aprendizaje competencial por el aumento de participación. Se propone la educación en competencias vitales para contribuir al bienestar personal y desarrollar el ser.

Palabras clave

Adolescencia, educación, valores morales, bienestar, competencias, aprendizaje a lo largo de la vida.



Introduction

Contemporary adolescents frequently exhibit a perceived deficit in moral values and a lack of existential purpose, a phenomenon where “having” takes precedence over “being”—a trend driven by contemporary consumerism, shifting motivations, and a fragmentation of life goals (Merino *et al.*, 2021). Adolescence constitutes the critical developmental stage during which moral consciousness is fully consolidated and socio-emotional development assumes greater significance than in earlier periods. Consequently, achieving alignment between intra-psychic listening and moral consciousness is essential for holistic development and the cultivation of a meaningful life (Armas Arráez, 2015).

Historically, Piaget (1985) posited that adolescents construct morality through obedience and mutual respect, integrating foundational parental guidance. Expanding upon this, Frankl (2004) argued that existential development requires an additional dimension: the voice of transcendence. Accessing this transcendent dimension necessitates psychological maturity, while the practical application of internalized values demands both specific competencies and developmental readiness, thereby establishing maturity as a higher-order skill fostered during adolescence (Bernal Guerrero, 2003). Because maturity and cognitive learning are interdependent, their interaction enables subsequent self-directed development. Therefore, educational frameworks must promote compe-

tencies that foster concurrent academic and personal growth, equipping students to effectively navigate systemic societal challenges (Alonzo Rivera *et al.*, 2016).

Under this conceptual framework, learning requires robust moral development, psychological maturity, the cultivation of life skills, and the formulation of a sense of purpose within the educational ecology:

- Reyes *et al.* (2025) underscore the importance of implementing structured programs designed to foster purpose within educational institutions and pedagogical practices.
- Caro Beltrán and Correa Arias (2023) indicate that existential vacuum stems from a deficit in social bonding and community building, which subsequently hinders identity formation and self-expression; they argue that a supportive educational community can mitigate this vacuum by fostering a sense of purpose.
- Nakamura *et al.* (2022) suggest that existential purpose is more malleable during early developmental stages, given that interventions targeted at adult populations yield only modest effects.

81



To address this identified need, an inclusive, holistic life skills intervention was designed and implemented, integrating digital technologies and creative methodologies. This competency-based educational experience aims to cultivate emotional intelligence, resilience, core values, moral consciousness, spirituality, and self-actualization, thereby driving intrinsic motivation and an enhanced sense of purpose. While the theoretical premises underlying this intervention are delineated in subsequent sections, presenting the operational mechanics of the experience itself falls outside the scope of this paper. Rather, the purpose of this study is threefold:

- To theoretically justify the psychological and developmental dimensions fostered by the intervention by systematically linking existential purpose to morality, values, self-actualization, emotional intelligence, spirituality, resilience, and life competencies (as analyzed in sections 2 through 5).
- To determine the empirical effect of this life skills experience on adolescents by evaluating variations in their sense of purpose. To operationalize the construct “sense of life,” the Purpose in Life (PIL) test (Crumbaugh & Maholick, 1969) was selected. This attitude scale is designed to quantify the degree to which an individual experiences existential meaning versus existential vacu-

um. While the PIL has been extensively validated across clinical settings (Armas Arráez, 2015; Armas Arráez *et al.*, 2017), university cohorts (Gallego Pérez & García Alandete, 2004; García Alandete *et al.*, 2011; Gottfried, 2019; Jonsén *et al.*, 2010; Magaña *et al.*, 2004; Noblejas, 2011; Porras & Noblejas, 2007; Risco, 2009; Valdivia Pareja, 2007), and youth vocational guidance programs (Cuny, 2007; Dewitz *et al.*, 2009), it lacks rigorous psychometric validation within non-clinical adolescent populations.

- To address this methodological gap by evaluating the psychometric quality of the instrument. Ensuring the technical suitability of measurement tools is a prerequisite for rigorous scientific inquiry to guarantee that the data yields an accurate approximation of the empirical reality under study. Consequently, this study analyzes the adolescents' sense of purpose longitudinally, comparing pre- and post-intervention scores.

Methodologically, this inquiry is structured as an empirical, quantitative study incorporating descriptive, comparative, correlational, and longitudinal experimental designs. The overarching research agenda encompasses two primary general objectives:

- To evaluate the psychometric properties of the PIL inventory within an adolescent sample, which entails two specific objectives: assessing its internal consistency (reliability) and verifying its construct validity.
- To evaluate the efficacy of the life skills intervention by statistically comparing pre- and post-test PIL scores.

Based on these objectives, the following research hypotheses are formulated:

- The PIL inventory demonstrates robust psychometric properties suitable for scientific research and accurately measures its target construct.
- Participation in the life skills intervention significantly modifies adolescents' documented sense of purpose, as evidenced by statistical variances between pre- and post-intervention scores (alongside its corresponding alternative hypothesis).

The remainder of this paper is organized as follows: first, the theoretical foundation is established, examining the intersections of moral consciousness, self-actualization, emotional intelligence, spirituality, re-

silience, and life competencies. Second, the empirical framework is presented, detailing the methodology, statistical results, and subsequent discussion to accept or reject the formulated hypotheses. Finally, the paper concludes with a summary of key contributions, pedagogical implications, and study limitations.

Moral Consciousness, Values, and Meaning in Life

Every existential situation necessitates the selection of a course of action; in this process, moral consciousness guides individual behavior toward ethical outcomes, wherein actions are executed or virtues are operationalized under the guidance of core values (Armas Arráez, 2015). From a humanistic perspective, attaining the “super-meaning” of life requires the progressive development of moral consciousness through a structured hierarchy of values (Frankl, 1988). Conversely, the positivist paradigm suggests that cultivating a meaningful life depends on the development of character strengths and the establishment of positive interpersonal relationships (Seligman, 2003). To differentiate these constructs, Sánchez (2014) notes that values undergo internalization, whereas virtues are progressively acquired through practice. Empirically, both values and virtues remain inextricably linked within the structural maturation of moral consciousness.

Values represent a critical, cross-cultural, and universal concern that transcends ethnic, religious, or racial boundaries (Hidalgo Hernández, 2005). Although individual beliefs heavily configure both moral frameworks and existential purpose (Ortega, 2020), the systemic need to cultivate moral consciousness has driven the emergence of moral pedagogy. This field encompasses personalized educational methodologies grounded in contextualized dialogue, designed to develop individuals of character capable of transforming both their immediate reality and themselves (Chacón Arteaga, 2014). Consequently, moral education requires behavioral internalization, adaptation to prosocial norms, autonomous development, and socio-emotional learning (Florentino Morillo, 2022).

The critical role of these dimensions is evident in specialized populations; for instance, institutionalized juvenile offenders in Argentina frequently exhibit a severely depleted sense of purpose in life. For this demographic, fostering moral consciousness and facilitating the formulation of an autonomous life plan are essential steps toward self-actualization, achieved through the activation of creative, experiential, and attitudinal values (Vecino, 2022).



To effectively educate for moral consciousness, instructional designs must utilize moral dilemmas as contextualized learning situations. These dilemmas should be derived from real-world scenarios, maintain structural simplicity, present binary outcomes with distinct moral implications, and require specific proposals for action (Rodero, 2025). Within innovative pedagogical practices, Morales and Camacho (2026) utilized multimedia tools—specifically video—to deepen student learning through a philosophical and pedagogical framework, encouraging ethical reflection driven by pedagogical action. Similarly, Cáceres (2025) deployed puppetry as an instructional medium to stimulate adolescent discourse and reflection regarding ethics and morality, thereby fostering critical thinking and moral awareness.

Synthesizing these findings, it is imperative to integrate moral value education into academic curricula so that students can apply these frameworks to real-world problem-solving and authentic learning contexts. This integration enables learners to construct a defined sense of purpose aligned with moral awareness, ultimately fostering the psychological maturity and self-actualization analyzed in the subsequent section.



Self-Actualization, Emotional Intelligence, and a Sense of Purpose

Self-actualization is achieved by fostering individual potential, which concurrently drives prosocial systemic change and promotes the pursuit of meaning across all life domains (Gómez del Campo *et al.*, 2011). In tandem, perceived self-efficacy requires the formulation of personal goals and positive achievement expectations (Sansinenea *et al.*, 2008). Empirically, a direct and significant relationship exists between self-efficacy and a positive sense of purpose, generating positive existential feedback loops that optimize subjective well-being and overall health (Morillo Ahumada, 2013; Armas Arráez & López Castedo, 2018). Consequently, contemporary educational paradigms require high-quality pedagogical processes characterized by positive interpersonal classroom dynamics. This necessitates instructional strategies grounded in care, the recognition of emotional complexity, the cultivation of prosocial skills, and the alignment of individual self-actualization demands with broader social expectations (Bernal Guerrero & König Bustamante, 2017).

Implicit in this framework is the development of emotional intelligence, which encompasses the accurate appraisal and regulation of one's

own emotions, intrinsic self-motivation, and the recognition of emotional states in others (Goleman, 1995)—constructs that theoretically map onto intra- and interpersonal intelligences (Gardner, 1993). Therefore, intervention programs focusing on life skills must systematically integrate emotional competencies, given that both existential fulfillment and academic learning are mediated by effective emotional regulation and intrinsic motivation. Personal interest is a prerequisite for internalizing knowledge, as intrinsic motivation drives the psychological flow of learning (Armas Arráez, 2019). This underscores the imperative of intrinsic motivation in all educational processes; regarding life skills specifically, cultivating emotional competence is essential for both cognitive learning (intrapersonal dimension) and adaptive life development (interpersonal dimension). This dual focus facilitates the transition from declarative knowledge to functional know-how while developing a moral consciousness that shifts individual orientation from “having” toward “being.”

Recent empirical evidence supports these interconnections within adolescents. On one hand, subjective life satisfaction correlates positively with emotional self-regulation, which subsequently functions as a foundational mechanism for psychological resilience (Frutos de Miguel, 2025). On the other hand, reorienting existential focus from materialistic consumerism (“having”) toward ontological depth (“being”) requires an openness to spirituality as a transformative ethical framework (Colorado, 2025). To explore these intersections further, the subsequent section delineates the explicit connections between existential purpose, spirituality, and resilience.

Spirituality, Resilience, and Meaning in Life

Educating in life skills extends beyond functional know-how; it entails equipping individuals with psychological resources, adaptive abilities, character strengths, and structured experiences to act responsibly throughout their lifespans. This process requires a humanistic pedagogical framework that infuses meaning into instructional design, given that the mere transmission of declarative knowledge does not cultivate competence; true competence necessitates the convergence of knowing, knowing how to act, and knowing how to be. Consequently, educational content, skills, attitudes, and values must be systematically oriented toward fostering both student “know-how” and ontological “being” (Armas Arráez, 2015; Sánchez Cabaco *et al.*, 2008; Martínez, 2010). The dimen-

sion of “being” encompasses critical intra- and interpersonal traits —such as empathy, self-esteem, social competence, frustration tolerance, and conflict-resolution skills— all of which are core components of emotional intelligence. Furthermore, it integrates goal-oriented intrinsic motivation, core values, spirituality, and resilience, which collectively drive prosocial success and holistic human development (Armas Arráez, 2015).

Within this framework, spirituality and resilience emerge as two pivotal dimensions intrinsically linked to existential meaning and the acquisition of life skills. In this regard, Arciniega González (2020) posits that a comprehensive framework for meaningful learning must explicitly address the teleological purpose of learning, the mechanics of learning through coexistence, and the diverse sources of knowledge within heterogeneous contexts, thereby promoting education oriented toward the common good. A substantial body of literature supports the mandate to foster these overarching life competencies (Sánchez Cabaco *et al.*, 2011; Farstad, 2004; Risco Lázaro & Sánchez Cabaco, 2010), personal and social skills (Goleman *et al.*, 2002; Noblejas, 2011), emotional competencies (Bisquerra Alzina, 2003; Bisquerra Alzina & Pérez Escoda, 2007; Faure *et al.*, 1972), and spiritual competencies, the latter of which transcend both traditional emotional intelligence and institutionalized religion (Fischman, 2017).

Spirituality functions as a powerful internal resource for constructing existential meaning and mitigating egocentrism in favor of universal benevolence and prosocial altruism (Vargas Herrera & Moya Marchant, 2018). By nurturing an understanding of universal interconnectedness, spirituality optimizes human interaction with both social peers and the broader environment. When operationalized as spiritual intelligence, this dimension is considered essential for fostering self-regulation, psychological resilience, and holistic well-being during the critical developmental stage of adolescence (Pacheco de Pauliz *et al.*, 2025).

Simultaneously, resilience is empirically linked to a defined sense of purpose in life. This intersection has been extensively verified within higher education cohorts (Smedema Malonda & Módenes, 2018) as well as within clinical populations, where a direct positive correlation between existential meaning and resilient coping mechanisms has been established (Armas Arráez *et al.*, 2017). Among adolescent samples, resilience significantly predicts subjective well-being (Omar, 2007); for instance, an empirical study involving 230 adolescents demonstrated a significant positive relationship between resilient adaptations and global life satisfaction (Casavilca & Solano, 2025). Mechanistically, Muñoz Betancourt



(2017) identifies creative coping strategies as a cognitive bridge connecting self-efficacy to resilience, ultimately enhancing the individual's sense of purpose. Under this view, adolescent happiness is conceptualized not as mere hedonic pleasure, but as eudaimonic fulfillment achieved through structured activities that catalyze internal development and experiential growth (Castro, 2026).

Synthesizing these theoretical and empirical insights, it is imperative to systematically foster spirituality and resilience through creative pedagogical resources. By enhancing self-efficacy and emotional self-regulation, these interventions enable adolescents to actively accept and resolve complex life situations through the practical application of life competencies.

Life Skills and Meaning in Life

87



The foundational premise of this inquiry posits that an individual's existential purpose is dynamic and subject to longitudinal modification; consequently, numerous studies have sought to optimize both life competencies and meaning within educational frameworks (Crumbaugh & Maholick, 1969; Noblejas, 2011). Incorporating a phenomenological approach within secondary education, Espinosa *et al.* (2016) evaluated an extracurricular life skills intervention involving high school students, demonstrating that the program successfully cultivated respect for diversity, self-directed learning driven by personal initiative, and active civic and ethical community engagement. Similarly, Salvino (2009) underscored the conceptualization of existential meaning as a structural framework for designing educational curricula rooted in attitudinal values.

The empirical literature documents diverse applications of purpose-centric interventions across student populations. Nationally and internationally, these programs have yielded significant insights:

- Following an empirical evaluation of 445 university students, Molasso (2006) argued that institutional policies must systematically integrate interventions that equip students with the cognitive and emotional tools necessary to cultivate existential clarity and subjective well-being.
- Barahona *et al.* (2013) operationalized a program grounded in “positive instructional cognition” with a sample of 110 secondary and higher education students, successfully promoting core life skills aligned with the competency-based mandates of the European Higher Education Area (EHEA).

- Utilizing a controlled experimental design with participants aged 17–18, Gottfried (2017) implemented a structured intervention to enhance existential meaning, evaluating outcomes via pre- and post-test administrations of the Purpose in Life (PIL) test. The findings revealed that the experimental group achieved a significantly higher sense of purpose and a greater capacity for personal achievement than the non-participating control group.
- Exploring the qualitative dimensions of this construct among young adults aged 20–24, Hernández *et al.* (2016) determined that the formulation of existential purpose is primarily driven by the convergence of professional development, autonomous personal growth, and prosocial interpersonal relationships.
- Berrocal (2019) evaluated the efficacy of the “Aprendo para la Vida” intervention utilizing an experimental framework with 48 secondary students; the post-intervention data confirmed a significant increase in the participants’ target life competencies.



From a curricular perspective, life skills must not be treated as isolated instructional blocks but should be integrated transversely across educational frameworks. This cross-curricular implementation facilitates an inclusive, humanistic, and integrative educational paradigm (Alegre, 2010). This approach aligns with the four classical pillars of education: learning to know, learning to do, learning to live together, and learning to be (Delors, 1996), which collectively nurture student talent, foster personal accountability, facilitate the construction of an autonomous life plan, and heighten awareness regarding universal human values (Bustos & Richmond, 2007). Expanding upon this model, Delors (2013) asserted that lifelong learning must remain anchored to these four pillars, emphasizing that a psycho-pedagogical policy shift is imperative to sustain competency development across all life stages.

The urgency of this approach is underscored by recent diagnostic data. A non-experimental inquiry conducted by Osorio (2021) revealed that 33% of surveyed adolescents experience profound difficulties in decision-making, express existential uncertainty regarding their future goals, question the inherent meaning of their objectives, and exhibit severe motivational deficits within academic tasks. This substantial prevalence of existential vacuum highlights the critical need for comprehensive empirical investigations regarding life purpose during adolescence as a prerequisite for effective life skill instruction.

Synthesizing this empirical background, it is evident that fostering life competencies and a structured sense of purpose within adolescents requires the systematic integration of moral awareness, value internalization, self-actualization, emotional intelligence, spirituality, and psychological resilience. Consequently, these interrelated dimensions established the conceptual and structural foundations for the competency-based learning experience evaluated empirically in the subsequent sections of this study.

Methodology

The following details the method, sample, instruments, procedures, and research phases used in this study.

Method

This study deployed an empirical, quantitative experimental design with a longitudinal and comparative approach. The operational mechanics involved the implementation of a competency-based learning situation as the independent variable to systematically evaluate its causal effect on the participants' documented sense of purpose, which served as the primary dependent variable. Longitudinal variations were captured by statistically comparing psychometric data generated prior to (pre-test) and following (post-test) the execution of the instructional unit.

In alignment with standard practices in behavioral and social science research, structured questionnaires were utilized for data elicitation. This measurement approach ensures that all respondents are exposed to identical items and standardized administration protocols, thereby minimizing procedural variance and ensuring that observed statistical variations are attributable to intra-individual differences rather than artifacts of the instruments or data collection processes (Fowler & Mangione, 1990).

Sample

The sample consists of 1,068 adolescent students aged 14 to 19, enrolled in different grade levels: the 3rd and 4th years of ESO and the 1st year of High School. The sample participants were recruited from two public high schools in two different municipalities in the Canary Islands (Spain)—one in San Cristóbal de la Laguna and the other in Santa Cruz de Tenerife— during two different administration periods of the questionnaire.



Initially, in the pre-implementation assessment of the learning experience, there were 518 participants, of whom: by age, 31.7% were 14 and 15 years old, 60.2% were 16 and 17 years old, and 8.1% were 18 and 19 years old; by gender, 43.6% were male and 56.4% were female. In the second phase, the post-unit assessment included 551 participants: by age, 27.2% were 14 and 15 years old, 62.4% were 16 and 17 years old, and 10.4% were between 18 and 19 years old; by gender, 39.7% were male and 60.3% were female. Participation in the life skills learning experience was voluntary and anonymous. All ethical procedures were followed when administering the instruments. There was an increase in participation throughout the implementation of the program or learning experience.

Instruments and Variables



The dependent variable is a sense of purpose, while the independent variable is the skills-based experience that brings about changes in the students; there are also descriptive variables for the sample of adolescents. Two questionnaires were selected because of their relevance to the research:

- An *ad hoc* questionnaire designed to collect descriptive information about the sample (gender, age, and grade level).
- The PIL inventory, an attitude scale that reveals the extent to which a person experiences meaning, purpose in life, and existential emptiness. Numerous studies confirm that it measures the attitudinal competence of life meaning with high reliability (Armas Arráez *et al.*, 2018; Caro Beltrán and Correa Arias, 2023; Noblejas, 2011). While there is considerable heterogeneity in the proposed factor structures for the PIL (García Alandete *et al.*, 2013), it has not been administered to the population of adolescent students selected for this study. Generally, it has been administered to college students (Caro Beltrán and Correa Arias, 2023; Fernández and Garzón, 2016; Jaramillo *et al.*, 2008; Risco, 2009). Moreno *et al.* (2020) examined the descriptive variables of secondary school students' sense of life purpose; however, they did not examine the factor structure of the PIL in that study. A study applying the PIL in a Thai context noted that it was appropriate for measuring adolescents aged 15 to 19 (Balthipa *et al.*, 2022). Therefore, it is necessary to study the factor structure in the Spanish middle and high school population and examine its fit with other data. The Spanish version of the PIL is used, consisting of 20 items on a 1-to-7 Likert-type

response scale, where 4 is the neutral point and 1 and 7 represent the extreme positions. It is administered in a group setting, and the completion time is approximately 30–40 minutes, as the participants are adolescents. The total score is obtained by summing the directly selected values, except for the reverse-scored items (2, 5, 7, 10, 14, 15, 17, 18, and 19). Therefore, a higher score corresponds to a greater sense of purpose in life.

Research Procedure and Phases

A circular model is employed in which the stages follow one another, generating and justifying the research decisions:

- In the first phase, questionnaires completed anonymously by the adolescents are administered to determine their initial sense of life prior to the implementation of the competency-based learning experience.
- In the second intervention phase, the competency-based learning experience is implemented, incorporating various methodological approaches: holistic, with a comprehensive focus; humanistic, as it explores students' needs and knowledge to transform them; behaviorist, as it aims to develop specific behaviors; and psychoanalytic, through the inclusion of guided symbolic activities. It is an open and flexible process that adapts to students' needs.
- In the third phase, the questionnaires from the first phase are administered again to obtain post-program results regarding the students' sense of purpose.
- The fourth and final phase consists of conducting the relevant statistical analyses described in the following subsection, followed by an analysis of the results to assess whether the objectives were met and to test the hypotheses, leading to the discussion and conclusions.



Data Analysis

Data analysis was performed using the SPSS v22 statistical software for Windows. After organizing the sample distribution based on the collected variables, the analysis was conducted in three distinct stages:



- Reliability was analyzed to ensure that the scale exhibits consistency, stability, and precision in the data, thereby enabling the prediction and inference of results. The reliability of the PIL was assessed using Cronbach's alpha, as it is one of the most widely recognized measures.
- Validity was examined because reliability alone is insufficient to support the legitimacy of the collected data; therefore, to ensure that an instrument measures what it claims to measure, it is necessary to consider validity (Bisquerra Alzina, 1987). Among the various approaches to validity, content validity and construct validity indicate that the instrument is suitable for measuring what it is intended to measure. Content validity prevents bias and erroneous inferences, while construct validity prevents the use of inappropriate variables that are not significant. The main component analysis procedure was used to relate the variables and reduce them to a smaller number of factors. This data analysis technique was used to identify homogeneous groups of variables from a large set of variables, reducing the dimensionality of the data to simplify its subsequent interpretation (Pardo and Ruíz, 2002) or to reduce the number of interrelated variables to a smaller number of independent factors (Corbetta, 2003). To do this, a factor analysis was performed using the principal components method, following the four characteristic phases: calculating the matrix capable of expressing the joint variability of all variables (commonalities); extracting the optimal number of factors (principal components); rotating the solution to facilitate interpretation; and estimating the subjects' scores on the new dimensions (based on interaction or conversion points) (Pardo and Ruíz, 2002).
- The t-test for independent samples was applied to determine whether there was a change in students' life skills following the implementation of the instructional unit or competency-based learning situation.

Results

First, a more reliable measure increases the likelihood of making a correct decision regarding the subjects of study—in this case, adolescents. Reliability was assessed as internal consistency using Cronbach's alpha,

where values above 0.75 indicate high reliability. The reliability of the scale, which exceeds this value regardless of when it was administered, is shown below:

Table 1
Reliability of the PIL Administered to Adolescents

Time of Questionnaire Administration	PIL Scale		
	Cronbach's alpha	Number of items	Sample size
Prior learning experience	0.833	20	518
Post-learning experience	0.871	20	550
Total	0.854	20	1068

To examine the construct validity of the PIL, a principal component analysis was used, and a multiple linear regression analysis was performed on the resulting components, where a new variable summarizes the scale into a single variable. First, the goodness-of-fit statistics for each analysis were calculated using Bartlett's sphericity test and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy.

As shown in Table 2, the Kaiser-Meyer-Olkin index for the PIL is 0.937 (higher than the required threshold of 0.800), indicating suitability for a factor analysis of the variables. Furthermore, Bartlett's sphericity test indicates that the data fit an appropriate factorial model and that the variables can be reduced through factor analysis.

Table 2
Factor Suitability of the PIL Applied to Adolescents

Kaiser-Meyer-Olkin (KMO)	0.937	
Bartlett's sphericity test	Chi-square	7,449.114
	G.l.	190
	Sig.	0.000

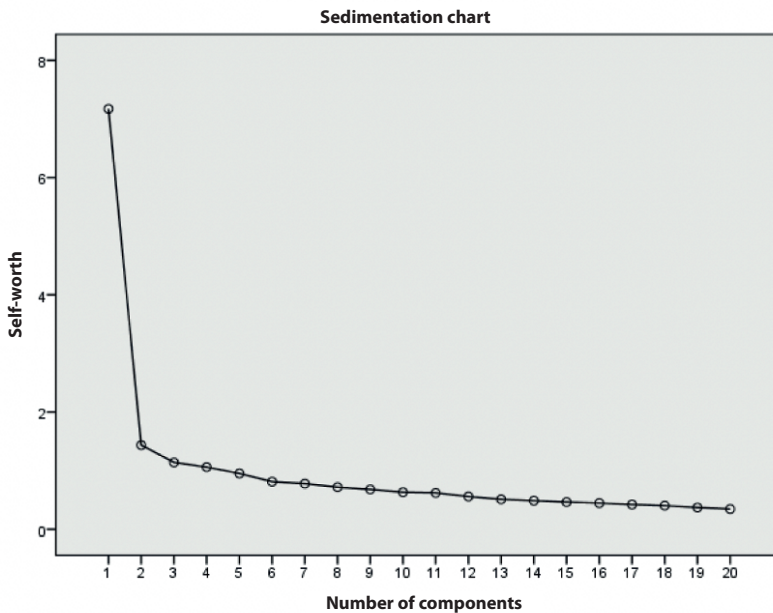
Furthermore, the communalities of the variables were calculated to determine the percentage of variance for each variable explained by the developed model. As shown in Table 3, based on the communality of the items, these are explained to an acceptable degree, as the values range from 0.24 to 0.66.

Table 3
Extraction method: principal component analysis (PCA)

PIL	Extraction
PIL 1	0.446
PIL 2	0.659
PIL 3	0.608
PIL 4	0.619
PIL 5	0.655
PIL 6	0.632
PIL 7	0.399
PIL 8	0.519
PIL 9	0.636
PIL 10	0.505
PIL 11	0.604
PIL 12	0.500
PIL 13	0.481
PIL 14	0.600
PIL 15	0.239
PIL 16	0.525
PIL 17	0.525
PIL 18	0.613
PIL 19	0.471
PIL 20	0.570

To extract the components, Kaiser's criterion was followed, where- by each component must have eigenvalues equal to or greater than 1. This is visually illustrated through the embedded scree plots. In Figure 1, the PIL scree plot shows a significantly higher weight for Component 1; there is a sharp difference compared to Component 2 and the rest of the inven- tory items, as these decrease gradually.

Figure 1
PIL Scatter Plot Applied to Adolescents



To interpret the data, it was decided to apply Varimax rotation to the factors, which ensures the absence of correlation among the components—a key consideration for constructing the variables that summarize the scales through multiple linear regression analysis.

As shown in Table 4, after applying Varimax rotation following the Kaiser method, four factors were obtained that explain 54.03% of the variance, ensuring that the factors are unrelated and provide distinct information. The first factor accounts for 20.74% of the variance; the second factor explains 14.27% of the variance; the third factor, 11.25% of the variance; and the fourth factor, which has the lowest weight, accounts for 7.77% of the variance.

Table 4

Total variance of the PIL applied to adolescents

Component	Initial eigenvalues			Rotated load sums of squares			Rotated load sums of squares		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative%	Total	Variance %	Cumulative %
1	7,172	35,861	35,861	7,172	35,861	35,861	4,148	20,742	20,742
2	1,436	7,178	43,039	1,436	7,178	43,039	2,854	14,272	35,015
3	1,140	5,699	48,738	1,140	5,699	48,738	2,250	11,248	46,262
4	1,059	5,295	54,033	1,059	5,295	54,033	1,554	7,770	54,033
5	0,952	4,759	58,791						
6	0,812	4,058	62,849						
7	0,779	3,894	66,743						
8	0,718	3,588	70,330						
9	0,680	3,398	73,729						
10	0,631	3,157	76,886						
11	0,620	3,101	79,987						
12	0,558	2,790	82,777						
13	0,510	2,550	85,327						
14	0,487	2,435	87,762						
15	0,463	2,314	90,076						
16	0,446	2,228	92,304						
17	0,421	2,106	94,410						
18	0,402	2,012	96,422						
19	0,371	1,854	98,276						
20	0,345	1,724	100,00						

Subsequently, using the Varimax rotation statistical procedure, summary variables were constructed for each scale, i.e., using the factors constructed for each scale, the total scores for each scale were estimated via multiple linear regression analysis. In this way, a summary variable was obtained for each scale, which facilitates the presentation of results and interpretation, yielding four factors.

The first factor accounts for the largest percentage of explained variance, at 20.74%. The set of items comprising this first factor in the rotated component matrix were items 11, 6, 16, 4, 9, 12, and 17. Table 5 shows the name of the resulting first factor, as well as the PIL items that comprise it along with their explicit content.

Table 5
Items included in Factor 1 of the PIL for adolescents

Items		Factor 1
11	I don't have any set goals in life —I have well-defined goals.	Capacity to live
6	If I could choose, I would rather not have been born —than to live a life exactly like this one a thousand times over.	
16	As for suicide, I've seriously considered it as a way out—I've never thought about it.	
4	My personal existence has no meaning—it has great meaning.	
9	My life is empty and hopeless—it's full of good and exciting things.	
12	When I consider the world in relation to my life, it completely baffles me—it has meaning for my life.	
17	I consider my ability to find meaning or purpose in my life to be very good—it is nonexistent.	

The second factor explains 14.27% of the variance and includes the items listed in Table 6, which were labeled “life purpose.” These items are distributed across different factors in other studies, which is why a label was chosen for this second factor based on the content of the items.

Table 6
Items included in Factor 2 of the PIL for adolescents

Items		Factor 2
3	When I think about my life, I often wonder why I exist—I always see a reason for why I'm here.	Life purpose
13	I'm irresponsible—yet very responsible.	
20	I haven't discovered any purpose or meaning in my life—I have very clearly defined goals and a sense of purpose that satisfies me.	
8	I haven't made any progress toward my life goals—I've made enough progress to be completely satisfied.	
7	If I didn't work, I'd like to do some things that have interested me—just wander around for the rest of my life.	

The third factor in Table 7 explains 11.25% of the variance and includes items 2, 5, 10, 19, and 1; it was named “life motivation.”

Table 7
Text of the Items Included in Each Factor 3
of the PIL for Adolescents

Items		Factor 3
2	Life always seems exciting to me—completely routine.	Life motivation
5	Every day is constantly new—exactly the same.	
19	Tackling my daily tasks is a source of pleasure and satisfaction—a boring and painful experience.	
10	If I were to die today, I would consider my life to have been worthwhile—not worthwhile at all.	
1	I am usually completely bored—excited.	

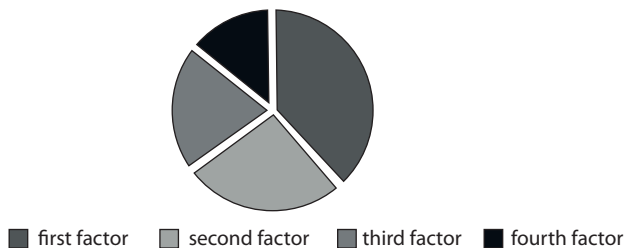
Finally, in Table 8, the fourth factor explains 7.77% of the variance and comprises items 14, 18, and 15; it was named “freedom to live.”

Table 8
Items included in Factor 4 of the PIL for adolescents

Items		Factor 4
18	My life is in my hands and under my control—or out of my hands and controlled by external factors.	Freedom to live
15	As for death, I am prepared and not afraid—I am not prepared and afraid of death.	
14	Regarding a person's freedom to make their own decisions, they are either completely free to choose or completely limited by their heredity and environment.	

In short, Tables 5, 6, 7, and 8 explain the composition of the factors, and the contents of the items that led to the identification of these factors in adolescents can be observed. Overall, Figure 2 shows the weight of the PIL factors applied to adolescents based on the percentage of variance explained, as previously observed in Table 2 using Varimax rotation.

Figure 2
Representation of the weights of the PIL factors in adolescents



Next, Table 9 provides a comprehensive overview of the four resulting factors and the items included in the PIL administered to the adolescent sample.

Table 9
Factors of the PIL administered to adolescents

Factors	Items Included
Capacity to Live	4, 6, 9, 11, 12, 16, 17
Life purpose	3, 7, 8, 13, 20
Life motivation	1, 2, 5, 10, 19
Freedom to live	14, 15, 18

Regarding the second general objective, the results indicated that the life skills program did not show significant differences. This result was skewed by the inclusion of 32 participants who did not complete the pre-program assessment, since participation in the program was voluntary and the questionnaire was anonymous; therefore, it was not possible to determine which participants had completed the entire program and which had joined after the program had begun and had not taken the pretest, which affected the result (Table 10).

Table 10
Impact of the Life Skills Program

Time of Questionnaire Administration		N	Mean	Standard deviation	Standard error
PIL	Pre-lesson unit	518	95.37	16.58**	0.73
	Post-teaching unit	550	94.93	18.47**	0.79
* $p < 0.1$ ** Significant differences in variances are assumed.					

Another possible explanation for the results is that the life skills program caused the subjects' responses to be more diverse from one another, since differences in variances were observed depending on when the instrument was administered. At the pre-life skills unit stage, deviations were centered around the mean and responses were more homogeneous, whereas at the post-unit stage, responses were more heterogeneous. In the post-unit phase, greater diversity was observed in the adolescents' responses to the PIL questionnaire.

Discussion

Regarding the first objective—the reliability and validity of the instruments—it should be noted that the reliability of the scale measuring PIL was studied by its authors, Crumbaugh and Maholick, using the split-half method, yielding a Pearson correlation coefficient of 0.81 and a Spearman-Brown correlation coefficient of 0.90. Subsequently, Crumbaugh (1969) obtained similar correlations (Pearson = 0.85 and Spearman-Brown = 0.92). In the Spanish population, the following studies stand out: Noblejas (2000), with a reliability coefficient of 0.88; Risco (2009), with 0.81; and Moreno (2013), who reported a reliability of 0.87 in university

populations. Armas Arráez (2015) achieved higher reliability results in a clinical population (Pearson = 0.90 and Spearman-Brown = 0.88).

The present study, using a sample of students aged 14 to 19 (in the 3rd and 4th years of secondary school and the 1st year of high school), obtained a Cronbach's alpha value of 0.83 in the pre-teaching unit or competency-based learning situation and 0.87 in the post-teaching unit or competency-based learning situation, with a total Cronbach's alpha of 0.85, which is consistent with previous research. Regarding validity, a statistical significance level of $p < 0.001$ (0.000) was observed, aligning with prior studies, while the heterogeneity of the factors postulated by the authors in their factor analysis was also noted. Four factors emerged from the adolescent sample:

- The first factor, labeled “capacity to live,” does not fully align structurally with previous studies; however, it remains similar. In Armas Arráez *et al.* (2018), five factors emerged that align with this one, termed “value of life.” A similar composition is found in Noblejas (2011), Jonsén *et al.* (2010), Magaña *et al.* (2004), Risco (2009), and García Alandete *et al.* (2013).
- The second factor, termed “life purpose,” was referred to as “capacity for meaning” in Armas Arráez (2015), with item 7 corresponding to this factor, as observed in the studies by García Alandete *et al.* (2013), Noblejas (2000), Jonsén *et al.* (2010), and Risco (2009).
- The third factor was identified as “life motivation.”
- The fourth factor was named “freedom to live,” a domain where establishing consensus has been difficult due to its heterogeneous distribution, although it bears similarities to the factor termed “freedom” by Caro Beltrán and Correa Arias (2023), which includes two of the identified items (14 and 18).

Regarding the second objective, variations in the meaning of life were observed following the implementation of the life skills program; however, the expected results were not fully achieved because some participants joined the program late and did not complete the pre-test. This late enrollment skewed the results, and due to the participants' anonymity, their questionnaires could not be removed from the sample, which constitutes a limitation of this study.

Even so, there is a positive takeaway: when discussing the life skills program, the students suggested new additions, indicating that the interest sparked in adolescents to acquire life skills was positively received. Furthermore, the students openly expressed verbally after the experience that



they perceived an increase in creative development, emotional intelligence in problem-solving, interpersonal skills, self-esteem and self-efficacy, sense of humor, resilience, generosity, and altruism, while also reporting greater well-being. Therefore, we consider that their life skills improved.

It is necessary to implement more skills-based programs, as other authors have indicated (Bisquerra Alzina, 2003; Bisquerra Alzina and Pérez Escoda, 2007; Faure *et al.*, 1972; Fischman, 2017; Farstad, 2004; Goleman *et al.*, 2002; Noblejas, 2011; Risco Lázaro and Sánchez Cabaco, 2010). The life skills program implemented in this study integrated personal, social, emotional, and spiritual skills so that knowledge can be transformed into being. At this critical stage in adolescents' lives, and given the current global situation, life skills are essential for coping with life's challenges and promoting well-being.

102



Conclusions and Limitations

The theoretical framework has demonstrated how fostering a sense of purpose is closely related to the development of morality and values, self-actualization, emotional intelligence, spirituality, resilience, and life skills in adolescents.

In the empirical framework, the psychometric characteristics of the PIL inventory were evaluated in an adolescent sample. The reliability and validity of the PIL were found to be optimal, validating the hypothesis that the inventory possesses sufficient psychometric quality for research purposes within this demographic. Furthermore, the instrument demonstrated strong psychometric properties, confirming its high reliability and internal validity for use with adolescents.

The outcomes of the life skills learning experience intervention were evaluated by comparing PIL scores before and after its implementation. The hypothesis was partially validated, indicating that the life skills program does modify adolescents' sense of purpose; however, the anticipated substantial increase in purpose was not observed. This outcome may be attributed to the late inclusion of new participants during the implementation phase, which potentially skewed the final results.

Limitations and Future Directions

One limitation of this study was the late enrollment of some students in the competency-based learning experience, which skewed the results of the experiential program. Due to participant anonymity, these question-

naires could not be removed from the sample, leading to an inflation of the sample size in the post-intervention assessment and introducing a selection bias. Conversely, the interest sparked among the students is viewed as a positive outcome, as it generated positive word-of-mouth about the program and motivated subsequent enrollment in the competency-based learning experience focused on the meaning of life.

This study opens up several directions for future research:

- It is deemed necessary to publish the life skills program and learning experience so that it can be replicated by other educators and applied in future research.
- To eliminate bias in future evaluations of the program's impact on the sense of purpose, it is recommended to assign a unique identifier to each participant. This would allow researchers to track experimental attrition or late entries, ensuring that participants who join late can be excluded from the data analysis, thereby validating hypotheses using only data from those who completed the entire program.
- Utilizing the data collected via the *ad hoc* questionnaire, it is proposed to analyze how specific demographic and socioeconomic variables (such as gender, age, grade level, parents' educational level, family socioeconomic status, religion, and religious practice) relate to or influence the development of adolescents' sense of purpose.

From an academic and institutional perspective, it is proposed to integrate this life skills program across all educational levels, either as a cross-curricular component or as a standalone course starting in the first year of secondary school (age 12). This approach aims to develop vital life competencies and promote students' personal, social, and academic success, encouraging a shift from a mindset of "having" to "being"—a transformation that requires positive, human-centered learning for life.

Bibliography

ALEGRE, Olga María (coord.)

2010 *Capacidades docentes para atender a la diversidad: una propuesta vinculada a las competencias básicas*. Alcalá de Guadaira Sevilla: MAD.

ALONZO RIVERA, Diana, VALENCIA, Marvel, VARGAS, Jorge, BOLÍVAR, Nidelvía & GARCÍA, María de Jesús

2016 Los estilos de aprendizaje en la formación integral de los estudiantes. *Revista Redipe*, 5(4), 109-114. <https://bit.ly/3PrWcKU>



ARCINIEGA GONZÁLEZ, Neima

2020 *Aprendizaje con sentido para la vida*. Tesis de pregrado, Universidad Jesuita de Guadalajara. <https://bit.ly/4vh8W6c>

ARMAS ARRÁEZ, María Milagros

2015 *El sentido de la vida y la afectividad negativa en pacientes con ansiedad y depresión*. Tesis doctoral, Universidad Pontificia de Salamanca. <https://bit.ly/4nYPmt0>

2019 Hacer fluir el aprendizaje. *Revista INFAD de Psicología*, 2(1), 299-310. <https://doi.org/10.17060/ijodaep.2019.n1.v2.1443>

ARMAS ARRÁEZ, María Milagros, SÁNCHEZ CABACO, Antonio & LÓPEZ CASTEDO, Antonio

2017 El sentido de la vida y la resiliencia en pacientes con depresión. En: *III Congreso Nacional de Psicología: libro de capítulos* (pp. 167-172). Oviedo: Consejo General de la Psicología. <https://tinyurl.com/ys68bvv7>

ARMAS ARRÁEZ, María Milagros & LÓPEZ CASTEDO, Antonio

2018 El sentido de la vida: factor protector de ansiedad y depresión. *Cauriensia*, 13, 57-72. <https://doi.org/10.17398/2340-4256.13.57>

ARMAS ARRÁEZ, María Milagros, LÓPEZ CASTEDO, Antonio & SÁNCHEZ CABACO, Antonio

2018 Fiabilidad y validez del Purpose In Life (PIL) en una muestra clínica. *European Journal of Health Research*, 4(1), 43-51. <https://doi.org/10.30552/ejhr.v4i1.89>

BALTHIPA, Karnsunaphat, BUNROME, Suwanphahub & SASITHORN, Laimek

2022 Development of a purpose in life scale for Thai adolescents: A mixed-method study. *Kasetsart Journal of Social Sciences*, 43, 561-568. <https://doi.org/10.34044/j.kjss.2022.43.3.04>

BARAHONA, María Nieves, SÁNCHEZ CABACO, Antonio & URCHAGA LITAGO, José David

2013 La psicología positiva aplicada a la educación: el programa CIP para la mejora de las competencias vitales en la educación superior. *Revista de Formación e Innovación Educativa Universitaria*, 6(4), 244-256. <https://tinyurl.com/2b5ny254>

BERNAL GUERRERO, Antonio

2003 El constructo “madurez personal” como competencias y sus posibilismos pedagógicos. *Revista Española de Psicopedagogía*, 225(2), 243-262. <https://bit.ly/4wR3OHr>

BERNAL GUERRERO, Antonio & KÖNIG BUSTAMANTE, Katerina Luz

2017 Percepciones de adolescentes sobre la educación según la identidad personal *Revista Española de Pedagogía*, 75(267), 181-198. <https://doi.org/10.22550/REP75-2-2017-01>

BERROCAL, Ana Nicolasa

2019 *Programa aprendo para la vida en la competencia construye interpretaciones históricas en estudiantes del 2do de secundaria IE 7075, Chorrillos 2019*. Tesis de pregrado, Universidad César Vallejo. <https://tinyurl.com/yrfxrxru>

BISQUERRA ALZINA, Rafael

1987 *Introducción a la estadística aplicada a la investigación educativa*. Barcelona: Promociones y Publicaciones Universitarias.



- 2003 Educación emocional y competencias básicas para la vida. *Revista de Investigación Educativa*, 21(1), 7-43. <https://bit.ly/4nSqLG5>
- BISQUERRA ALZINA, Rafael & PÉREZ ESCODA, Nuria
2007 Las competencias emocionales. *Educación XX1*, 10(1), 61-82. <https://doi.org/10.5944/educxx1.1.10.297>
- BUSTOS, Ingrid & RICHMOND, Viviana
2007 Fundamentos del enfoque de competencias para la vida y de la transversalidad en el Ministerio de Educación Pública. *Revista Electrónica Educare*, 11(2), 45-61. <https://tinyurl.com/ys35fzhq>
- CÁCERES, Santiago
2025 *Entre cuerdas y valores: el teatro de títeres para promover el pensamiento crítico sobre ética y moralidad en la adolescencia. Caso Colegio El Buen Pastor en Lima-Perú*. Tesis de pregrado, Pontificia Universidad Católica de Perú. <https://tinyurl.com/29cp7gmo>
- CARO BELTRÁN, Amelia & CORREA ARIAS, César
2023 Construcción del sentido de vida y responsabilidad social: encuentros y desencuentros en la formación universitaria. *International Journal of New Education*, (12), 81-101. <https://doi.org/10.24310/ijne.12.2023.17887>
- CASAVILCA, Elisabeth & SOLANO, Pamela
2025 *Resiliencia y satisfacción con la vida en adolescentes en el contexto postpandemia COVID-19 en una institución educativa de Puente Piedra*, 2023. Tesis de pregrado, Universidad de Ciencias de Humanidades. <https://tinyurl.com/25p39acj>
- CASTRO, Claudia
2026 La felicidad como parte fundamental del sentido de vida en la adolescencia. En: Luz Marina Méndez Hinojosa (coord.), *Del saber al ser: transformaciones del aprendizaje, la inclusión y el bienestar en la universidad* (pp. 105-118). Transdigital. <https://doi.org/10.56162/transdigitalbc0908>
- CHACÓN ARTEAGA, Nancy Lucía
2014 El enfoque ético, axiológico y humanista como fundamento de la labor educativa. Algunas experiencias y resultados de su aplicación. *Congreso Universidad*, 3(2), 1-13. <https://bit.ly/4uDBO8V>
- COLORADO, Jorge
2025 Erich Fromm y el humanismo radical: una ética del ser como faro para las nuevas generaciones. *Revista Holón*, 10(3), 138-154. <https://doi.org/10.48204/j.holon.n10.a8090>
- CORBETTA, Piergiorgio
2003 *Metodología y técnicas de investigación social*. McGraw-Hill.
- CRUMBAUGH, James & MAHOLICK, Leonard
1969 *Manual of instructions for the Purpose In Life test*. Saratoga: Viktor Frankl Institute for Logotherapy. <https://psycnet.apa.org/doi/10.1037/t01175-000>
- CUNY, José Antonio
2007 Exploración de la intensidad motivacional para la búsqueda del sentido de la vida en estudiantes universitarios de Psicología. *Persona, Revista de la Facultad de Psicología*, 10, 161-177. <https://bit.ly/4umnkCF>
- DELORS, Jacques (comp.)
1996 *La educación encierra un tesoro*. Informe a la UNESCO de la Comisión Internacional sobre la Educación para el Siglo XXI. <https://bit.ly/2Hfsbdd>



- 2013 Los cuatro pilares de la educación, Informe para la UNESCO sobre Educación Superior. *Revista Galileo*, 23, 103-110. <https://tinyurl.com/yp7ghe5s>
- DEWITZ, Joseph, WOOLSEY, Lynn & WALSH, Bruce
- 2009 College Student Retention: An Exploration of the Relationship Between Self-Efficacy Beliefs and Purpose in Life Among College Students. *Journal of College Student Development*, 50(1), 19-34. <https://doi.org/10.1353/csd.0.0049>
- ESPINOSA, Laura, GARCÍA, Bogar & VÉLEZ, Alberto
- 2016 Estrategias institucionales que favorecen competencias para la vida en los estudiantes de bachillerato. *Red Internacional de Investigadores en Competitividad*, 9(1), 1676-1694. <https://bit.ly/4uFQwfz>
- FARSTAD, Halfdan
- 2004 *Las competencias para la vida y sus repercusiones en la educación. Una educación de calidad para todos los jóvenes: desafíos, tendencias y prioridades*. 47ª Conferencia Internacional de Educación de la UNESCO. 8-11 de septiembre, Ginebra.
- FAURE, Edgar, HERRERA, Felipe, KADDOURA, Abdul-Razzak, LOPES, Henri, PETROVSKY, Arthur V., RAHNEMA, Majid & CHAMPION WARD Frederick
- 1972 *Aprender a ser: la educación del futuro*. Madrid: UNESCO; Grupo Santillana de Ediciones.
- FERNÁNDEZ, Luz María & GARZÓN, Aránzazu
- 2016 Papel de la edad en el sentido de la vida y la capacidad de perdonar. *Caurien-sia*, 13, 157-174. <https://doi.org/10.17398/2340-4256.13.157>
- FISCHMAN, David
- 2017 *Inteligencia espiritual en la práctica*. México DF: Planeta Mexicana. <https://tinyurl.com/2yh3daw7>
- FLORENTINO MORILLO, Basilio
- 2022 Aportes de la investigación a los avances de la educación moral. *Revista Historia de la Educación Latinoamericana*, 38(24), 223-244. <https://doi.org/10.19053/01227238.14694>
- FOWLER, Floyd & MANGIONE, Thomas
- 1990 *Standardized Survey Interviewing*. Sage. <https://tinyurl.com/23hnyimgy>
- FRANKL, Viktor
- 1988 *La voluntad de sentido*. Herder.
- 2004 *El hombre en busca de sentido*. Herder.
- FRUTOS DE MIGUEL, Jonatan
- 2025 La satisfacción vital de los estudiantes de Educación Secundaria a través de la inteligencia emocional. *Bordón, Revista de Pedagogía*, 77(3), 155-170. <https://orcid.org/0000-0002-0990-4386>
- GALLEGO PÉREZ, José Francisco & GARCÍA ALANDETE, Joaquín
- 2004 Sentido de la vida y desesperanza en un grupo de estudiantes universitarios. *NOUS, Boletín de Logoterapia y Análisis Existencial*, 8, 49-64. <https://tinyurl.com/24lbowcb>
- GARCÍA ALANDETE, Joaquín, MARTÍNEZ, Eva Rosa, SOUCASE, Beatriz & GALLEGO PÉREZ, José Francisco
- 2011 Diferencias asociadas al sexo en las puntuaciones total y factoriales del Purpose In-Life Test en universitarios españoles. *Universitas Psychologica*, 10(3), 681-692. <https://tinyurl.com/yly2drjt>

- GARCÍA ALANDETE, Joaquín, MARTÍNEZ, Eva Rosa & SELLÉS, Pilar
 2013 Estructura factorial y consistencia interna de una versión española del Purpose-in-Life Test. *Universitas Psychologica*, 12(2), 517-530. <https://doi.org/10.11144/Javeriana.upsy12-2.efci>
- GARDNER, Howard
 1993 *Multiple intelligences*. Basic Books.
- GOLEMAN, Daniel
 1995 *Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement*. Bantam Books.
- GOLEMAN, Daniel, BOYATZIS, Richard & MCKEE, Annie
 2002 *Primal Leadership: Realizing the power of Emotional Intelligence*. Harvard Business Press. <https://tinyurl.com/2c49mgqv>
- GÓMEZ DEL CAMPO, María Inés, MEDINA, Belén & AGUILAR, Deyanira
 2011 Sentido de la vida y éxito. *Uaricha, Revista de Psicología*, 8(17), 124-146. <https://bit.ly/4wXNc0E>
- GOTTFRIED, Andrés Enzo
 2017 El sentido de vida en adolescentes entre 17 y 18 años de la ciudad de Mendoza, evidenciado antes y después de un programa de intervención basado en los postulados de Viktor Frankl. *Diálogos Pedagógicos*, 15(29), 85-114. [http://dx.doi.org/10.22529/dp.2017.15\(29\)05](http://dx.doi.org/10.22529/dp.2017.15(29)05)
- 2019 Adaptación argentina del PIL test (Test del Sentido de la Vida) de Crumbaugh y Maholick. *Revista de Psicología*, 12(23), 49-65. <https://tinyurl.com/ylqdqvfc>
- HIDALGO HERNÁNDEZ, Verónica
 2005 Cultura, multiculturalidad, interculturalidad y transculturalidad: evolución de un término. *In Memoriam*, 1, 75-85. <https://tinyurl.com/ypzpas33>
- HERNÁNDEZ, Fernando, VALDEZ, José Luis, AGUILAR, Yesica Paola, TORRES, Marta Adelina & GONZÁLEZ ARRATIA, Norma Iyonne
 2016 Sentido de vida en jóvenes. *Revista Electrónica de Psicología Iztacala*, 19(2). <https://tinyurl.com/24acs92z>
- JARAMILLO, Alba, CARVAJAL, Sandra Milena, MARÍN, Nalda Mabel & RAMÍREZ, Angélica
 2008 Los estudiantes universitarios javerianos y su respuesta al sentido de la vida. *Pensamiento psicológico*, 4(11), 199-208. <https://tinyurl.com/yu8xc9rq>
- JONSÉN, Elisabeth, FAGERSTRÖM, Lisbeth, LUNDMAN, Berit, NYGREN, Björn, VÄHÄKANGAS, Magdalena & STRANDBERG, Gunilla
 2010 Psychometric properties of the Swedish version of the Purpose in Life scale. *Scandinavian Journal of Caring Sciences*, 24(1), 41-48. <https://doi.org/10.1111/j.1471-6712.2008.00682.x>
- NAKAMURA, Julia, CHEN, Ying, VANDERWEELE, Tyler & KIM, Eric
 2022 What makes life purposeful? Identifying the antecedents of a sense of purpose in life using a lagged exposure-wide approach. *SSM-Population Health*, 19, 101235. <https://doi.org/10.1016/j.ssmph.2022.101235>
- MAGANA, Laura, ZAVALA, María Alicia, IBARRA, Isaac, GÓMEZ, María Teresa & GÓMEZ, María Mercedes
 2004 El sentido de la vida en estudiantes de primer semestre de la Universidad de La Salle Bajío. *Revista del Centro de Investigación-Universidad La Salle*, 6(22), 5-13. <https://tinyurl.com/yodk9j3o>





- MARTÍNEZ, José Alberto
2010 Las competencias del profesor en la Educación Superior. *Cuadernos de Educación y Desarrollo*, 2(21). <https://bit.ly/49sSUxG>
- MERINO, Abel, BERBEGAL, Alfredo, ARRAIZ, Ana & SABIRÓN, Fernando
2021 Motivación en la adolescencia y el acompañamiento para la autodeterminación. *Orientación y sociedad*, 21(1), 1-27. <https://tinyurl.com/2c8at6pp>
- MOLASSO, Willian
2006 Exploring Frankl's purpose in life with collage students. *Journal of Collage y Character*, 7(1), 1-10. <https://doi.org/10.2202/1940-1639.1502>
- MORALES, Hernán Andrés & CAMACHO, Luis Rodrigo
2026 Hacia una didáctica de la ética usando el recurso metodológico video. *Sophia, Colección de Filosofía de la Educación*, (40), 125-151. <https://doi.org/10.17163/soph.n40.2026.03>
- MORENO, María Victoria
2013 *Sentido de la vida y afectividad negativas (ansiedad, depresión y obsesión ante la muerte) en universitarios*. Tesis doctoral, Universidad de Extremadura. <https://tinyurl.com/yr7q7h9j>
- MORENO, Victoria, RISCO, Ana, CABACO, Antonio & LITAGO, José David
2020 Sentido de la vida: estudio empírico en estudiantes de educación secundaria. *Paideia*, 48, 1-24. <https://tinyurl.com/ymva96x2>
- MORILLO AHUMADA, Gustavo Adolfo
2013 Autoeficacia y felicidad en ingresantes a una universidad privada de Trujillo. *Journal of Psychologist*, 15(1), 24-36. <https://bit.ly/4wMxs0u>
- MUÑOZ BETANCOURT, Fernando David
2017 *Estrategias de afrontamiento del estrés y sentido vital en estudiantes de Artes Plásticas*. Tesis de pregrado, UCE, Quito. <https://tinyurl.com/ymv7j49k>
- NOBLEJAS, María Ángeles
2000 Fiabilidad de los test PIL y Logotest [versión electrónica]. *NOUS: Boletín de Logoterapia y Análisis Existencial*, 4, 81-90. <https://tinyurl.com/ykp7pch6>
- 2011 El sentido en la vida, dimensión evolutiva: hallazgos empíricos en la rebarremación del test PIL (Purpose in Life) en España. *Journal of Transpersonal Research*, 3, 30-38. <https://tinyurl.com/yvgas5ly>
- OMAR, Alicia
2007 Las perspectivas de futuro y sus vinculaciones con el bienestar y la resiliencia en adolescentes. *Psicodebate*, 7, 141-154. <https://doi.org/10.18682/pd.v7i0.432>
- ORTEGA, Pedro
2020 Otra educación moral. *Revista Redipe*, 9(5), 24-35. <https://doi.org/10.36260/rbr.v9i5.972>
- OSORIO, César Augusto
2021 *Modelo relacional: sentido de vida, optimismo y trascendencia y su vínculo con ansiedad o depresión en adolescentes y jóvenes*. Tesis doctoral, Universidad Católica de Colombia. <https://hdl.handle.net/10983/26896>
- PACHECO DE PAULIZ, William, CONRADO, Etilbia & FIGEROA, Roberto
2025 Espiritualidad operacionalizada como inteligencia espiritual y crecimiento personal en adolescentes escolarizados: análisis desde la escala Vivesae. *Revista Redipe*, 14(12), 77-87. <https://doi.org/10.36260/vhxbez47>

- PARDO, Antonio & RUÍZ, Miguel
 2002 *SPSS 11. Guía para el análisis de datos*. McGraw-Hill. <https://tinyurl.com/27fmgu6>
- PIAGET, Jean
 1985 *El criterio moral en el niño*. Madrid: Fontanella.
- PORRAS, Antonio & NOBLEJAS, María Ángeles
 2007 Estudio longitudinal del sentido de la vida en el Proyecto Hombre de Málaga: análisis de las dos primeras fases con atención a los abandonos. *NOUS: Boletín de Logoterapia y Análisis Existencial*, 11, 67-79. <https://tinyurl.com/yrnxtada>
- REYES, Flor Ivett, REYES, Yoeski & BRAVO, Orlando Uriel
 2025 Sentido de vida: expresión de la motivación en personas estudiantes universitarias. *Ciencia y Reflexión*, 3(4), 1517-1529. <https://doi.org/10.70747/cr.v4i3.627>
- RISCO, Ana
 2009 *Sentido de la vida: evolución e implicaciones para la Educación Superior*. Tesis doctoral, Universidad Pontificia de Salamanca.
- RISCO LÁZARO, Ana & SÁNCHEZ CABACO, Antonio
 2010 Pedagogía del sentido de la vida en el ámbito educativo: estudio empírico con jóvenes salmantinos. *Boletín de Logoterapia y Análisis Existencial*, (14), 33-45. <https://tinyurl.com/ywqaxrd4>
- RODERO, Sergio
 2025 La educación para el desarrollo moral. *Revista Reflexões*, 14(26), 17-26. <https://tinyurl.com/ys2pg8v>
- SALVINO, Eliseudo
 2009 Aspectos actitudinales en el EEES-Espacio Europeo de Educación Superior. *Foro de Educación*, 7(11), 195-207. <https://bit.ly/4uFoG39>
- SÁNCHEZ, Julia
 2014 La urgencia de la educación en virtudes. *Revista Mexicana de Logoterapia*, 2, 40-47. <https://tinyurl.com/22ym6on5>
- SÁNCHEZ CABACO, Antonio, RISCO LÁZARO, Ana & URCHAGA LITAGO, David
 2011 Propiedades psicométricas de un instrumento para evaluar el sentido de la vida: Purpose in Life (PIL). *International Journal of Development and Educational Psychology*, 25, 373-381. <https://tinyurl.com/yod6z5sz>
- SÁNCHEZ CABACO, Antonio, RISCO LÁZARO, Ana, SALVINO GOMES, Eliseudo
 2008 Desarrollo de competencias actitudinales en la educación superior: búsqueda de sentido vital y felicidad. *Naturaleza y Gracia*, 3, 697-721.
- SANSINENEA, Eneko, GIL, Lorena, AGIRREZABAL, Arrate, LARRAÑAGA, Maider, ORTIZ, Garbiñe, VALENCIA, José Francisco & FUSTER, María José
 2008 Autoconcordancia y autoeficacia en los objetivos personales: ¿cuál es su aportación al bienestar? *Anales de Psicología*, 1, 121-128. <https://tinyurl.com/2xyej346>
- SELIGMAN, Martin
 2003 *La auténtica felicidad*. Buenos Aires: Ediciones B.
- SMEDEMA MALONDA, Yoel & MÓDENES, María Paz
 2018 Resiliencia, ansiedad y sentido de la vida en estudiantes universitarios. *Cauriensi*, 13, 87-106. <https://doi.org/10.17398/2340-4256.13.87>



VALDIVIA PAREJA, Álvaro Eduardo

2007 Vacío existencial y riesgo suicida en pacientes con trastorno de personalidad borderline. *Persona, Revista de la Facultad de Psicología*, 10, 179-197. <http://dx.doi.org/10.26439/persona2007.n010.918>

VARGAS HERRERA, Francisco & MOYA MARCHANT, Loreto

2018 La espiritualidad como fortaleza humana y su relación con la construcción de sentido vital. Algunas notas específicas para el campo educativo. *Cauriensia*, 13, 277-299. <https://doi.org/10.17398/2340-4256.13.277>

VECINO, Melisa Ángeles

2022 *Sentido de vida en adolescentes y adultos jóvenes privados de libertad*. Trabajo de pregrado, Universidad Católica de Argentina. <https://tinyurl.com/2xqy8jtw>

Author Declaration—CrediT Taxonomy

Author	Contributions
María Milagros Armas Arráez	This article was written entirely by the author; therefore, the content presented in this document is the sole responsibility of the author.

Statement on the Use of Artificial Intelligence

The author, María Milagros Armas Arráez, declares that the article titled “The Sense of Purpose Among Adolescents Following a Learning Experience” was not produced with the assistance of artificial intelligence (AI).

Date of receipt: July 13, 2025

Review date: September 20, 2025

Date of approval: November 22, 2025

Publication date: July 15, 2026



CULTIVATING DEMOCRATIC SKILLS IN THE 21ST CENTURY SOCIETY

El cultivo de competencias democráticas en la sociedad del siglo XXI

ISABEL TAMARIT LÓPEZ*

Universidad de Valencia, Spain

<http://ror.org/043nxc105>

isabel.tamarit@uv.es

<https://orcid.org/0000-0003-0114-5554>

Suggested citation: Tamarit López, Isabel. (2026). Cultivating Democratic Skills in the 21st Century Society. *Sophia, Colección de Filosofía de la Educación*, (41), pp. 111-136.

Abstract

This paper addresses the current problems facing 21st century democracies, the threats and conflicts faced by citizens, and how to mitigate the negative effects of growing atomization and authoritarian radicalism, which are exacerbated by technology and digitalization. The aim is to present ethical and civic education as a fundamental resource for human development and democratic life, understanding that critical thinking and civic virtues lay the foundations for enjoying democratic values. It highlights the importance of equipping young people with the democratic skills that will enable them to become responsible agents in a pluralistic and complex social context. To this end, a methodology of critical analysis of articles and research studies has been followed, providing results and reflections on both the current situation and pedagogical proposals aimed at revitalizing democratic life. Therefore, the document initially presents an analysis of the state of the art and the foundations of democracy, pointing out which democratic skills are most necessary today. Next, the importance of ethical-civic education is justified, and finally, pedagogical proposals aimed at cultivating these skills are presented, which are framed within dialogic learning, peaceful conflict resolution, and emotional education.

Keywords

Democracy, Education, Ethics, Skills, Citizenship, Critical thinking.

* Ph.D. in Philosophy with highest honors and an international distinction. Bachelor's degree in Philosophy with highest honors and a diploma in Physical Therapy with highest honors, as well as the Third National Award for University Studies from the University of Valencia. She is currently a teacher of secondary education specialized in Philosophy and serves as principal of the school where she primarily teaches, IES Massamagrell. She is also an associate professor in the Department of Philosophy at the University of Valencia. She has participated in several research projects on bioethics, Euroethos, and development cooperation in collaboration with the AEI. During her training as a researcher, she completed academic internships at the University of Cambridge, Oxford, Leuven, and the University of the Republic of Uruguay. She has published numerous articles in prestigious journals and contributed to volumes on philosophy, education, and the teaching of ethics.

Resumen

El presente escrito plantea la problemática actual en las democracias del siglo XXI, las amenazas y los conflictos a los que se enfrenta la ciudadanía y de qué manera paliar los efectos negativos de un atomismo y radicalismo autoritario creciente, que se agrava con las tecnologías y la digitalización. El objetivo es presentar la educación ético-cívica como un recurso fundamental para el desarrollo humano y la vida democrática, entendiendo que el pensamiento crítico y las virtudes cívicas sientan las bases para degustar los valores democráticos. Se destaca la importancia de capacitar a los jóvenes con las competencias democráticas que les permitirán erigirse como agentes responsables en un contexto social pluralista y complejo. Para ello se ha seguido una metodología de análisis crítico de artículos y estudios de investigación que aportan resultados y reflexiones, tanto sobre la situación actual como propuestas pedagógicas orientadas a la revitalización de la vida democrática. Así, el documento presenta inicialmente el análisis del estado de la cuestión y los fundamentos de la democracia, señalando qué competencias democráticas son más necesarias en la actualidad; a continuación, se justifica la importancia de la educación ético-cívica; finalmente, se presentan unas propuestas pedagógicas orientadas al cultivo de dichas competencias y que se enmarcan en el aprendizaje dialógico, la resolución pacífica de conflictos y la educación emocional.

Palabras clave

Democracia, educación, ética, competencias, ciudadanía, pensamiento crítico.

112



Introduction

At this historic juncture in the 21st century, society is witnessing a rise in radicalism, a decline in the democratic spirit, and the reemergence of authoritarian political stances—proposals that seemed to have been consigned to the 20th century with the triumph of Western liberal democracy (Fukuyama, 1992). This current landscape can be framed as a context of “post-democracy” (Crouch, 2020) or “illiberal or anti-liberal democracy” (Zakaria, 1997; Ylarri, 2015), manifesting through symptoms that primarily threaten citizens and the core ethical and civic values of democratic life: equality, justice, and freedom. This baseline situation is further compounded by prevalent societal individualism and atomization, a lack of social and democratic commitment among younger generations, and their limited participation in civic processes—all of which pose a serious threat to democratic stability (Taylor, 2005).

Such a scenario is highly conducive to the emergence of radicalism and extreme positions that undermine tolerance and mutual respect, as seen in the rise of xenophobic, racist, or discriminatory attitudes toward different belief systems. Consequently, polarized identities clash within pluralistic and multicultural spaces which, in democratic terms, demand respect for and recognition of equal human dignity to guarantee social peace (Przeworski, 2022). This context is further fueled by a lifestyle of conformity and adaptation that increasingly drives individuals inward.

In an environment shaped by pervasive digitization and technological transformation, individuals often take refuge in an anonymous reality, lacking the critical capacity to navigate overwhelming amounts of information and feeling desensitized by the accelerated pace of data delivery (Rosa, 2016). This results in a vast, uncritical accumulation of data (Han, 2022) that defies comprehensive understanding. As mathematician Cathy O’Neil (2018) noted, complex mathematical models are increasingly used for political decision-making, leading not only to the perpetuation of inequality and discrimination but also to a new form of technocracy where citizens are effectively sidelined by algorithms.

This situation constitutes the main problem of this research: it affects individual development, self-concept, and identity formation, while simultaneously threatening the foundations of community life—namely, the ethical and civic values of freedom, justice, equality, and solidarity that undergird democratic societies (Bauman, 2007). Therefore, the objective of this study is to propose the viability of learning to live in a democracy, under the premise that no one is born knowing how to appreciate freedom or justice; rather, this is an educational task that requires a strong cultural backdrop and a horizon of meaning. To address this issue—which is of critical relevance given its impact on democracy as a form of social and political organization—this paper proposes the promotion of ethical-civic education as a fundamental mechanism for empowering citizens. This approach aims to help individuals exercise their democratic competencies, rediscover essential civic values, and cultivate a set of virtues that, alongside critical thinking, will revitalize an active, responsible, just, and supportive citizenry (Jerome et al., 2024).

Consequently, this paper presents learning for democratic life as a priority within citizenship education (Santisteban et al., 2018), emphasizing that living in a democracy is a learned behavior requiring specific skills, attitudes, values, and knowledge.

The methodology used to justify this proposal is grounded, on the one hand, in the immediate demands and challenges of the current socio-political context and, on the other hand, in the recovery of the philosophical foundations of democratic thought as a political system centered on freedom and justice. To this end, a comprehensive literature review is conducted, analyzing the primary classical theoretical proposals within political philosophy. Additionally, the research includes a propositional section that outlines a series of pedagogical proposals aligned with ethical-civic education. These proposals are intended to serve as a practical framework for cultivating democratic virtues, skills, and competencies



for active citizenship. The goal is to prepare citizens to understand what life in a democracy entails and to exercise their agency responsibly and in solidarity, working for the common good and recognizing others as beings possessing inherent dignity.

Finally, the paper presents relevant conclusions addressing the challenges posed by the initial research question, delving into the role of educators in this endeavor and exploring how the educational context serves as a vital nexus for human development and the revitalization of 21st-century democracy.

A World in Crisis Facing “Post-Democracy”

114



It is undeniable that the 21st century began at a critical juncture for democratic systems, the effects of which are clearly evident in the current global landscape. This context is characterized by a globalization that, while connecting us through communication and enabling us to live alongside countless others, has simultaneously disconnected us from the human issues closest to us. Consequently, situations of injustice are rendered invisible, relegated to anonymity and to the margins of a society focused strictly on the immediate. In this regard, it is worth highlighting the role of social media and the dominance of technology and digitalization; these forces drive a mass-oriented way of life that often feels hollow, pursuing a false imperative of happiness that ultimately leads to disillusionment and confusion (Pinedo Cantillo, 2024).

The accelerated pace of modern life not only impacts us individually but also leads to an alienation of the self, as Hartmut Rosa (2016) points out, making it impossible to explore our authentic identity and the deeper implications of our humanity. This alienation extends to the community: as the capacity to pause and listen attentively to others diminishes, we lose sight of the importance of recognizing them as equals and valuing their inherent dignity.

Likewise, the bonds that historically held communities together—giving meaning to customs, beliefs, lifestyles, and shared understandings of the world—are gradually eroding. Social cohesion, which is essential for mutual recognition and solidarity-based agency, is fracturing. These emerging cracks weaken the very foundation necessary for human flourishing.

Furthermore, the complexity of a multifaceted identity is being oversimplified. The habits that allow for mutual understanding beyond the immediate—by returning to the origins and shared horizons of

meaning from which genuine consensus is possible—are neither cultivated nor forged (Taylor, 1994, 2005). Cultural freedom is lost alongside critical capacity, and the richness of context is nullified as cultural diversity and the varied lifestyles of pluralistic societies are homogenized into standardized patterns. Paradoxically, this reduction in cultural diversity coexists with the extreme radicalization of certain cultural practices and viewpoints. This polarization generates conflicts and clashes between opposing stances—at times escalating into violence and hate speech—that undermine the foundations of communal life, trust, and security required for a healthy democracy (Gracia Calandín & Suárez Montoya, 2023).

All these factors undermine democratic life, suggesting that we may be entering an era of “post-democracy,” where the democratic system has become so distorted that it fails to function or respond to the political organizational needs of states aspiring to be governed by the principles of equality, justice, and freedom (Gozálvez Pérez et al., 2023).

In the absence of a robust system, some states claim to be democratic yet include extremist and authoritarian groups within their political landscape. These factions deploy radical rhetoric that polarizes public opinion, leaving no room for dialogue or the pursuit of common ground (Bauer et al., 2021). Furthermore, political institutions are deteriorating—a shift that citizens interpret as a cause for mistrust due to issues such as corruption, embezzlement, institutional inefficiency, and a blurred separation of powers. While nominally democratic, these regimes function as weak democracies for several reasons: they may be fledgling democratic states with limited democratic traditions and authoritarian origins, thus requiring a strengthening of their baseline foundations and values (Albertus & Menaldo, 2018); alternatively, they may be historically established, strong democracies that have weakened over time by failing to safeguard essential pillars of democratic life, such as fundamental freedoms, pluralism, critical civic participation, respect for minorities, a free and diverse press, a multiparty system, security, and the basic civil rights of all groups within civil society.¹

Both scenarios suffer from democratic deficits that must be addressed if we are to remain committed to a democratic political system (Bauer et al., 2021). The following section outlines the democratic foundations that justify the relevance of pedagogical proposals capable of contributing, through ethical and civic education, to strengthening citizens’ democratic competence and revitalizing democratic life in 21st-century societies, utilizing an approach centered on the acquisition of skills, attitudes, and values that facilitate competency development.

Fundamentals of Democratic Life

In its origins, democracy was conceived as a participatory and direct government by the people, albeit with a distinct degree of elitism embedded in the concept of citizenship. In Athens and the Greek city-states of classical antiquity, those considered citizens were limited to a small fraction of the population—specifically, free adult males who were not foreigners. The capacity for participation—and, consequently, the recognition required to exercise that freedom—was highly restricted; equality was not understood as equal treatment or the recognition of rights for all inhabitants of the *polis*, but only for those who could truly conceive of themselves and be recognized as full citizens (Bovero, 1987).

Therefore, we must look to the Modern Era to understand the resurgence of democracies in the West. Through this transition, an alternative perspective emerged for interpreting freedom and equality. This approach, contrasting with the democracy of the ancients, defines modern democracy. It can be categorized according to Benjamin Constant's—and later Isaiah Berlin's (2001)—conceptualizations comparing the liberty of the ancients with that of the moderns.

Modern democracy is inherently representative and characterized primarily by the separation of powers; moreover, every individual is recognized as a rights-holder with an equal capacity to participate in democratic life. The classical restrictions on the concept of citizenship were lifted, establishing the premise that every person is eligible to exercise their rights of participation, at least through universal suffrage. Historically, however, exceptions to this universality arose, based precisely on an alleged lack of capacity to participate on equal terms or to exercise rights and freedoms responsibly. Full citizenship, therefore, is not something acquired simply by being born in a particular territory; it requires legal status and institutional recognition.

The liberalism characteristic of modern society undoubtedly represents significant social progress regarding individual rights and freedoms when contrasted with the oppression of pre-modern regimes. Since the seventeenth century, authors such as John Locke—and, in a more developed form in the mid-nineteenth century, John Stuart Mill (1988)—have emphasized the central role that individual freedom must play in society. However, although the concept of “negative liberty” (Berlin, 2001) constitutes an indispensable safeguard against totalitarianism—a validity that must be acknowledged in both Mill and Berlin—it nevertheless presents certain shortcomings for the purpose of cultivating democratic com-



petencies. In this regard, Taylor (2005) analyzes the limitations of negative liberty and proposes a positive conception of freedom. According to this view, it is insufficient to merely assert that liberty is a right; rather, it must be understood as an exercise. Otherwise, it risks remaining a mere declaration on paper with no mechanism to make it effective—i.e., to act and be free. In other words, even if an individual encounters no external interference or obstacles—as negative liberty posits—this absence alone does not guarantee the actual exercise of freedom. To achieve this, it is essential to recognize the material conditions of existence, including social, historical, and political contexts. Special emphasis must be placed on social ties and the actors' horizons of meaning, as these factors either facilitate or hinder the actual exercise of freedom. Understanding freedom as an exercise implies a critique of social atomism, shifting the focus toward the social bonds that shape society and facilitate free action. In this sense, education for democratic citizenship is key, as it helps to critically assess these contextual conditions, which are essential for understanding the true exercise of freedom (Santisteban et al., 2018).

Consequently, following classical authors such as John Dewey (1995) or contemporary thinkers like Nussbaum (2010), there is an intrinsic relationship between education and democracy, since education is the primary vehicle for forming active, responsible, and committed citizens. Education for participation, democracy as a way of life, and the promotion of ethical and civic values—such as justice, equality, freedom, solidarity, and dialogue—are foundational pillars of teaching (Gracia Calandín, 2020). To be genuinely exercised, the status of democratic citizenship requires both competence (the aptitude or know-how) and capacity (the real freedom to fulfill the role that characterizes a responsible, free, and just citizen). This democratic competence is acquired through ethical and civic education, which cultivates the virtues, habits, and abilities enabling its development while simultaneously fostering awareness of the profound responsibility that this type of agency entails.

Democratic Competencies for the Effective Exercise of Citizenship

This section outlines the competencies required for citizens to effectively exercise their power and sovereignty within a democratic system, thereby safeguarding the foundations and values of democratic life in 21st-century societies.



First, citizens need to cultivate critical thinking grounded in an embodied rationality (Cortina Orts, 2007)—as opposed to an instrumental or calculating one—directed toward the holistic development of individuals and communities (Barrientos Rastrojo, 2024). Faced with an overwhelming influx of information, alongside systematic attempts at indoctrination and polarization by populist or authoritarian factions (Han, 2022), citizens must possess the capacity to critically analyze, select, and process information. This capability allows them to distinguish between truth and falsehood, and between communication designed to manipulate and data disseminated merely to generate confusion or obscure essential issues. Furthermore, the populist discourses proliferating across the political landscape demand rigorous critique to accurately assess the underlying intentions of political parties or media outlets that have compromised their integrity by partisan bias, relying on fake news or the distorted presentation of facts.

This critical disposition also enables individuals to evaluate personal prejudices, ungrounded opinions, and underlying arguments, exercising a capacity for self-criticism that dismantles cognitive biases and discriminatory stances (Barrientos Rastrojo, 2024). Critique requires rational justification; however, specifying the nature of this rationality is vital to avoid the pitfalls of purely instrumental or calculating reasoning. Instrumental logic often approaches civic issues from an exclusionary standpoint, exhibiting little sensitivity toward arguments rooted in feelings, traditions, or customs that imbue communities with meaning but defy quantitative calculation. These elements pertain to personal roots and moral obligations (Cortina Orts, 2007, 2024) rather than algorithmic efficiencies. In contrast to the ubiquity of artificial intelligence in contemporary technologically advanced societies, “cordial reason” and “embodied reason” appeal to what fundamentally humanizes us—through the body and the heart. This perspective acknowledges human beings as entities who simultaneously think, reason, and feel, thereby establishing empathy as the foundational step toward the recognition of the other. While empathy is frequently an ambiguous term, this framework advocates for a form of “ethical compassion” directly intertwined with critical capacity, since reason and emotion, or discernment and feeling, are intrinsically linked (Gracia Calandín, 2020, 2023). This synthesis manifests as a creative sentimental education (París Albert, 2022b).

Second, closely linked to this embodied rationality and critical thinking, are language and the capacity for speech—the *logos* of classical antiquity, as articulated by Aristotle. It is this uniquely human fac-

ulty that, through reason and language, allows us to discern between the just and the unjust, the true and the false, and the harmful and the good. When this *logos* engages with another, it transforms into dialogue; thus, rational inquiry and the pursuit of truth occur intersubjectively through language, conversation, and the exchange of words, enabling individuals to understand the reasons, feelings, and perspectives of others (Tamarit López, 2025).

Evidently, dialogic competence is foundational for mutual understanding, peaceful conflict resolution, reaching consensus on controversial issues, and fostering empathy. These actions constitute the core of democratic life and provide the baseline for active civic participation within the public sphere (Dewey, 1995; Nussbaum, 2010).

Third, life in society demands cooperation and solidarity to sustain communal bonds and meet basic human needs, particularly those of the most vulnerable, given that all individuals require the assistance of others at various stages of life. Recognizing this inherent vulnerability and the precarity associated with isolation becomes starkly apparent during periods of frailty—such as illness, old age, or disability—yet it remains a permanent feature of the human condition. Consequently, citizens must commit to maintaining social cohesion and fostering the cooperative processes that preserve interpersonal bonds (Barrientos Rastrojo, 2024). These connections, rooted in ethical compassion, mutual recognition, care, and civic friendship, are cultivated within community life. They drive acts of solidarity—the deliberate willingness to act on behalf of others in need—out of a sense of shared humanity or other ethical imperatives that compel us to alleviate suffering and redress injustice (Nussbaum, 2010; Gracia Calandín, 2020, 2023).

Sustaining these bonds as catalysts for altruistic action aimed at the common good requires the cultivation of specific moral feelings. Emotional education and the development of civic virtues serve as the keystone for achieving genuine mutual recognition and active respect among individuals, whether within a local community or as part of global humanity (Tamarit López, 2022; París Albert, 2022b).

Fourth, this framework emphasizes cultivating the ethical feeling of compassion and acquiring a robust sense of justice to prevent indifference toward the suffering of others (Gracia Calandín, 2023; Gozávez Pérez, 2025). This competency involves developing a sensitivity to injustices, alongside the capacity to denounce them and act on behalf of disadvantaged groups to advance equity and social equality. Within a democratic framework, the presence of the other —regardless of differ-



ences— cannot be ignored; recognizing equal human dignity obligates the collective to demand freedoms, rights, and opportunities under equitable conditions. While a sense of justice provides the capacity for moral outrage, compassion allows individuals to understand the suffering of others and translates that understanding into decisive action.

Fifth, and finally, citizens must become conscious of their shared responsibility toward the community to achieve the common good. Mutual recognition, social connections, and a sense of belonging cultivate a responsibility toward the institutions and individuals with whom we identify, counteracting the individualism and atomism that isolate and fragment contemporary society. This responsibility entails managing collective affairs, sustaining community life, and preserving its foundational elements, while remaining open to new perspectives and broadening horizons through critical thinking and an understanding of alterity (Taylor, 2005). Accordingly, promoting intercultural dialogue requires a cosmopolitan competence (Nussbaum, 2010) that expands our ethical perspective and identity from the local to the global, fostering inclusion and valuing the inherent richness of human diversity.

120



Justification for Ethical and Civic Education in Cultivating Democratic Competencies

The development of democratic competencies is fundamental to the exercise of citizenship. However, these competencies cannot be achieved unless they are intentionally cultivated and taught, as they require habits, systemic training, and the capacity to respond to situations that demand civic action (Suárez Montoya et al., 2024).

- For their part, Teegelbeckers et al. (2025) identify six relevant practices for fostering democratic competence:
- Meaningful engagement
- Incorporation of multiple perspectives
- Reflection on solutions from divergent viewpoints
- Independently gathering and presenting information
- Implementation of sociopolitical measures
- Critical reflection on the topic at hand

The ideal discipline for developing these competencies is ethical-civic education, as it focuses on cultivating virtues and moral feelings, facilitates value learning, and regards reasoning and dialogue as central

to the educational process. Within this framework, the objective is not indoctrination, but rather deliberating and arguing about what is understood to be just, good, or correct (Conroy, 2020).

Ethical-civic education is not restricted solely to formal educational contexts; it must also be embedded within community life, family structures, and civil society (García López et al., 2011; Gozávez Pérez, 2025). Indeed, numerous settings provide individuals with the opportunity to develop and exercise their democratic competencies. Nevertheless, the formal educational context offers an exceptionally conducive environment for creating structured opportunities for interaction and dialogue. This learning process requires practice, activity, and active engagement—involving individuals not only cognitively but also emotionally—and relies on the presence of others for genuine interaction and recognition to occur. Ultimately, citizens must possess the actual capacity to act and deploy these competencies at the appropriate moment. If opportunities for such development are absent, learning remains incomplete and insufficient because, like any habit, civic competence is forged through practice and repetition (Lipman, 2003; París Albert, 2022a).

Consequently, a philosophical rethinking of the foundations of education is essential (Aguilar Gordón & Collado Ruano, 2025). More specifically, for the cultivation of democratic competencies, ethical and civic education must be rooted in conceptual foundations that justify democracy as a framework for political organization within which to exercise freedom and uphold the values of justice, equality, solidarity, and dialogue (Conroy, 2020). We situate these foundations within the realm of human rights and the capabilities-based approach to sustainable human development (UNESCO, 2015, 2021).

On the one hand, human rights lay the groundwork for a universalist ethical theory that serves as the foundation for advocating an intercultural ethic and a cosmopolitan approach (Schaffer, 2015)—one that remains open to the inclusion of individuals with diverse cultural backgrounds and worldviews distinct from the prevailing norm (Nussbaum, 2010). Thus, the differences characteristic of today's pluralistic societies can be addressed without forcing individuals to renounce their own cultural identity or distinctive traits by focusing instead on the social bonds that coexistence itself generates, thereby achieving a greater degree of social cohesion (Gracia Calandín, 2020).

On the other hand, referencing sustainable human development highlights the necessity of orienting civic actions toward a development model focused on people and their functional capacities. As the capa-



bilities approach—advocated for decades by Amartya Sen and Martha C. Nussbaum—maintains, this involves providing individuals with real opportunities to lead lives they have reason to value. What is essential is that people possess the means to act, be, and do what they deem valuable—elements that imbue their lives with meaning and afford them the freedom to pursue their own life plans—while explicitly factoring in sustainability. This implies respect for present and future generations, as well as responsibility toward the environment and vital, scarce resources. From this perspective of human development, democracy can be understood as the optimal vehicle for fostering capabilities and expanding personal, social, and economic opportunities (Sen, 2000; Nussbaum, 2010).

Finally, it is essential to distinguish between capabilities—understood here as measures of positive or substantive freedom that enable people to effectively execute their life plans—and competencies or skills. More specifically, regarding democratic competencies, the Council of Europe (2016) provides the following definition:

The ability to mobilize and use relevant values, attitudes, aptitudes, knowledge, and/or insight to respond appropriately and effectively to the demands, challenges, and opportunities posed by democratic and intercultural situations. Competence is approached as a dynamic process in which a competent person actively and flexibly mobilizes and uses a range of psychological resources to respond to new circumstances as they arise (p. 6).

The Art of Conversation as the Key to Democratic Life

In previous sections, it has been noted that dialogue is one of the most powerful tools in democratic life. It is considered key because citizens use speech to express their viewpoints and opinions, as well as to listen to those of others, on topics that may or may not be directly related to politics. Dialogue does not inherently involve confrontation; however, the exchange of reasons or views can naturally give rise to disagreements or divergent perspectives on a given issue. In such cases, dialogic competence prevents this exchange from being cut short, ensuring the continuity of the communication. Rather than dividing us, dialogue should foster proximity by allowing the free expression of thought, provided specific conditions are met for a truly fruitful exchange to occur. According to Boontinand and Forstenzer (2024), these essential conditions include active respect, active listening, and sincerity in expression; speaking from



one's own perspective; providing arguments and justifications for one's opinions; critically reviewing and reflecting on one's own thoughts; and the capacity to shift viewpoints, reach consensus, or accept dissent without undermining peaceful coexistence or resorting to violent behavior.²

To the reader, conversation may seem like an everyday activity learned almost by osmosis due to our social nature; however, genuine conversation happens neither automatically nor spontaneously. While human beings learn to speak through early socialization, language acquisition alone does not make speakers effective conversationalists. Even a sophisticated command of language in adulthood is insufficient for functioning adequately in dialogic settings. Conversation requires a process of deliberate, practical learning; it is an art—a skill that must be systematically cultivated—and its practice requires the mastery of specific techniques and procedural know-how.

If democracy demands dialogue and conversation to resist authoritarianism, populist domination, or discursive manipulation, it is clear that we must foster this art of conversation. Deliberation, as an essential resource of democratic life, requires identifying and overcoming both visible and invisible obstacles, such as the deeply ingrained prejudices and preconceptions that restrict dialogic exchange (Lipman, 2003; Gozávez Pérez, 2025; Gozávez Pérez et al., 2023).

That said, it is easy to conflate the art of conversation with mere rhetoric. Succumbing to this misconception traps communication within the realm of manipulation, dialectical struggle, the ridicule of opponents, and an inability to reach the consensual agreements necessary for the common good. Rhetoric is indeed an art, but it serves fundamentally different purposes, as Plato famously illustrated in his dialogue *Gorgias*. Those who employ rhetoric do not always seek truth or the common good; they are often less concerned with listening to the interlocutor than with defeating them, aiming to impose their own perspective as if it were already uniquely valid. This monological approach precludes genuine dialogic practice, as it eliminates the exchange needed to discover common ground through reason and the spoken word; the rhetorician's starting point and destination are already rigidly predefined.

- Learning to converse requires, first, recognizing and respecting the other as a valid interlocutor.
- Second, building upon this baseline of respect, individuals must practice active listening and respond from their own perspective, directly addressing the interlocutor's arguments and critically reflecting on their own position in light of these differences.



- Third, participants should aim for consensus—or at least maintain a clear intention to advance the exchange of ideas—thereby broadening the shared horizon of meaning within which the conversation is framed.

Education must intentionally address this dialogic learning to fulfill the democratic purposes outlined above (Teegelbeckers et al., 2025). Mastering this skill within democratic societies to facilitate coexistence and mutual understanding requires both substantive knowledge and procedural practice, operating within a framework where active respect prevails over mere tolerance (Forst, 2014).

The cognitive dimension of this learning manifests through activities of structured inquiry, information-seeking, and the application of critical thinking to analyze and evaluate data or sources (Valles Molina & Rivas Lara, 2025; París Albert, 2022a).

Conversely, the procedural dimension involves cultivating spaces of encounter where individuals can engage in face-to-face conversation, exchange perspectives, articulate arguments, and clarify their points according to the specific context of the discussion. This practice is only effective when participants are placed in situations that demand a direct, intentional encounter with the other.

Ultimately, these spaces for intersubjective exercise must be championed throughout civil society—within schools, civic associations, and neighborhood groups—as well as within institutional and corporate sectors. These are the concrete contexts where agreements must be forged to build robust communities.

The educational framework is exceptionally conducive to these practices, serving as a laboratory for innovative pedagogical proposals that promote dialogic practice and democratic competencies. Deploying active, deliberative methodologies—such as Lipman’s (2003) model of “communities of inquiry,” which stimulates reflection, critical thinking, and collaborative problem-solving through deliberative practice—is vital for integrating dialogue into classroom instruction and preparing students for democratic life (Tamarit López, 2025).

Likewise, educational innovation in this domain must be critically tied to a broader social commitment to community improvement. Innovation should not be pursued for its own sake or merely to boost academic performance and isolated skill acquisition. Rather, it must convey to students the foundational values and transformative power of an education designed to secure collective achievements, social justice, and the common good (Jasso Alfieri et al., 2025).



Peaceful Conflict Resolution as a Democratic Competency

One of the democratic competencies identified by the Council of Europe (2016) is the ability to resolve conflicts peacefully. This competency involves listening to the parties involved and seeking consensus, thereby reducing the likelihood that violence or intolerance will prevail in the conflict situations that inevitably arise in communal life (Galtung, 2003).

Education for the philosophy of peace is essential in the current global context, where polarization and radicalism in pluralistic settings generate dissent as well as intercultural and ideological clashes; these must be constructively redirected to prevent violent or discriminatory responses to alterity. The objective is to promote educational methodologies and strategies—such as mediation and restorative practices—that foster the art of peacemaking from the perspective of a culture of peace. This paradigm posits that human beings are fully capable of treating one another with care and tenderness, as well as with justice and equity, on both personal and institutional levels (Martínez Guzmán, 2009, 2015; París Albert, 2022a, 2025; Steele & García, 2024; Comins Mingol, 2009). Consequently, it becomes possible to address escalating violence and its accompanying social ills, such as exclusion, discrimination, poverty, and marginalization. This is not a utopian aspiration, but rather a realistic goal characteristic of a democratic society striving to realize human rights and ethical-civic values.

Once again, schools emerge as an ideal setting for nurturing this culture of peace and equipping individuals with the skills required for mediation and restorative justice—namely, dialogue, empathy, mutual recognition, active respect, and care for interpersonal relationships. The Philosophy for Children framework offers a methodology that develops the attitudes and competencies enabling students to view themselves as active mediators (Valles Molina & Rivas Lara, 2025; Orts García, 2025). Within this approach, they become capable of addressing conflicts through reflection and empathy, collaborating with others to seek agreements that facilitate resolution and, where appropriate, the restoration of harm and fractured relationships. Therefore, the goal extends beyond mere conflict resolution; it encompasses restoring and inventing new modes of relationship that allow individuals to understand one another and coexist, enabling each person to pursue their life's purpose without undermining the foundations of democratic life (Vázquez Recio et al., 2024).

In this regard, Martínez Guzmán's (2009, 2015) "philosophy for making peace" approach is highly enriching, as Sonia París Albert (2025)

asserts, since it allows educators to orient teaching toward the construction of peaceful social environments —settings where individuals develop their peaceful capacities rather than violent impulses when faced with conflict. In this manner, societies are built where the presence of peaceful means and environments is more visible and recognized as a viable alternative to violence. Violence, unfortunately, is often more striking, more prominent in the media, and more visible among the life choices perceived by citizens, who sometimes lack the opportunity to consider alternative courses of action. Following Herrero Rico (2021), París Albert (2025) emphasizes the importance of philosophical pedagogical approaches to peacemaking, linking their development directly to the pursuit of social justice:

I am referring, for example, to pedagogical dynamics that foster cooperation, perception, empathy, active listening, integrative skills, nonviolent communication, recognition, etc (Herrero Rico, 2021). In other words, a whole series of competencies that are, at the same time, a *sine qua non* for social justice (París Albert, 2025, p. 6).

126



In the educational setting, peaceful conflict resolution translates into school mediation processes that serve as a vital resource for positive coexistence while providing students with the opportunity to learn as citizens who can respond peacefully. Operating from a perspective of positive peace, they develop the capacity to deliberately choose peace over violence as an effective behavioral option (París Albert, 2022a). Ultimately, it is a matter of educating —about’ violence, rather than —for’ violence; according to París, this involves explicitly acknowledging that violence exists and that we must learn to respond to it —ideally, without resorting to further violence.

In turn, school mediation is intrinsically linked to the dialogic competence and critical thinking addressed in previous sections, both of which dismantle prejudices and ideological barriers (Fisher, 2007). School mediation cannot function effectively unless we demonstrate that the value of dialogue in a democratic society—and for positive coexistence—demands the systematic cultivation of moral sentiments and emotional competencies such as empathy, compassion, and moral indignation.

Emotional Education as the Key to Promoting Inclusion and a Culture of Peace

Rafael Bisquerra (2008, 2011) argues that emotional education constitutes an education for life, which is fundamental to active citizenship. This ap-

proach involves preparing individuals to respond effectively to the social needs they encounter throughout their lives, acknowledging that they are inherently sentient and emotional beings. Emotional education is thus conceived as a continuous, lifelong process aimed at fostering emotional competencies as a core element of holistic human development, ultimately equipping individuals for life's challenges.

The development of core emotional competencies reduces vulnerability to emotional distress situations that expose individuals to dysfunctions such as stress, impulsivity, and aggression—states that generate harmful effects on personal well-being. Consequently, the ultimate goal of emotional education is to maximize constructive tendencies while minimizing destructive ones. This process fosters greater emotional awareness and management, enhances the ability to generate positive emotions while mitigating the impact of negative ones, and cultivates self-motivation alongside a positive attitude toward life. Furthermore, empirical studies link emotional education to academic performance and student success. Through psychoeducational interventions, individuals achieve greater emotional regulation, stress management skills, and frustration tolerance, benefits that extend even into higher education settings (Rojas Cadena et al., 2024; Ferragut & Fierro, 2012).

Complementarily, Nussbaum (2014) identifies political emotions that foster positive coexistence, such as compassion and love, as well as those that emerge during conflict, namely shame, hatred, and disgust. Both categories demand the attention of an educational system that takes seriously the holistic development of individuals with a view toward the common good and the public sphere (Paris Albert, 2022b).

The emotional education programs presented by Bisquerra (2008, 2011) are particularly relevant because they are implemented in formal educational settings and focus on the acquisition of five core emotional competencies: emotional awareness, emotion regulation, self-motivation, social-emotional skills, and the relationship between emotion and subjective well-being—the latter providing the conditions for optimal experiences and actions oriented toward well-being.

For these programs to be successful, they must be combined with educational innovation across all levels, since pedagogical methodologies vary in their alignment with emotional education and their capacity to promote educational inclusion (Ferragut & Fierro, 2012). Pedagogically, the most effective resources are those requiring high student participation and active engagement in both the learning process and the co-construction of knowledge (Moraga & Soto, 2016). Cooperative, team-based

activities that promote self-motivation and emotional awareness serve as valuable tools for inclusion and academic success (Tamarit López, 2022). Students trained under these active methodologies become more empathetic; they develop skills that allow them to take responsibility, recognize their own abilities, improve their self-esteem, and appreciate the value of others. In doing so, they cultivate a self-critical, self-aware, and responsible character, gaining the autonomy to make independent decisions while considering the needs of the collective. They learn to forge consensus cooperatively, moving beyond self-centered perspectives to broaden their horizons of meaning.

These lessons are essential for fostering active and responsible citizenship. Emotional education programs implemented in classrooms aim to promote the emotional, social, and personal well-being of the entire educational community (Ferragut & Fierro, 2012). This systemic improvement in well-being nurtures positive coexistence, prevents a range of socio-emotional dysfunctions, and empowers individuals to resolve conflicts peacefully. Consequently, these programs not only include diverse individuals but actively promote a sustainable culture of peace.

Individuals who develop emotional intelligence possess the social-emotional skills required to understand themselves and express their feelings assertively. They are also more empathetic and better equipped to understand others, taking external interests into account and resolving conflicts through dialogue rather than violence. However, it is essential to link this emotional education to a foundational ethical and civic framework. It is not merely a matter of achieving emotional or social well-being, but of “living well” in the strict ethical sense; this means attaining a good life and fulfilling a life project that one has reasoned to value (Tamarit López, 2022). In this manner, individuals develop a commitment to core ethical values that democratic societies embody as the bedrock of community life: respect, equality, solidarity, compassion, justice, freedom, and integrity (Santisteban et al., 2018). These values enable human beings to actively shape the world, adapting reality to human demands and offering the opportunity to experience a meaningful, peaceful existence.

Learning these values in school requires a deliberate instructional effort paired with active discovery and appreciation on the part of the students. Ultimately, the goal is to develop students’ capacity for ethical discernment, enabling them to recognize what is intrinsically valuable in reality. When combined with education in reflection and critical reasoning, emotional and ethical education ensures the holistic formation of indi-



viduals, empowering them with the moral, emotional, and social capacities required to pursue a good life (Gracia Calandín & Tamarit López, 2021).

Such citizens possess the potential to develop a compassionate imagination that fosters mutual recognition and active respect. When deployed, this compassionate imagination awakens empathy and drives ethical reflection, as the narratives of others challenge them to think and act without divorcing reason from moral sentiments. It is, therefore, a matter of educating in compassion—the ethical virtue that enables “the recognition of the dignity of every human person” (Gracia Calandín, 2020, p. 125). Those educated within this framework not only experience moral outrage in the face of injustice but also feel a profound sense of responsibility toward those who suffer, compelling them to offer help and act on behalf of the victims.

- First, a humanities-based education inherently fosters the cultivation of imagination, reflection, and reasoning through narratives, artistic resources, and learning situations that draw upon historical memory or contemporary social analysis (Nussbaum, 2010, 2014).
- Second, the analysis of moral dilemmas effectively stimulates critical and alternative thinking, ethical reasoning, value recognition, and the development of empathy and a sense of justice.
- Third, the implementation of dialogic methodologies—specifically those based on thinking routines and a structured culture of thinking (Moraga & Soto, 2016)—cultivates fundamental moral capacities, personal and social reflection, metacognition, and prosocial behavioral change (Jerome et al., 2024).

All of this underscores the importance of establishing a classroom climate dedicated to collaborative reflection. When these routines and cognitive skills become an integral part of the individual’s personal toolkit, learning becomes transferable to other life situations, enabling citizens to choose the most appropriate and just options for themselves and their communities.

Conclusions

Learning for democratic life must be meaningful for students, grounded in a clear ethical and holistic foundation, and attentive to the various spheres of individual and community life. This paper has outlined the



democratic competencies required to live in a democracy and to exercise citizenship in an active, responsible, just, and supportive manner.

Acquiring these competencies requires a structured context, such as that provided by the educational setting, which enables individuals to come together in an atmosphere of interculturality, embracing the full diversity of contemporary pluralistic societies. To this end, a series of pedagogical proposals have been presented that place individuals at the center, alongside their inherent dignity and the respect they deserve. Simultaneously, these proposals delve into the necessity of cultivating reasoning, critical thinking, dialogue, and emotional and virtuous development—dimensions that collectively facilitate the learning, experience, and appreciation of values in real life. It is crucial to emphasize educational innovation in philosophy—at least regarding ethics education—and to support competency-based learning as a vital mechanism for addressing the 21st-century democratic crisis (UNESCO, 2021). Furthermore, advances in neuroeducation—and neuroethics specifically—must be integrated into the development of philosophy instruction and citizenship education (Gracia Calandín, 2020). Before designing pedagogical proposals for ethical and civic education, it is essential to engage in a profound reflection on the ultimate purposes of education and the specific challenges to which citizens in a democratic society must respond.

Educators, therefore, share a professional commitment to further their own development and to transform classrooms and schools into safe, free spaces. In these environments, the constructive management, resolution, and restoration of conflicts can serve as a practical model for students as future citizens—offering a valuable alternative to violent options that violate human dignity or are perpetuated by systemic prejudices and social ills (Vázquez Recio et al., 2024). Educators themselves must serve as role models for students, as the school, which must explicitly define its own ethical character and the civic principles undergirding its educational mission (Jerome et al., 2024). In the case of schools within democratic states, institutions must respect both the laws that regulate them and the legitimacy that justifies them as places where humanity and democratic citizenship are cultivated. They must flatly reject manipulation, indoctrination, or mere technical instruction—practices through which educational institutions shirk their democratic responsibility under the guise of being impartial or neutral regarding world events.

Likewise, schools must define themselves as spaces where students can enrich themselves and grow holistically, acquiring the resources to develop skills and abilities that foster awareness of their own lives and the



broader community (Gracia Calandín & Tamarit López, 2021). This implies viewing oneself as an active, responsible citizen within a democracy that demands justice and solidarity, a mindset cultivated through practices such as dialogue, cooperative research projects, and service-learning—which recognizes the value of knowledge by putting it directly at the service of community needs (Jerome et al., 2024).

Society as a whole—and specifically those working in education—must assume their share of responsibility to ensure that democracy is not undermined by rising populism or emerging authoritarianism (Gozálvez Pérez et al., 2023). Younger generations must develop robust critical thinking and open themselves to a democratic environment that encourages civic engagement, rejecting indifference and the uniform thinking that nullifies the richness of diversity. This engagement can be actively practiced in schools, where dialogue is key to discovering others through intercultural exchange, building bridges between justice and care, and transforming these values into everyday habits that forge a virtuous character. In this manner, it is possible to cultivate a sustainable culture of peace and a robust democratic culture—providing the fertile ground necessary for positive coexistence that pursues human and sustainable development, ensures inclusion, leaves no one sidelined, and realizes the fundamental values of civic ethics.



Notes

1. Data on this topic can be found in the Report of the United Nations High Commissioner for Human Rights (<https://bit.ly/4nU8isK>). We also find interesting data on this subject in the Forum on Human Rights, Democracy, and the Rule of Law (<https://bit.ly/3PLH9f8>).
2. “To effectively educate about, through, and for human rights and democracy—and, therefore, to engage in the art of violence reduction—requires young people to seriously engage in relational deliberative work. Instead of merely telling students that human rights, democracy, or peace are values that should be upheld and that violence is to be condemned, schools ought to give young people the opportunity to learn to deliberate together, to solve problems together, and to learn to give good reasons for why they believe in and what they wish to do” (Boontin and Forstenzer, 2024, p. 695).

Bibliography

- AGUILAR GORDÓN, Floralba & COLLADO RUANO, Javier
 2025 *Filosofía, ética y educación para la ciudadanía en la era digital*. Quito: UPS.
- ALBERTUS, Michael & MENALDO, Victor
 2018 *Authoritarianism and the Elite Origins of Democracy*. Cambridge: Cambridge University Press.

BARRIENTOS RASTROJO, José

2024 *Pensar críticamente, investigar y cooperar*. Granada: Comares.

BAUMAN, Zigmunt

2007 *Los retos de la educación en la Modernidad líquida*. Barcelona: Gedisa.

BAUER, Michael, PETERS, Guy, PIERRE, Jon, YESILKAGIT, Kutsal & BECKER, Stefan

2021 *Democratic Backsliding and Public Administration: How Populists in Government Transform State Bureaucracies*. Cambridge: Cambridge University Press.

BERLIN, Isaiah

2001 *Dos conceptos de libertad: el fin justifica los medios. Mi trayectoria intelectual*. Madrid: Alianza.

BISQUERRA, Ramón

2008 *Educación para la ciudadanía: el enfoque de la educación emocional*. Barcelona: Wolters Kluwer.

BISQUERRA, Ramón

2011 *Educación emocional: propuestas para educadores y familias*. Bilbao: Desclee de Brower.

BOONTINAND, Vachararutai & FORSTENZER, Joshua

2024 Educating *about, through and for* human rights and democracy in uncertain times: The promise of the pedagogy of the community of philosophical inquiry. *Educational Philosophy and Theory*, 57(7), 688-701. <https://doi.org/10.1080/00131857.2024.2444414>

BOVERO, Michelangelo

1987 Sobre los fundamentos filosóficos de la democracia. *Dianoia*, 33, 149-165. <https://doi.org/10.22201/iifs.18704913e.1987.33.694>

COMINS MINGOL, Irene

2009 *Filosofía del cuidar: una propuesta coeducativa para la paz*. Barcelona: Icaria.

CONROY, James

2020 Chaos or coherence? Future directions for moral education. *Journal of Moral Education*, 50(1), 1-12. <https://doi.org/10.1080/03057240.2020.1830578>

CORTINA ORTS, Adela

2007 *Ética de la razón cordial: educar en la ciudadanía en el siglo XXI*. Madrid: Nobel.

CORTINA ORTS, Adela

2024 *¿Ética o ideología de la inteligencia artificial? El eclipse de la razón comunicativa en una sociedad tecnologizada*. Barcelona: Paidós.

CONSEJO DE EUROPA

2016 *Competencias para una cultura democrática: convivir en pie de igualdad en sociedades democráticas culturalmente diversas*. Lima: Publicaciones del Consejo de Europa. <https://bit.ly/4fPaG1Z>

CROUCH, Colin

2020 *Post-democracy after the crisis*. Cambridge: Polity Press.

DEWEY, John

1995 *Democracia y educación: una introducción a la filosofía de la educación*. Madrid: Morata.

FERRAGUT, Marta & FIERRO, Alfredo

2012 Inteligencia emocional, bienestar personal y rendimiento académico en pre-adolescentes. *Revista Latinoamericana de Psicología*, 44(3), 95-104. <https://bit.ly/4fUT2d4>



- FISHER, Alec
 2007 *Critical Thinking: An Introduction*. Cambridge: Cambridge University Press.
- FORST, Rainer
 2014 *Justificación y crítica: perspectivas de una teoría crítica de la política*. Buenos Aires: Katz.
- FUKUYAMA, Francis
 1992 *The End of History and the Last Man*. Barcelona: Planeta.
- GALTUNG, Johan
 2003 *Paz por medios pacíficos: paz y conflicto, desarrollo y civilización*. Gernika, Bakeaz-Gernika Gogoratuz.
- GARCÍA LÓPEZ, Raúl, GOZÁLVEZ PÉREZ, Vicent, VÁZQUEZ VERDERA, Victoria & ESCÁMEZ SÁNCHEZ, Juan
 2011 *Repensando la educación: cuestiones y debates para el siglo XXI* (2ª ed.). Valencia: Brief.
- GOZÁLVEZ PÉREZ, Vicent
 2025 Educación global desde el Mediterráneo: propuestas para la igualdad y la justicia social mundial. En: Vicent Gozálvez Pérez & Patrizia Panarello (eds.), *Horizontes pedagógicos para la igualdad y la justicia social* (pp. 13-31). Valencia: Tirant lo Blanch.
- GOZÁLVEZ PÉREZ, Vicent, BUXARRAIS, María Rosa & PÉREZ, Cruz
 2023 Towards a post-democratic era? Moral education against new forms of authoritarianism. *Journal of Moral Education*, 52(4), 474-488. <https://doi.org/10.1080/03057240.2022.2159346>
- GRACIA CALANDÍN, Javier
 2020 *El desafío ético de la educación*. Madrid: Dykinson.
- GRACIA CALANDÍN, Javier
 2023 *Educación ética y filosófica en contextos de conflicto, heridas y vulnerabilidad*. Madrid: Dykinson.
- GRACIA CALANDÍN, Javier & TAMARIT LÓPEZ, Isabel
 2021 Education as a Common Good from the Capability Approach. *Journal of Philosophy of Education*, 55(3), 817-828. <https://doi.org/10.1111/1467-9752.12575>
- GRACIA CALANDÍN, Javier & SUÁREZ MONTOYA, Leonardo
 2023 The Eradication of Hate Speech on Social Media: A Systematic Review. *Journal of Information, Communication and Ethics in Society*, 21(4), 406-421. <https://doi.org/10.1108/JICES-11-2022-0098>
- HAN, Byung-Chul
 2022 *Infocracia: la digitalización y la crisis de la democracia*. Barcelona: Herder.
- HERRERO RICO, Sofía
 2021 La educación para la paz en tiempos de la COVID-19: repensar otras lógicas desde la imaginación, la fantasía, la creatividad y la utopía. *Araucaria*, 23(48), 325-348. <https://doi.org/10.12795/araucaria.2021.i48.15>
- JASSO ALFIERI, Romina Denise, FERNÁNDEZ MORA, Vicente de Jesús & GARCÍA ROJAS, Antonio Daniel
 2025 Perspectiva crítica de la innovación educativa desde las metodologías activas de aprendizaje. *Sophia, Colección de Filosofía de la Educación*, (38), 241-269 <https://doi.org/10.17163/soph.n38.2025.07>



- JEROME, Lee, HYDER, Faiza, HILAL, Yaqub & KISBY, Ben
 2024 A Systematic Literature Review of Research Examining the Impact of Citizenship Education on Active Citizenship Outcomes. *Review of Education*, 12, e3472. <https://doi.org/10.1002/rev3.3472>
- LIPMAN, Matthew
 2003 *Thinking in Education*. Cambridge: Cambridge University Press.
- MARTÍNEZ GUZMÁN, Vicent
 2009 *Filosofía para hacer las paces*. Barcelona: Icaria.
- MARTÍNEZ GUZMÁN, Vicent
 2015 Intersubjetividad, interculturalidad y política desde la filosofía para la paz. *Thémata*, 52, 147-158. <https://doi.org/10.12795/themata.2015.i52.08>
- MORAGA, Daniel & SOTO, Jeannette
 2016 TBL-aprendizaje basado en equipos. *Estudios Pedagógicos*, 42(2), 437-447. https://dx.doi.org/10.4067/S0718_07052016000200025
- MILL, John Stuart
 1988 *Sobre la libertad*. Madrid: Alianza.
- NUSSBAUM, Martha C.
 2010 *Sin fines de lucro: ¿por qué la democracia necesita de las humanidades?* Buenos Aires: Katz.
- NUSSBAUM, Martha C.
 2014 *Emociones políticas: ¿por qué el amor es importante para la justicia?* Barcelona: Paidós.
- O'NEIL, Cathy
 2018 *Armas de destrucción matemática: cómo el big data aumenta la desigualdad y amenaza la democracia*. Madrid: Capitán Swing.
- ORTS GARCÍA, María
 2025 La filosofía para niños/as como aproximación a la Agenda 2030. La necesidad de una ciudadanía cosmopolita, crítica y compasiva. *Revista Internacional de Filosofía Aplicada HASER*, 16(16), 79-111. <https://bit.ly/4ajaep4>
- PARÍS ALBERT, Sonia
 2022a El pensamiento de Paulo Freire en la comunidad de indagación filosófica: aportes para el cultivo de los movimientos sociales. *Insurgencia*, 8(2), 97-114. <https://doi.org/10.26512/revistainsurgencia.v8i1.41726>
- PARÍS ALBERT, Sonia
 2022b La fuerza de los sentimientos y el reclamo de una educación sentimental creativa. *Bajo Palabra*, 2(30), 265-280. <https://doi.org/doi.org/10.15366/bp2022.30.014>
- PARÍS ALBERT, Sonia
 2025 Filosofía para hacer las paces: hacia una educación para la justicia social. *Revista Internacional de Educación para la Justicia Social*, 14(1). <https://doi.org/10.15366/riejs2025.14.1.010>
- PINEDO CANTILLO, Iván Alfonso
 2024 El papel de las emociones en la sociedad del rendimiento. *Sophia, Colección de Filosofía de la Educación*, (36), 201-220. <https://doi.org/10.17163/soph.n36.2024.06>
- PRZEWORSKI, Adam
 2022 *La crisis de la democracia, ¿a dónde pueden llevarnos el desgaste institucional y la polarización?* Madrid: Siglo XXI.

- ROJAS CADENA, Cristina Michelle, RUIZ SILVA, Arianna Melissa & DIAZ MOSQUE-
RA, Elena Narcisa
2024 Propuesta psicoeducativa sobre competencias emocionales en jóvenes uni-
versitarios. *Sophia, Colección de Filosofía de la Educación*, (36), 169-197.
<https://doi.org/10.17163/soph.n36.2024.05>
- ROSA, Harmut
2016 *Alienación y aceleración: hacia una teoría crítica de la temporalidad en la
Modernidad tardía*. Buenos Aires: Katz.
- SANTISTEBAN, Antoni, PAGÈS, Joan & BRAVO, Liliana
2018 History Education and Global Citizenship Education. En: Ian Davies, Li-
Ching Ho, Dina Kiwan, Carla Peck, Andrew Peterson, Edda Sant & Yusef
Waghid (eds.), *The Palgrave Handbook of Global Citizenship and Education*
(pp. 457-472). Londres: Palgrave Macmillan. https://doi.org/10.1057/978-1-137-59733-5_29
- SCHAFFER, Johan Karlsson
2015 The Co-originality of Human Rights and Democracy in an Internatio-
nal Order. *International Theory*, 7(1),96-124. <https://doi.org/10.1017/S1752971914000426>
- SEN, Amartya
2000 *Desarrollo y libertad*. Barcelona: Planeta.
- STEELE, José & GARCÍA, Elizabeth
2024 Hacia una educación transformadora: la mediación escolar, un pilar en la
cultura de paz y la ciudadanía mundial. En: Enrique Pozo Cabrera & Manuel
Torres Aguilar (coords.), *Estudios de mediación, conflictos y paz* (pp. 203-
223). Cuenca: EDUNICA; UCACUE. <https://bit.ly/43nKPXL>
- SUÁREZ MONTOYA, Leonardo, ORTS GARCÍA, Maria & FERNÁNDEZ, Manu
2024 *Educación ética y filosófica para el desarrollo de hábitos sostenibles*. Madrid:
Dykinson.
- TAMARIT LÓPEZ, Isabel
2022 El empoderamiento en competencias emocionales como clave para la con-
vivencia y la inclusión educativa. En: Javier Gracia Calandín (ed.), *Educa-
ción ética y filosófica para la inclusión social* (pp. 63-75). Valencia: Tirant lo
Blanch.
- TAMARIT LÓPEZ, Isabel
2025 Educación por el reconocimiento del otro: una propuesta pedagógica ba-
sada en el diálogo y el pensamiento crítico. En: Vicent Gozálvarez Pérez &
Patrizia Panarello (eds.), *Horizontes pedagógicos para la igualdad y la justicia
social* (pp. 169-180). Valencia: Tirant lo Blanch.
- TAYLOR, Charles
1994 *La ética de la autenticidad*. Barcelona: Paidós.
- TAYLOR, Charles
2005 *La libertad de los modernos*. Buenos Aires: Amorrortu.
- TEEGELBECKERS, Jip, NIEUWELINK, Hessel & OOSTDAM, Ron
2025 How to Teach for Democracy? Identifying the Classroom Practices Used
by Expert Teachers of Democracy. *Teaching and Teacher Education*, 157.
<https://doi.org/10.1016/j.tate.2025.104942>
- UNESCO
2015 *Replantear la educación: ¿hacia un bien común mundial?* París: UNESCO.

UNESCO

2021 *Reimagining our futures together: A new social contract for education. Report of the International Commission on the Futures of Education*. París: UNESCO. <https://bit.ly/4ff18x9>

VALLES MOLINA, Jacqueline & RIVAS LARA, Heidi Alicia

2025 Hacer las paces desde las infancias: un enfoque critico frente a la filosofía para niños. *Eirene*, 8(15). <https://doi.org/10.62155/eirene.v8i15.323>

VÁZQUEZ RECIO, Rosa, CALVO GARCÍA, Guadalupe & GARCÍA GÓMEZ, Teresa

2024 Acción directiva disidente para la equidad educativa. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 22(4), 33-51 <https://doi.org/10.15366/reice2024.22.4.002>

YLARRI, Juan Santiago

2015 Populismo, crisis de representación y democracia. *Foro*, 18(1), 179-199 https://doi.org/10.5209/rev_FORO.2015.v18.n1.49695

ZAKARIA, Fareed

1997 The Rise of Illiberal Democracy. *Foreign Affairs*, 76(6), 22-43. <https://bit.ly/4ecPCKI>



Author Declaration—CRediT Taxonomy	
Author	Contributions
Isabel Tamarit López	This article was written entirely by the author; therefore, the content presented in this document is the sole responsibility of the author.

Statement on the Use of Artificial Intelligence
The author, Isabel Tamarit López, of the article titled “Cultivating Democratic Competencies in 21st-Century Society,” submitted to the OJS of the journal <i>Sophia, Philosophy of Education Collection</i> , for review and evaluation as part of the editorial process, declares that the preparation of the document was supported by artificial intelligence (AI) at a level of 0%.

Date of receipt: July 15, 2025
Review date: September 20, 2025
Date of approval: November 22, 2025
Publication date: July 15, 2026

PEDAGOGICAL BIAS AND THE VALIDITY OF PEDAGOGY

El sesgo pedagógico y la vigencia de la pedagogía

ÓSCAR JULIÁN CUESTA MORENO*

Pontificia Universidad Javeriana, Bogotá, Colombia

<https://ror.org/03etyjw28>

ocuesta@javeriana.edu.co

<https://orcid.org/0000-0001-7181-1183>

RAFAEL REYES GALINDO**

Pontificia Universidad Javeriana, Bogotá, Colombia

<https://ror.org/03etyjw28>

reyes@javeriana.edu.co

<https://orcid.org/0000-0001-8359-1915>

Suggested citation: Cuesta Moreno, Óscar Julián & Reyes Galindo, Rafael. (2026). Pedagogical Bias and the Validity of Pedagogy. *Sophia, Colección de Filosofía de la Educación*, (41), pp. 137-175.

* Professor in the School of Education at the Pontificia Universidad Javeriana; holds a Ph.D. in Social Sciences and a Ph.D. in Knowledge and Culture in Latin America, as well as a master's degree in Education. His research focuses on educational practices and training processes. He is interested in teaching and training.

h-index: 19.

** Professor in the School of Education at the Pontificia Universidad Javeriana; holds a master's degree in Hermeneutic Philosophy, a bachelor's degree in Theology, and a bachelor's degree in Philosophy and Letters. His research interests include the history of pedagogical practice, teacher education, and the social construction of school curricula.

h-index: 2.

Abstract

The article analyzes a series of statements commonly used in contemporary educational discourse, but whose underlying assumptions do not constitute fundamental elements of education. To explain these expressions, the concept of pedagogical bias is proposed, understood as a distorted interpretation of educational reality that, relying on statements of apparent rationality or widespread social acceptance, leads to erroneous judgments about the educational process and reinforces practices perceived as necessary or appropriate, even though they lack a solid foundation. The analysis categorizes five biases: Those related to the teacher and their work, The school and the nature of schooling, Pedagogy and its object, Teaching and its implementation, and Education and its purpose. The main findings identify that these pedagogical biases stem from good intentions, however, they generate undesirable consequences in the educational field, altering the conditions of schooling and distorting teaching, prioritizing learning for its own sake and elevating the student to a subject to be satisfied. The conclusion emphasizes the role of pedagogy as a field that reflects on, investigates, and conceptualizes education, and therefore cannot be simplified to a set of techniques focused on criteria of efficiency and effectiveness.

Keywords

Bias, Education, Teaching, Teacher, Pedagogy, Schools.

Resumen

El artículo analiza una serie de enunciados de uso común en el discurso educativo contemporáneo, pero cuyos supuestos no constituyen elementos estructurantes de la educación. Para explicar tales expresiones, se propone el concepto de "sesgo pedagógico", entendido como una interpretación distorsionada de la realidad educativa que, apoyándose en enunciados de aparente racionalidad o de aceptación social generalizada, conduce a juicios erróneos sobre el hecho educativo y consolida prácticas que se perciben como necesarias o adecuadas, aunque carezcan de un fundamento sólido. En el análisis se categorizaron cinco sesgos: los que tienen que ver con el maestro y su trabajo; la escuela y la condición de lo escolar; la pedagogía y su objeto; la enseñanza y su realización; y la educación y su propósito. Como principales resultados se identifica que estos sesgos parten de buenos propósitos, pero generan consecuencias indeseadas en el campo educativo, alterando las condiciones de lo escolar y distorsionando la enseñanza, privilegiando el aprendizaje por el aprendizaje y enalteciendo al estudiante como sujeto a satisfacer. La conclusión resalta el papel de la pedagogía como campo que reflexiona, investiga y conceptualiza la educación, por lo que no puede ser simplificada a un conjunto de técnicas centradas en criterios de eficiencia y eficacia.

Palabras clave

Sesgo, educación, enseñanza, maestro, pedagogía, escuela.

Introduction

Education as a social practice is not immune to beliefs and prejudices. Even today, when there is talk of evidence-based pedagogy, educational practice is carried out based on assumptions that are taken for granted and that, despite having good intentions, end up producing unintended consequences. Specifically, the objective of this article is to analyze a series of statements commonly used in contemporary educational discourse whose assumptions do not constitute foundational elements of educa-

tion. For this analysis, we propose the concept of pedagogical bias, which allows us to question whether educational discourses, while having good intentions, can simultaneously generate unintended consequences in the field of education, altering school conditions and distorting teaching.

Along these lines, Durwin and Reese-Weber (2019), for example, reveal ten myths or beliefs about education, such as the widely touted notion that students learn best through discovery rather than as a result of an explanation. In response to this myth, the authors argue that, while projects and activities that encourage discovery do benefit students, they do not necessarily negate the importance of a teacher's explanation—especially since independent inquiry does not lead to the same kind of understanding as listening to someone who is knowledgeable on the subject. Nevertheless, discovery-based learning is currently promoted, and a teacher's lecture on a topic is often dismissed as “anachronistic.”

Ruiz (2023) proposes the term “edumyths” to refer to certain ideas that circulate as unquestionable truths in contemporary education. Many of these are misrepresentations cloaked in supposed scientific support that tend to be readily accepted. For example, there is confusion surrounding the concept of “active learning”: it is often thought to imply learning by physically doing things, but the word “active” actually refers to “intellectual activation”—such as that which might be sparked by a question, a teacher's lecture, or a reading—activities that are, in contrast, commonly characterized as passive.

Duriez (2023) points out that these myths or beliefs about education take the form of simple, appealing statements that—driven by the intention to improve classroom practice and supported by the notion of self-evidence—are easily accepted by the public. However, we agree with him that the task of pedagogy, rather than proposing ready-made solutions, is to question those slogans that circulate as supposedly proven truths.

In light of the above, this article seeks to broaden the pedagogical discussion by analyzing some of these beliefs, whose self-evident nature rarely invites critical scrutiny. Unlike the previously cited works, we do not speak of myths but of biases, since these are not merely narratives that explain something, but rather false ideas that—once accepted as self-evident truths—have the power to guide important decisions, even though their results may run counter to the intended objectives.

In short, the problem is that statements about education circulate that appear rational but, at their core, lack substantial pedagogical grounding. The hypothesis posits that these statements constitute biases that shape decisions and practices which, contrary to expectations, un-



dermine pedagogy. Thus, the purpose of this article is to introduce the concept of “pedagogical bias,” understood as a distorted interpretation of educational reality that—based on statements of apparent rationality or widespread social acceptance—leads to erroneous judgments about the educational process and reinforces practices that are perceived as necessary or appropriate, even though they lack a solid foundation.

This topic is important because the beliefs or ideas we hold about reality influence the way we investigate educational phenomena, but above all, they shape the efforts we make and the decisions we take regarding education. Indeed, a bias could lead to policies or initiatives that, despite supposedly rational foundations and good intentions, ultimately fail to change the reality of education or, at times, produce undesirable results. As Bach-elard (1993) states, this work invites us to think against our own minds.

This is essential for reclaiming pedagogy as a field of disciplinary knowledge production, since its object of study would be ongoing critical reflection and research on education. However, the beliefs, stereotypes, and biases present in discourses on education stifle critical reflection. Furthermore, they tend to reduce pedagogy to a technique for applying strategies, taking for granted an understanding of education (what it means to educate) and its purpose (why we educate). Pedagogy has scientific potential if it does not become merely instrumental action and, above all, if it does not become a mere operational framework for what other educational sciences say.

First, the paper presents the research methodology. Next, it develops the concept of pedagogical bias, using “cognitive bias” as a reference point. Third, it systematizes the biases identified in the research into five categories, based on their focus: the teacher, the school, teaching, education and its formative purpose, and pedagogy. Fourth, it proposes that these biases have gained significant ground due to the erosion pedagogy has experienced, stemming from its displacement as a field of knowledge. Finally, the conclusions indicate that the way to avoid falling into these biases is to reclaim pedagogy as a field that reflects on and investigates education.

Methodology

A descriptive study was conducted (Tamayo, 2001) based on a conceptual framework that reaffirms the epistemological dimension of pedagogy—i.e., asserting that pedagogy produces knowledge about education as an object of study without being subject to the claims of other educational sciences.



Thus, the methodology was based on the theoretical premise that pedagogy is not merely a field of recontextualization (Bernstein, 1998), but rather a disciplinary body of knowledge that produces concepts, theories, and methodologies specific to its own object of study, facing the challenge of ensuring that these constructs are unique to educational theory and not terms adapted from other fields (Siegel and Biesta, 2022). Consequently, the research relied on the premise that concepts such as training, education, teaching, teacher, and school are specific to the pedagogical tradition; therefore, they were adopted as the central terms of the study.

In line with the conceptual framework outlined above, to highlight the concept of pedagogical bias, the researchers first compiled common statements in the field of education by collecting dialogic narratives through interviews (Delgado and Gutiérrez, 1999).

To this end, a two-way matrix was designed, in which the researchers compiled statements that circulate in everyday discussions about education (Miles and Huberman, 1994). For data reduction and coding, open coding was used (Creswell, 2013), identifying the following five categories: biases related to the teacher and their work; the school and the nature of schooling; pedagogy and its object; teaching and its implementation; and education and its formative purpose.

141



Pedagogical Biases

Tversky and Kahneman (1981) proposed the concept of “cognitive bias,” referring to any distortion in the mental process that leads to an inaccurate judgment yet appears to be entirely rational. The authors point out that this phenomenon occurs because the mind, while serving to “pragmatically guide our actions in the world” (García Campos et al., 2022, p. 103), operates by taking shortcuts to conserve cognitive effort. Thus, biases manifest in various ways: hasty calculations, logical errors, misinterpretations, and cognitive illusions—all of which are systematic errors that reveal the operation of imprecise mental processes (García Campos et al., 2022).

However, biases would be nothing more than an anecdote if they were not involved in our choices, decisions, and practices. Even in the scientific field—which is based on a method designed to avoid them—biases affect critical abilities such as making estimates, forming objective value judgments, attributing causal relationships, or establishing hypotheses (Redondo, 2020).

Santizo (2022) conceptualizes cognitive bias in education as a “partial perception of educational reality” (p. 39). It occurs when the attention and decisions of students and teachers focus disproportionately on certain elements while ignoring others that are equally relevant. Although biases operate individually, they are reinforced by social factors such as beliefs and stereotypes. In educational settings, this dynamic is amplified, as the very organization of the system and educational policies can contribute to the establishment and reinforcement of biases by determining default actions and decisions (Santizo, 2022). An example of this is the reductionist interpretations of the use of new technologies for skills development (García, 2018), which can limit their pedagogical potential by confining it to merely preventing student boredom.

The difficulty in identifying and subverting cognitive biases lies in the fact that they often bring benefits to “one’s own individual and social image” (Concha et al., 2016, p. 118). For example, if a teacher faithfully adheres to the educational stereotypes promoted by the media and social networks (Observatorio Pedagógico de Medios, 2017), they are likely to be perceived as an excellent teacher, both by themselves and by their peers and superiors. However, such validation, based on prejudice, does not guarantee that their teaching is truly effective; in fact, it is even possible that these practices ultimately hinder their students’ learning process.

In fact, a teacher who follows the guideline of attending to their students’ emotions so that they do not get bored is complying with socially accepted norms. However, at the same time, they are preventing their students from being challenged by the world, which is not always wrapped in fun but, on the contrary, demands sacrifice or dealing with the discomfort of not satisfying the demands of the self to attend to something that transcends it: the subject of study (Larrosa, 2019).

Pedagogical bias is thus defined as a distorted interpretation of educational reality that, relying on statements of apparent rationality or widespread social acceptance, leads to erroneous judgments about the educational process and reinforces practices that are perceived as necessary or appropriate, even though they lack a solid foundation.

Below is a classification of biases organized into five categories: those related to the teacher and their work; the school and the nature of schooling; pedagogy and its object; teaching and its implementation; and education and its purpose (Table 1).



Table 1
Categorization of Pedagogical Biases

Category	Biases that have gradually weakened and eroded the meaning
Teacher	The teacher is a facilitator of learning. The teacher should be a mediator of knowledge. The teacher should be a friend to the students. Teachers must learn from their students. Teachers should be innovative. Teachers should be motivators and resilient.
School	Education takes place outside of school, and therefore, school is unnecessary. School should prepare students for a life of service to society. School must respond to its context.
Teaching	Teaching is to make the difficult easy. Teaching is facilitating learning. Teaching should be fun. Teaching involves motivating students. Good teaching is about giving students freedom.
Education	The best education uses the latest technologies. The student is the center of education. Education must be of high quality. Education should not be traditional. Education prepares us to be happy.
Pedagogy	Pedagogy must be measured by learning outcomes. Pedagogy must be evidence-based. Pedagogy establishes techniques for classroom development. Pedagogy consists of educational models. Good pedagogy begins with recognizing students' interests.



Teacher-centered biases

We begin this analysis with a bias that stands out because it prescribes how a teacher should be. This bias states that “the teacher is a facilitator of learning” and that “the teacher’s role is to create the conditions for learning to occur.”

At first glance, this idea sounds obvious; however, things are not necessarily that simple. Learning is a quality of living beings that allows them to adapt based on the information they receive from their environment. Seen in this light, it is no surprise that a student achieves learning,

since simply being alive is enough. Therefore, the teacher is not there to facilitate learning as such; rather, beyond achieving learning that is visible in behavior, the teacher's work seeks the socialization, enculturation, qualification, and subjectivation of the other (Biesta, 2017).

Socialization is understood as the incorporation of the dispositions that a society considers necessary for its reproduction; enculturation consists of fostering the assimilation of cultural frameworks for being and existing in the world; qualification refers to the acquisition of qualities that are socially valued within a specific historical context—such as soft skills and emotional intelligence in contemporary capitalism; and, finally, subjectivation is a paradoxical outcome in which each individual develops their uniqueness through exposure to common norms.

Now, the teacher seeks to achieve the above through an educational practice centered on explaining knowledge: teaching. In short, the teacher does not merely facilitate learning; rather, they shape individuals, and such formation has an ontological impact that transcends learning. In fact, teaching cannot be observed or measured in the same way as learning; instead, its results become apparent in retrospect long afterward and operate even unconsciously—what Jackson (1999) calls “implicit teachings.” Therefore, a teacher's work cannot be evaluated solely based on the immediate results achieved by the students.

Furthermore, teaching is a practice in which one person (the teacher) offers something (the subject matter or field of study) to another (the student). The student has no control over either the nature of that content or the way it is presented. Hence, it is to be expected that the student will experience a certain degree of discomfort and may even want to avoid the process, since it requires them to be open to being taught and to pay attention to that other person, setting aside their own desires and postponing immediate gratification. Thus, rather than a facilitator, the teacher is more of a “complicator” (Cuesta, 2021), since they unsettle the student by pulling them out of their self-referentiality to make them attend to something they do not master, that does not interest them, that they see no meaning in, and that, in their judgment, may be of no use at all.

The idea of the teacher as a facilitator is one of the consequences of adopting constructivism uncritically (Biesta, 2016) and has led to a clear shift in the teacher's role from that of an expert in a discipline to a docile companion to the learner's interests (Enkvist, 2009)—one whom the learner may well do without. However, it has been demonstrated that the most efficient learning occurs through an explanation provided by

another person (Ruiz, 2023), as it involves less cognitive load and reduces the time required for the learning process.

Similarly, it is often said that “the teacher must be a mediator of knowledge,” with “mediator” understood as one who stands between the student and knowledge. At first glance, it also seems obvious that the teacher is a link between their students and knowledge; however, when the teacher teaches, they are not mediating but rather embodying knowledge, since they know the subject they are teaching and can therefore explain it.

If the teacher were a mediator, knowledge would only be summoned when the teacher is with their students; but even when the students are not present, the teacher still possesses knowledge. In fact, they view and experience the world through that knowledge. This knowledge gives them a social identity and becomes a driving force, a good teacher wants to know more—which is why they continue to study. Put another way, the teacher’s work does not end during school breaks when there are no students; rather, it continues as a way of life: its meaning is knowledge. Indeed, in many cases, teachers first fell in love with knowledge, and this love led them to become teachers; thus, their work is first a desire for knowledge and then a desire to share that knowledge. The teacher is not a mediator. Their knowledge is an existential horizon.

On the other hand, conceiving of the teacher as a mediator implies instrumentalizing them, reducing them to a tool at the service of the student. In this framework, the student seeking knowledge would use the teacher as a mere means to attain it. This dynamic not only produces relational adjustments that undermine the teaching profession but, more importantly, ignores its authentic formative function. Formation, as Biesta (2016 and 2022) points out, necessarily involves an “interruption of the self,” an act that the teacher carries out while teaching. This act is incompatible with instrumental logic, whose purpose is to facilitate the individual’s enjoyment, thereby perpetuating an unquestioned extension of their selfhood.

The idea of the teacher as a mediator fits very well with discourses on learning, since these discourses center their assumptions on the student: what interests the student, what the student needs, and what the student likes. In other words, they validate a stance that elevates the self and thereby creates the possibility of instrumentalizing others. Among other things, this discourse on learning aligns closely with marketing and the capitalism of immediacy, since it seeks to gratify the individual quickly. That is why it is so common in the advertising of educational services and products. Let us remember that acquiring knowledge is not a matter



of immediate gratification, but of effort; it involves setting aside other desires and working through discomfort.

On the other hand, when a teacher instructs, they often strip the student of their prior knowledge (representations) regarding the subject matter. For example, when a teacher explains why a board floats in water by describing Archimedes' principle, they gradually strip students of the intuitive explanations they brought with them ("it floats because it is made of wood" or "it floats because it is light"). Thus, rather than a mediator, the teacher often acts as a productive obstacle: they challenge common sense and strip us of what we thought we knew, thereby stimulating curiosity, doubt, and, ultimately, the desire to know.

Another pedagogical mandate or bias that is often heard is that "the teacher should be a friend to their students." At first glance, this seems desirable, since it places both parties in an emotional bond characterized by loyalty, trust, support, and reciprocity. However, this seemingly appealing idea overlooks the fact that the relationship between the two is not organized by an emotional or affective connection, but rather by the subject matter.

In fact, teacher and student come together because of a course, content to be taught, or, in a word, knowledge. Without this knowledge, their encounter would be shaped by other social dynamics or intersubjective arrangements, and thus would have a different meaning. Teacher and student interact because one knows what the other does not; that is why one is paid and the other—in the private system—must pay. Stripped of the realm of knowledge, both lose their status as student and teacher; in that case, we have two people between whom friendship might blossom, though this would be the result of human contingencies rather than a pedagogical precept.

Now, it is possible for friendship between teacher and student to arise as a result of the encounter facilitated by the subject matter. In fact, it is common for teachers and students to become friends after the student develops a passion for the subject the teacher instructs—i.e., when they become peers because both desire the same thing. But to require friendship as a prerequisite for positive classroom development is to overlook the fact that the nature of emotional bonds is not shaped by mandate or mere desire—especially when the teacher is instructing a class of 20 or 40 students. Perhaps one or two of them will eventually become passionate about the subject. Maybe with one of them there is the possibility of a future friendship, but that is not the goal. Furthermore, being friends with



everyone would imply programming emotional responses, which is more characteristic of robotics than of the human condition.

On the other hand, it is important to note that there is no relationship of equality, equivalence, or horizontality between teacher and students. On the contrary, it is a bond defined by inequality and hierarchy. It is evident that teachers and students are equal on the legal-normative level (although there are variations if the students are minors), but in the pedagogical relationship they do not stand on the same footing. The teacher possesses something the student does not: knowledge, and that knowledge authorizes the teacher to teach. However, this authority is not imposed but conferred: the student, society, and the academic discipline itself authorize the teacher to teach. Hence, we can speak of a granted hierarchy between the two: the student, who sees the teacher as an authority because of their knowledge, tacitly says, “Teach me” (Cuesta, 2019).

Breaking down that hierarchy sounds politically correct and therefore seems like a good intention; however, not all good intentions lead to the desired results. We see this today: in the name of ending authoritarianism, teachers have been stripped of the conditions of authority, making it increasingly difficult to manage students. In fact, it is becoming increasingly common for teachers to be subjected to harassment and mistreatment by their students. It is no coincidence—and almost prophetic—that Arendt (1996) stated decades ago that the crisis in education was fundamentally a crisis of authority.

Hand in hand with the previous bias goes the notion that “teachers must learn from their students.” The idea that students construct their own knowledge, that they are creative, and that they bring prior knowledge to the classroom—among other slogans—has fueled this bias, which does not place teachers on equal footing with their students as the principle of friendship would, but rather reverses the hierarchy: students are there to give to the teacher (in a relationship that is, moreover, structurally unequal, since the teacher receives a salary from the student, who not only pays tuition but would also be expected to provide the teacher with learning opportunities).

While a teacher may learn from a student, they will not do so regarding the subject they teach, but rather in other fields or areas of knowledge in which the student is presumed to be an expert. Such is the case with a chemistry teacher who might learn literature from one of their students. Nevertheless, it is expected that, when it comes to chemistry, the teacher will remain the authority.



Teachers learn from reflecting on their teaching experience. Their students' comments, questions, and answers do not lead to direct learning but are instead processed and interpreted by the teacher. Thus, rather than learning from their students, teachers learn from their analysis of their own practice (Perrenoud, 2004).

The belief that teachers learn from their students stems from a homogenizing view of the pedagogical relationship, which distorts the democratic conception of the teacher-student relationship. As Kant states in his *Treatise on Pedagogy* (2009), "One generation educates another," which implies an important distinction. Equality may exist in terms of equal intelligences, as Rancière (2003) points out, but the responsibility to equip "newcomers" with the necessary tools so that the world is not destroyed (Arendt, 1996) lies with adults. On the other hand, the newcomers have the responsibility to renew the world in ways we cannot even imagine. This tension places the teacher on one side and the student on the other, both engaged with a shared world.

Furthermore, we must bear in mind that, although teachers learn from their reflection, this does not necessarily imply a transformation of their practice—nor should it. The following bias runs counter to this reality, imposing the idea that "teachers must be innovative." If innovation involves introducing new elements to achieve objectives, this demand becomes an overwhelming mandate.

In fact, there is now talk of the "innovation bias," which consists of favoring ideas, products, or services simply because they appear novel, or because they can be labeled as innovative. This affects decision-making in two critical ways: first, because such an attribution does not guarantee real improvement or added value; second, because it carries the risk of dismissing established processes and methods—whose effectiveness has been proven—simply because they are considered outdated.

In any case, the dictatorship of innovation shifts the focus to novelty rather than to an understanding of the established—in this case, the underlying principles of teaching, which do not necessarily require constant invention. To teach, one must master a body of knowledge and share a symbolic repertoire with the learner who allows one to explain that mastery. Viewed this way, the demand for innovation can remain superficial, overlooking internal mechanisms.

On the other hand, educational innovation is often reduced to the pursuit of the student's immediate gratification—avoiding boredom at all costs—while overlooking the fact that education inherently involves a structural inconvenience. This is because education consists, in essence,



of an encounter with culture that requires renouncing the purely instinctive. This process necessarily generates a structural unease (Freud, 2022). In other words, the educational process involves the temporary loss of the “natural state,” demanding discipline and instruction in return (Kant, 2009). Through education, humans encounter culture and undergo the regulation of their instincts, which inevitably produces unease.

School-Centric Biases

Discussions about the need for innovation and calls for school reform are nothing new. Since at least the late nineteenth century, there has been a persistent push for school reform, particularly regarding teaching methods. However, contrary to this view, some argue that “education takes place outside of school” and that, therefore, school is unnecessary. If educating were merely a matter of shaping the human being, school could be dispensed with, since the processes of socialization, enculturation, and subjectivation take place through social spaces such as the family, the community, or even the media. However, in schools and universities, the focus is on disciplinary knowledge. Hence the role of the teacher, who is not only an expert in their discipline but also in the art of teaching.

The education provided in schools is based on removing the child from their everyday life, freeing them from their context (family, neighborhood, work, etc.) and from themselves (Simons and Masschelein, 2014). Thus, while education in the broadest sense can occur outside of school, the formation of the individual for a specific purpose—centered on disciplinary knowledge and mediated by the teacher’s instruction—necessarily requires the school institution. For this reason, arguments advocating for the abolition of schooling are often limited to superficial criticisms that seek to eliminate anything that is not pleasurable. However, attempting to eradicate discomfort is a mistake, as it is an inherent part of the educational process. Proof of this is that boredom can manifest even in hyperstimulated environments filled with screens, holograms, and recreational activities.

Another common, accusatory bias asserts that “school must prepare students for a useful life.” Indeed, critics are often heard saying that school teaches useless things—things students will never use in the future. Joining them are the students themselves, who look down on school subjects and justify their disinterest by asking, “What’s the point of that?” To all of them, we must respond unequivocally: school teaches a subject



and brings the world into the classroom because the world is there, not because it serves a specific purpose. We teach for the love of knowledge, not for its usefulness (Simons and Masschelein, 2014; Larrosa, 2019).

The essential difference between the student and the apprentice lies in their relationship to the pragmatic goal: the apprentice appropriates knowledge for immediate purposes (to answer an exam question or perform a mechanical task that can be forgotten as soon as it is finished), while the student contemplates knowledge, admires it from a distance, and finds joy in its pursuit. Their quest is defined by the resistant nature of the object of study—its quality of resisting complete grasping—which keeps them in a state of constant inquiry. Hence, as Larrosa (2019) points out, study is an open-ended process whose outcome is uncertain, unlike learning, which begins with a predetermined list of expected outcomes.

Viewed in this light, not everyone in the classroom becomes a student. Although those attending class are bureaucratically assigned this label, their ontology does not correspond to that status, since most do not develop a passion for the subject but rather study it simply because they must, even though the subject itself possesses dignity beyond its potential utility (Bárcena et al., 2020).

Subjects exist in school to remind students that the world is greater than they are and that they owe a debt to it. Therefore, it is normal—if we view it through the lens of a productivist society—for “useless things” to be taught in school, though this does not justify their elimination. Their purpose transcends mere immediate pragmatism and finds dignity in its own fulfillment.

Along these lines, it is also common to hear that “school must respond to the context,” a phrase that at first glance sounds relevant, though it conceals another pedagogical bias. Of course, it is reasonable for a school in an indigenous territory to respond to certain sociocultural determinants, such that the context becomes an opportunity for teaching—as in the case of a teacher who teaches how to calculate speed using as an example a cart pulled by mules rather than camels, since in that territory mules are familiar while camels are not. However, it is important to bear in mind that the purpose of the lesson is to understand the concept of speed, not the student’s context.

Of course, education carries the risk that students, after attending school and broadening their horizons, will leave their home context and seek opportunities elsewhere (Luri, 2022). Thus, school education aims to “enculturate” students by revealing humanity’s legacy to them—always through a selection of content, which is a matter of debate—without



limiting itself to the immediate environment to which they belong. It is therefore contradictory to demand that schools produce free, autonomous, and even emancipated individuals while at the same time denying them the possibility of overcoming cultural insularity by requiring them to remain bound to their specific context.

To conclude this section, there is the demand to “transform the school.” Note that this demand implies, in principle, that the school is flawed—i.e., that everything done within it is wrong. It is generally argued that schools operate in authoritarian and traditional ways, which, in the language of innovation, is already an excuse to change everything. However, authoritarianism is one thing, and authority is another. The former, without a doubt, must be combated. As for the latter, it would be better to understand it and observe its role in the dynamics of education (Bustamante, 2015).

School confers authority on academic subjects—on the object of study—in short: on knowledge about the world. To this end, it authorizes certain individuals to teach and shape the education of others. This educational process involves some degree of regulation, since the student may resist being educated; that is why they get bored, skip class, interrupt the teacher, and so on (Bustamante, 2013). There are various forms of regulation, but in general, it is a process whose objective is to impose discipline on the self—on the need for immediate gratification. The fact that this is not always pleasant does not mean that school must be transformed; for if that were the case, we would have to transform all regulations, constitutions, and social regulatory frameworks, since they all aim to regulate humankind and make it human. Certainly, we must transform authoritarianism and violent forms of coercion, but that does not mean we should eliminate authority.

The function of the school is to introduce tradition to the newcomer, but the fact that one is a newcomer is not sufficient grounds for transforming the school in the name of innovation. By labeling the school as “traditional,” the aim is to delegitimize it by accusing it of being out of date. But the school as an institution is an administrative structure that enables the transmission of disciplinary knowledge, which, as such, responds to forms of expression and practices determined by a body of knowledge or heritage. The culture transmitted in school is tradition. Thus, by definition, all education is traditional.

Schools establish their areas of focus through the selection of shared interests and the exercise of a collective imagination. The history of education reveals the existence of “educational situations” that occur



outside of school; however, not even educators who engaged in education through social activism—such as Dewey (advocating for women’s suffrage) or Freinet (worker communities)—renounced the school; on the contrary, they defended it—the former arguing that it was a specific laboratory for the social, and the latter viewing it as the sum of “life skills.” For Dussel (2009), education can take place through many means, but this does not support the possible decline of the school as an institution.

It is often said that any place is suitable for education, and this may be true from the perspective of educational settings—such as the home, the street, or a museum—that facilitate the transmission of culture, beliefs, and behaviors; but the school performs a specific pedagogical function: it sets aside everyday relationships to spark interest and, in this way, transforms the child into a student. Thus, children learn their native language at home through community ties and the media, but at school, the native language becomes an object of study; it is not a matter of learning it, but of dissecting it, deconstructing it, and analyzing it (Simons and Masschelein, 2014; Larrosa, 2018 and 2019). In other words, the education that takes place in school is not mere learning, since it requires specific conditions that cannot occur sporadically anywhere, as is the case with learning as a biological response.

In any case, there will be aspects of school that need to be changed. After all, it is a relatively recent institution in human history and can be improved, but this does not justify the oft-repeated mantra that school must be transformed, since it is first necessary to determine whether what one wishes to transform is structural to the school system itself. Note that the reforms implemented in recent years have produced undesirable results; for example, that children today do not know how to read as well as previous generations did (De Lima, 2025) or that fun and immediate gratification are prioritized (Barrio, 2025), paving the way for the development of narcissistic students who struggle with social interaction and connecting with others (Fryd, 2018). These two phenomena alone pose potential risks to democracies, even though they are good business for the market of products and services under hedonistic capitalism.

Biases Centered on Teaching

Teaching, as a practice specific to the teacher, is also subject to biases that dictate its nature. For example, the saying “teaching is making the difficult easy” is common, and it seems natural for a teacher to impart knowledge



to their students. However, if we look more closely, that is not exactly what happens.

Teaching involves presenting an object of knowledge while simultaneously capturing students' attention (Biesta, 2021). To do so, the teacher, in a certain sense, does make the difficult easy. They explain a subject using various resources, beginning with oral presentation—all with the goal of making intelligible what others find confusing. However, their explanation presupposes the use of jargon that the student does not master and is probably not interested in mastering. Therefore, teaching does not consist of making things easier, but rather of getting the other person to take ownership of and discuss the subject matter, thereby challenging their comfort zone (Cuesta, 2021).

When a teacher teaches, they invite the student to observe an object that, by definition, resists being grasped (Larrosa, 2019). If knowing were simple, science would not exist and common sense would suffice. What characterizes teaching, however, is the process of challenging the learner, shaking up the stagnant knowledge inherent in common sense to create a connection with the subject through the use of the discipline's own concepts.

The teacher wants to clarify the abstract, but to achieve this, they unsettle, confuse, and challenge—i.e., they do not necessarily advocate for the easy path, since knowing involves thinking against our own minds (Bachelard, 1993), displacing ingrained beliefs and mental frameworks, and thus finding ourselves in the limbo of uncertainty. The easy path for the student would be to stay where they are, with what they already know, since accepting the invitation to examine the subject involves complicating their life and opening themselves up to the possibility of enjoying knowledge, trying to grasp that which tends to slip away.

On the other hand, we must bear in mind that teaching is an inherently communicative practice: it involves sharing a common object or body of knowledge. For this reason, it is subject to the same uncertainty as communication, especially if the teacher adopts the discipline's specific jargon to study the subject. The problem is that as long as the student does not share the discipline's common lexicon, they will have to continue making a great effort to learn.

Similar to the previous bias, it is often repeated that “teaching is facilitating learning,” taking for granted that the teacher's role is to ensure that learning occurs. However, the power of teaching does not lie in the achievement of learning outcomes, but in its formative effect (Bustamante, 2019). At the beginning of this article, it was stated that learn-



ing is possible without a teacher and, in fact, without the intervention of another person (whether a parent, friend, etc.), since learning is, biologically speaking, the change an organism undergoes as a result of the information it receives from the environment. Thus, teaching does not facilitate learning but rather seeks to foster formation (socialization, enculturation, qualification, subjectivation, or individualization). Moreover, learning is, ultimately, the act of appropriating the object, making it one's own, whereas teaching invites one to study; i.e., to marvel at and contemplate the object, beyond the self-serving pragmatism of making it one's own (Larrosa, 2019).

When a teacher teaches, they challenge the student and make them uncomfortable. The teacher becomes an “other” who interrupts the student's sense of self, confronting them with a way of seeing that belongs to another generation (Biesta, 2016, 2022). Such an encounter is not always harmonious, nor does it take place with an open mind; on the contrary, it often occurs from a defensive stance that calls into question the recognition of the other (Cuesta, 2019). Put simply, when a student decides not to listen to their teacher, they are disregarding them (Honneth, 2011).

Therefore, teaching is not the same as facilitating learning, because it is someone else who comes to challenge me, showing me something I might not want to see. Above all, because the moment of teaching is something I, as a student, do not control: I do not control the content, the form, or the purpose. All of this runs counter to learning, which takes place under my control; hence, any slogan claiming learning is easy is well-suited to educational marketing—which repeats messages such as: “Learn however you want, wherever you want, and whatever you want”—but does not correspond to reality. Learning, unlike teaching, is not necessarily formative, because human formation involves exposing oneself to contingency—to the determinants that existed before I did—in short: to the inherent discomfort of education.

Now, it is worth noting that, while in teaching it is expected that the student will learn (the math teacher expects their student to learn the subject), good teaching is not a matter of cause and effect. In fact, good teaching does not always result in learning something, because sometimes what it does is break down the naturalized, shift entrenched frameworks, generate a desire to know, or provoke more doubts than certainties. Thus, judging teaching by learning outcomes obscures the complexity of the process and, on the contrary, may overlook important formative elements. Furthermore, the outcomes of teaching are often implicit and only become apparent in hindsight—such as when, years later, we realize the



role a teacher played in our education, even though, in the heat of the moment, we misjudged them or labeled them as boring (Jackson, 1999).

Given the above, we must distance ourselves from another common misconception: that “teaching should be fun.” It would be wonderful to achieve a teaching practice that is enjoyable—one that does not bore students but keeps them engaged. However, this is a goal that is not always easy to achieve; it can overwhelm teachers as they strive to meet it and, above all, it fails to acknowledge the complexity of the educational process.

The purpose of teaching is to shape, not to entertain. As already mentioned, education is not always pleasant—so much so that the individual may resist being educated. This is why a child might respond sarcastically to a rule set by their parents, or a parishioner might pull out their cell phone and ignore the priest’s homily. Thus, the educational task is to shape, but that does not make it an appealing activity. In fact, the experience can be quite unpleasant: it involves moving from biological impulses—focused on instinctive pleasures—to the constraints of culture, which hinder the free expression of instinct. Education involving setting limits on the individual runs counter to fun.

Moreover, fun provides immediate gratification, whereas studying—which is the essence of education—involves delayed, long-term gratification. Claiming that all classes and subjects are fun is all well and good for selling a service and meeting customer demand, but it is a false advertising promise. Teaching, more than fun, demands attention, that is: curiosity, dedication, and effort, which bring joy, but only on the condition of foregoing immediate gratification (Bustamante, 2013).

For this reason, we must also be wary of the assertion that “teaching involves motivating the student,” since it places the burden on what the teacher does (generally through fun or, at the very least, by avoiding boredom) rather than on the student’s own will. Viewed this way, motivation would be an attitude sparked by the teacher, but one that can be just as fickle and fleeting, since its energy depends on something extrinsic to the student. Whether or not the teacher does this does not guarantee the student’s motivation forever (for example, motivational activities can become boring due to repetition).

On the contrary, deciding to pay attention is an act of the student’s will, which can be a decision independent of what the teacher does or does not do. While attention is directed toward the teacher, what is at stake is the subject. In other words, at its core, rather than paying attention to the teacher, the student is focused on the subject. That is why there are students who, despite their teacher’s uninspired teaching methods, re-



main engaged with the subject or content being taught—in other words, they behave as students.

So motivation is very helpful for studying, as it can serve as a catalyst for attention, but it cannot become the goal of teaching, since the student is ultimately the protagonist of their own education, and their freedom lies in the volitional act of paying attention or not—regardless of however entertaining the strategy employed by the teacher may be. Thus, it is possible to teach without motivating, as the student may find the motivation on their own—whether by engaging with the subject or through a willingness to listen to their teacher—and thereby feel the need for knowledge (Gutiérrez Pozo, 2023).

However, whether or not the student is willing to pay attention does not mean we should fall into the trap of believing that “good teaching means giving the student complete freedom,” since teaching inherently involves guiding the student’s focus in some way. It is assumed that teaching aims to subject the student to a framework that determines them, since it conditions them: for example, when a teacher teaches a child to read and write, the child is subjected to the grammar of the language.

At first glance, such conditioning seems to imply a denial of freedom, but in essence it is quite the opposite, since, by being subjected to teaching, the student has the opportunity to decide to be—i.e., to become a subject. Without this frame of reference that defines them, the decision to be—and thus to become a subject—would not be possible (Cepeda Sánchez, 2022).

Thus, education does not set people free by leaving them to their own devices, but by inviting them to be, by showing them the limits that condition them. On the contrary, leaving them free as a precondition would be to subject them to their instincts, which tend to enslave human beings to their self-referentiality (Fryd, 2018). Leaving students to their own devices—which implies not teaching—means failing to take responsibility for newcomers, something that Arendt (1996) had already identified as a crisis in education. Teaching requires guiding—even restraining—toward a regime of enunciation so that, within an educational aporia, that regime ultimately liberates the individual.

Biases Centered on Education

To begin with, it should be noted that, in addition to teaching, there are various educational practices—i.e., actions that seek to shape new members of society. To name a few, one could list exhortation, punishment, ex-



ample, imitation, and coercion (rather than simply eliminating bullying, we must ask why human societies resort to this practice to subjectivize and shape individuals).

Thus, when we speak of education, we are not necessarily speaking of teaching, even though the terms seem synonymous due to the naturalization of the discourse. In any case, statements about education are also shaped by biases, such as the one asserting that “education should not be traditional”—i.e., that education must be updated.

In a society subject to the discourse of innovation and change, it is obvious that education is expected to constantly update itself. This is because it is conceived as a process of construction rather than transmission. This conception justifies the shift away from focusing on the teacher’s voice toward student activity, as students demand the practical utility of knowledge and insist that their feelings and emotions be prioritized, along with their engagement through the most advanced technology.

However, classifying education as traditional, modern, alternative, or innovative follows an empty framework that remains at the level of superficial comparison and fails to delve into the constitutive elements of the act of educating. Education is the transmission of tradition and, as argued in this work, culture is not biologically inherited but is imprinted on the individual through systematic social action. If culture is, above all, tradition, then to educate is to pass on that tradition to others.

Using the adjective “traditional” to disparage education not only prevents an understanding of what happens during the educational process but also distorts the very act of educating. In a simplistic way, the adjective “traditional” is associated with student passivity, while “innovative” education is linked to constant student activity. Hence, the call is no longer for a teacher, but for a facilitator, a companion, or an assistant, as well as for active students who carry out projects, workshops, games, and so forth. The consequence is that, in their eagerness to avoid the traditional, teachers stop teaching and instead focus on managing activities (Enkvist, 2009)—even though physical or manual activity does not necessarily imply intellectual engagement, whereas a lecture can spark curiosity and a desire to learn.

Traditional education has been questioned because it is associated not only with useless content but also with rote memorization. Regarding the former, it has already been noted that knowledge is not limited to working life and that, when we study something, we do so out of a desire to learn (Larrosa, 2019). Whether knowledge is assessed through rote memorization, however, does not depend on whether it takes place



in a traditional school, but rather on the very nature of the subject being studied. Assessment, rather than being a matter of methods or forms, is a practice grounded in epistemology: what can we say about the subject of study, and how can we know that we know something about it? Thus, assessment is not traditional simply because it requires rote knowledge; rather, it is based on the constitutive elements of the subject. If knowledge requires memory—such as driving a car in a city—then memory is assessed; but if knowledge requires a different process, then it is assessed according to that specific process.

Since it is believed that traditional education must be overcome, the following bias fuels this alienation, asserting that “education must rely on the latest technologies” (Prensky, 2001). While technology is seen as desirable and necessary, its use does not always lead to the achievement of educational goals; in fact, it can be an obstacle to attaining them. Rather than simply incorporating technology just because it is available, the first step is to reflect on its uses, implications, effectiveness, and relevance, and only then to use it if necessary. Currently, however, when a company releases an educational app, schools and their teachers are required to use it, without considering whether it is truly relevant.

The fact is, we tend to forget that schools have historically been places where technologies are developed—not merely applied, as is the case today. Teachers have created techniques and tools tailored to their specific purposes without needing to be constrained by patents. Educational technology is not merely a tool or device, but rather a whole series of practices that have made the act of educating possible (Simons and Masschelein, 2014).

It is often claimed that technology helps capture students’ attention and keep them engaged; however, its mere use tends to produce the opposite effect (Jiménez, 2023), causing students to withdraw into themselves—into what they like and what gratifies them—and refuse to engage with others or the world. Therefore, it is not a matter of using technology just for its own sake, but rather within the framework of an educational purpose that makes it relevant to the process.

That said, a very common bias in textbooks, educational policy documents, and, above all, in research papers is the notion that “the student is the center of education.” Like the biases mentioned earlier, this one also masquerades as self-evident. No one can deny the importance of the student, since all actions are always directed toward them. Furthermore, since the late nineteenth century—and in an effort to move beyond traditional education—the student has been regarded as the center of the



educational process, and movements such as constructivism and active pedagogy have cemented the normalization of this line of thinking. However, neither the teacher nor the student is the center of the act of educating, for both are accountable to their object of study—or to the world (Larrosa, 2019; Simons and Masschelein, 2014). The teacher seeks to have the student engage with the object of study, and the student also studies to engage with that object. Education allows children to realize that they are not the world, but rather that they are part of the world—indeed, that they owe their existence to it (Biesta, 2017 and 2022).

Thus, the student is not the center of education (Biesta, 2017 and 2022); rather, it is the object of study that enables the student to decide to become. We only come into being once we encounter that external reality that challenges us. This demonstrates that education is an effect and that the subject is called upon to make a decision, motivated by the knowledge presented by the teacher (Bustamante, 2019).

Another common and difficult-to-challenge bias insists that “education must be of high quality.” While it is impossible to desire an education lacking in quality, what exactly is meant by “quality”? In general, quality refers to a framework for measuring the outcomes of service processes and the production of goods (Calamet et al., 2022). In this context, standards allow for the comparison of processes and thus the determination of levels of success, efficiency, or effectiveness. Hence, quality is expressed through indicators.

But when we speak of the quality of education, we are not referring to excellence in production or service delivery, but rather to student development—which, by extension, turns students into individuals who can be classified and measured according to a standard. This would be acceptable if the human condition and ontology were measurable in all their forms and dimensions, but human development cannot always be assessed in terms of obvious and measurable aspects. Education is not viewed as a process leading to the dignification of the human being, but rather to the reification of quality.

Quality as defined by standards deliberately ignores the fact that one of the consequences of education is subjectivation or individualization—i.e., education seeks to homogenize, yet produces unique individuals (Biesta, 2017). Thus, although everyone receives the same class, the effects are unique (Charlot, 2008); for this reason, each person ends up becoming a subject: someone who is subject to a regime of common sense, even though their ontological realization is unique.



Standards normalize, whereas education produces differences; it is contingent (Biesta, 2017). One can follow the plan, but that does not guarantee the expected results. What is at stake is the encounter between human beings, and this is influenced by environmental, inter-subjective, and intra-subjective factors (Cuesta and Reyes, 2024). Quality control seeks to manage this complexity by using checklists, portfolios, tests, and all manner of evidence to ensure compliance with indicators. Meanwhile, this complexity gets lost in the bureaucratic tangle to which teachers, coordinators, and principals end up being subjected; their workload increases as they fill out forms (Graeber, 2018 and 2020) that require no pedagogical reflection whatsoever but do exhaust teachers (Cuesta, 2018).

The quality of education involves the instrumentalization and operationalization not only of technologies and knowledge but also of the individuals involved (let us not forget that teachers are a key factor in the quality of educational institutions). This gives rise to contradictions, such as demanding more creativity and innovation from teachers within the framework imposed by the standard. In other words, they are asked to produce a tamed form of creativity that, obviously, ceases to be creative (Niño and Gama, 2013).

Furthermore, since standards allow for the comparison of processes, education ends up becoming a competition for rankings, overlooking the fact that the pedagogical goal is the formation of the human person and not the establishment of prestige that can be capitalized upon. So, contrary to what is often repeated, it seems that the best approach is an education without quality—or at least one in which that concept is approached with a critical eye.

Another trend gaining momentum asserts that “education should prepare people to be happy.” This is, of course, clearly desirable—though not necessarily true. Indeed, there has recently been much talk of “positive education,” “education for happiness,” “education for self-actualization,” and so on. At their core, they all share something in common: a fusion of a certain type of psychology with education within the framework of a capitalism of emotions and immediate gratification.

Psychology can tell us a great deal about human behavior and, by extension, about education (it is no coincidence that fields such as psychoeducation and psychopedagogy exist). The danger arises when trivialized (neuroscience) or pseudoscientific (positive psychology, NLP, quantum psychology, coaching) trends in psychology attempt to impose themselves as the sole formula for the educational process, even serving to justify many of the biases analyzed.



Added to this phenomenon is another: the reduction of educational discourse to psychological terminology and methodology, also known as the “psychologization of education.” Psychology is descriptive and can explain how we learn, but that does not mean it should dictate the purposes of the act of educating (Prieto, 2018), as is currently the case. Curricular agendas tend to include psychological discourses with proposals for addressing topics such as emotional intelligence, feelings, talent, mental health, and their role in learning. However, while these reflections may be relevant to the self-awareness of students and teachers, they cannot determine what kind of person the school should shape (Prieto, 2018).

Educating for happiness sounds great, but within the framework of a simplified psychology and a psychologized education, happiness is also reduced to processes of self-esteem, emotional gratification, well-being, and self-actualization. These are very important issues, but they are not necessarily central to education. In fact, education is a process of socialization—i.e., a task of preparing oneself to live with others, which implies a certain transformation of the self. The discourse on individual well-being, for its part, justifies turning a blind eye to what one dislikes, even if this means severing emotional or empathetic bonds with others. The discourse of positive psychology and self-help celebrates the atomization of the individual, which runs counter to the purpose of education; for ultimately, to educate is to foster an ethical subjectivity—i.e., one capable of responding to the needs of others by stepping outside of one’s own self (Critchley, 2010).

In other words, happiness—as presented in certain trendy discourses—instrumentalizes others and may well dispense with them, which is the very opposite of education. Artificial intelligence and robots may well provide information, but they do not thereby educate, as they are programmed more to satisfy us than to challenge us (which is an essential part of education).

Furthermore, in contemporary capitalism, not all emotions are valid. There is a constant appeal to positive emotions, emphasizing the consumerist nature of the happy individual (Wilson, 2008). Happiness is reduced to the description of certain individual emotional states resulting from self-knowledge, mindfulness, and acceptance. Thus, if an individual fails or feels bad, it is not due to structural conditions at the social level—such as the injustice underpinning capital accumulation—but rather as a consequence of a lack of “willpower” or a failure to learn how to manage their emotions (Miño and Pozo, 2023). This conception of happiness, centered on the individual’s emotions, also obscures the fact that human



fulfillment is social and intrinsically linked to the fulfillment of others; on the contrary, it fosters a narcissism that prevents the recognition of the other (Solé and Moyano, 2017).

The pedagogical task is not to design a program teaching people to be happy, but rather to ask what the purpose of education is and what kind of happiness we are talking about, since the happiness prevalent in contemporary discourse can very well be achieved without education, given that it focuses on self-actualization and positive emotions. As we have seen, education involves a certain violation of one's sense of self (sacrificing my gratification to open myself up to the world), which may initially evoke unpleasant feelings, even though its goal is to produce a new framework of satisfaction—one that is less immediate and more connected to others.

162



Perspectives Centered on Pedagogy

To begin with, it is important to note that education is not the same as pedagogy; they are not synonyms. In fact, one can educate without pedagogy (Lucio, 1989). Pedagogy arises when education is interrupted and reflection begins (Runge and Muñoz, 2012). In short, one can educate through unreflective and automated actions, but engaging in pedagogy involves questioning those actions. However, we are witnessing a time marked by a wide array of prescriptions regarding education with very little reflection on the matter, which allows for the unquestioning acceptance of educational policies imposed by the market and the hegemony of economic institutions.

It is taken for granted that “pedagogy must be measured by learning outcomes.” On the surface, it seems obvious that the purpose of education is to acquire learning, but as we have already stated, education is not necessary to achieve learning. The environment is responsible for triggering changes whose scope depends on the individual's ontogenetic development and congruence with the environment (Maturana and Varela, 2003). To learn, it is enough to be alive and in contact with the environment. Education, therefore, is not learning for learning's sake, as implied in contemporary educational discourse.

Learning outcomes, in line with the logic of indicators and standards, do not specify the what, the why, the how, or the purpose of the act of educating; they are concerned only with achieving the result without considering the intersubjectivity of the process. This is why there is talk of

autonomous and independent learning, which amounts to a renunciation of education. In plain terms, the discourse on learning renders the teacher dispensable, undermining their expertise and minimizing their practice. In education, forms do matter (Biesta, 2021), for a facilitator who fulfills a merely instrumental role does not have the same capacity to create the conditions for learning as a wise teacher would (Bustamante, 2013).

These aspects mean that the term “learning” is not the most appropriate one for analyzing education and teaching. It fails to capture the complexity of the act; rather, it abruptly reduces it, making it accessible to common sense. We are witnessing a process of “learningification” (Biesta, 2016) in which education is reduced to learning, thereby diluting the roles of the teacher and the school, and producing an educational policy that is subservient to individualization and training, to the detriment of the formation of the individual and their capacity for resistance. Pedagogy is formation through culture—i.e., a distancing from the biological—but how is it possible to measure culture and formation? We can say that pedagogical practice unravels biographical threads, but how can we measure a biography?

In line with this focus on measurement, it is asserted that “pedagogy must be evidence-based.” This would be the result of experimentation and measurement, which is perfectly fine in the sciences that allow for such operations. However, education is contingent, and pedagogy is about the here and now. Furthermore, the educator assumes the risk of failing to achieve their goal, since—among so many factors at play—the learner may, in principle, not want to be educated.

Evidence-based education operates according to the logic of cause and effect. It therefore starts from a conclusion rather than from uncertainty, which runs counter to the nature of the educational act, which by definition is risky (Biesta, 2017). Evidence serves a totalitarian ideal: the production of docile and homogeneous subjects. But what, after all, is evident in education? To whom is it evident? These questions demand an epistemological argument, since what is evident is the data that emerges from a model of conceptualization and measurement. Yet when people call for evidence-based education, they are not speaking from an epistemological framework but rather from common sense.

Evidence, as data from experimentation, involves the management of variables. In education, however, it involves grappling with the complexity of a multicausal and multivariate phenomenon. Furthermore, controlling variables implies viewing the teacher as a mere reproducer of the same methods and discourses, just as controlling the variable de-



mands. Yet much of what outstanding teachers do lies in their ability to improvise, and this requires attentiveness and the capacity to rise to the occasion in whatever situations arise in the classroom (Säfström and Rytzler, 2023). Pedagogy allows for resistance—which, by definition, is uncontrollable. For this reason, the other can say no, can say something else, or can ask questions. Evidence imposes homogeneity on the practice, counteracting its political potential.

Likewise, it is difficult to accept the bias asserting that “pedagogy establishes techniques for classroom development,” since thinking of pedagogy in this way reduces it to a field of application that undermines its epistemological and reflective aspirations. Indeed, pedagogy can establish techniques for educating, particularly through didactics (Runge Peña, 2013), but this is not its purpose. In fact, didactics is a secondary outcome. Pedagogy reflects on and investigates education to produce concepts, theories, and methodologies regarding this object of study. The formulation of techniques would be a result subsequent to that produced regarding its object.

Reducing pedagogy to the formulation of techniques not only limits its scope but outright eliminates the possibility of thinking about education from within a robust tradition. Furthermore, it undermines the possibility for teachers to reflect on their own practice and generate knowledge from it, leaving them reduced to mere implementers of the curriculum and subject to the shifting discourses produced by those who do research on education (Cuesta and Reyes, 2024).

Associated with this reduction of pedagogy to mere techniques is the bias that “pedagogy is an educational model.” Indeed, when one opens any book on pedagogy, it is common to find an approach organized by models: traditional, constructivist, behaviorist, critical, active, etc., although they are sometimes given other names (such as heterostructuring or self-structuring). Each approach is framed according to the functions correlatively attributed to students and teachers.

A model is a practical, theoretical framework that serves as a reference—in this case, for curriculum design and classroom practice—and in that order, pedagogy may propose models as a consequence of its epistemological aim, but not as a teleological principle. However, in the literature, pedagogy is frequently reduced to a list of models.

Pedagogy, within the German tradition, has a scientific aspiration that seeks to produce concepts, theories, and methodologies regarding its object of study: education. Nevertheless, when guiding practice, it can reduce its aspiration to a dangerous pragmatism that diminishes reflection.



Pedagogy emerges when educational practice is interrupted (Lucio, 1989; Runge and Muñoz, 2012). In other words, one can educate without pedagogy —without reflection on practice— by simply doing what others do, operating more out of habit than out of rigorous reflection. When one begins to question practice —what to teach, why, how to teach, when, where, and whom to teach, how others teach, and how to monitor educational outcomes, among other questions— the discursive possibility of pedagogy takes shape.

However, pedagogy challenges itself to establish its own ontological framework (what education is and on what concepts this object of study is built), as well as its epistemology (how a conscious relationship with this object of study is established and what can be said about it) and its methodology (how education can be investigated as an object of study). Viewed this way, pedagogy is not reduced to techniques or models; rather, these are a secondary result of the conceptual, theoretical, and experimental construction it proposes. In fact, the construction of pedagogical models that inform pedagogical literature is not necessarily the result of epistemological effort, since the theory underpinning them may stem from dogmas or ideological stances. Moreover, if the human condition has been transcended—as some discourses, such as posthumanism, maintain—then education is no longer necessary (Charlot, 2024a). Cyborgs are not educated; they are programmed or have software installed.

Revitalizing pedagogy does not involve creating evidence-based models or techniques that guarantee the effectiveness of processes; rather, it is a debate about what it means to be human and about the future of humanity (Charlot, 2024b). What kind of society do we want? What kind of human beings should we shape? These are questions that the aforementioned models claim to have resolved; however, the magnitude of the debate demands a shift from the tacit to the explicit, positioning itself within a disciplinary field of enunciation. Pedagogy with scientific pretensions cannot be a matter of models, for the sciences are not fixed structures but rather change according to their own regimes of enunciation (Bustamante et al., 2017). Models schematize and do not foster scientific revolution.

Finally, there is the bias positing that “good pedagogy begins with recognizing students’ interests.” Questions about the child and the student are very important, but that does not imply—as we have already stated—that the goal is to place the child at the center. As mentioned earlier, the objective is to instill in the child the interests of humanity. Starting from the child’s interests can lead to an idealization of the child. Thus, while it is appropriate to acknowledge students’ emotions and interests, this should



not be done to create a pedagogical practice that merely processes or satisfies them. Attention must be paid to the world despite the emotion.

Moreover, education is not about letting the child acquire knowledge or develop talents according to their own preferences or interests; on the contrary, education often involves interrupting certain forms of learning or talents. If a child wants to learn to steal or has a talent for swindling, they are not allowed to proceed until they become a master thief or artist. The goal is to intervene so that they adopt a desired ethical path under the guidance of certain socially desirable axiological principles—above all, the principle that my satisfaction cannot take precedence over that of others, and indeed that we are educated to care for one another (Rincón Gallardo, 2024).

166



Distortion and Dispersion in the Discourse on Education and Pedagogy

The aforementioned biases have gained significant traction, among other reasons, due to the dilution that pedagogy has undergone following its displacement as a field of knowledge. Hence, it is pertinent to highlight some ideas in this regard.

Between the late nineteenth and early twentieth centuries, the debate on education in France pitted various thinkers against one another, whose viewpoints were often incomplete and contained various theoretical gaps. However, in the face of the rise of the positive sciences, it became necessary to achieve conceptual precision. Amid the many contributions, there was one that set the terminological standards for educational discourse, endowing it with structure, purposes, and content: Émile Durkheim's work *Education and Sociology* (2003).

For Durkheim, education “is the action exerted by adult generations upon those who are not yet mature for social life” (p. 49), and its purpose is to awaken and develop in the child a certain number of physical, intellectual, and moral states required by society in its political sense and, in general, by the environment to which the child is destined. For its part, pedagogy was regarded as a practical theory or an applied theory, consisting of systematic reflection on the methods, techniques, and aims of education.

Durkheim would be followed by educators such as Gaston Mialaret (1977 and 1984) and Maurice Debesse, who would become pillars of the French tradition in education. Mialaret would argue that education

is too complex to be approached from a single discipline, and in 1964 he proposed an integrative, multidisciplinary approach: the field of educational sciences. Thus:

- **Education** will be understood not only as a phenomenon (the social reality of socialization) but also as a subject of multidisciplinary scientific study (Mialaret, 1977).
- Pedagogy will be not only an idea (the theoretical reflection on that fact) but also a synthesizing discipline that organizes and utilizes the knowledge produced by the educational sciences to develop methods, techniques, and strategies for classroom action (Mialaret, 1977).
- The educational sciences (psychology, sociology, history, philosophy, economics, biology, and medicine) will emerge as an autonomous field of study, focused on analyzing educational situations based on the findings of these sciences (Mialaret, 1977).



However, in countries such as Colombia, colleges of education did not emerge in an environment similar to the one described; on the contrary, they were the product of ideological debates aimed at controlling the country. Regarding the educational system, these debates focused more on pitting tradition against the nation's modernization project, secularization against religious affiliation, and the choice between humanistic and technical approaches. Added to this was the drive to modernize education, which led to the implementation of curriculum designs with an industrial and managerial focus, obsessed with quality metrics (Ríos, 2006). Thus, faculties of education —overwhelmed by instructional design and behavioral psychology— ended up diluting teacher training, the social role of the school, and, in particular, the disciplinary status of pedagogy.

This is why authors such as Díaz (1993) argued that pedagogy had become a fragmented body of knowledge or an amorphous field lacking accumulated knowledge. Mockus (1995) noted that universities made only an instrumental use of contemporary pedagogy. For Zuluaga (1999), teacher education was characterized by “dispersion” and “dilution.”

These phenomena of dispersion and dilution in pedagogy have prevented a sufficient connection between the knowledge constructed by the educational sciences and pedagogy itself, leading to a disjointed conceptualization, the fragmentation of concepts, and the subordination and instrumentalization of pedagogy. This, in turn, has affected teacher education, as there is a recurring absence of a common purpose, a reliance on purely

procedural pedagogical practices, an inability for teachers to reflect on their own practice, and a tendency toward professionalization in teacher education without a historical understanding of the teaching profession.

This fragmentation has allowed discussions about education to be laden with what this article refers to as pedagogical biases: a set of seemingly reasonable statements that teachers often resort to in their discourse and practices, which—despite their good intentions—are likely to produce unintended consequences.

Conclusions

Although there is talk of evidence-based pedagogy, educational practice is carried out based on beliefs that are taken for granted. These beliefs, due to the way they are operationalized, can be termed pedagogical biases. Pedagogical biases are readily accepted because they align with the expectations that a commercialized society has of education; they are presented as self-evident and easily understandable, and they are framed as aimed at improving education—which makes them politically correct (Pozo, 2003)—but they can serve as conceptual frameworks that hinder our thinking (Shapiro Donato, 2022).

Nevertheless, the task of pedagogy is to question these slogans that tend to become established as proven truths. Teacher Olga Lucía Zuluaga reminds us that pedagogical knowledge tends to solidify into frameworks that subsequently determine practice. It is therefore not enough simply to possess this knowledge; the task is to constantly question it to prevent it from becoming stagnant.

Defending pedagogy involves challenging these biases, which, ultimately, are a misinterpretation of educational reality that distorts it, turning supposedly appropriate practices into necessary ones. Today, more than ever, there is a risk of burying pedagogy, as reflective capacity is minimized in the name of efficiency, and good intentions are prioritized over an understanding of phenomena. Reflecting on these biases implies recognizing pedagogy as a legitimate field of knowledge. As the manifesto in support of educators states: “Pedagogy is key to a specific approach to humanity and its journey through existence” (Houssaye et al., 2004).

It is acknowledged that these pedagogical biases stem from good intentions; however, they generate unintended consequences in the field of education, altering school conditions and distorting teaching by pri-



oritizing learning for its own sake and elevating the student as a subject to be satisfied.

How can we overcome these biases in pedagogy? How can we address this conceptual fragmentation? Can we counteract and halt the erosion of pedagogy? This requires a careful study of the history of our discipline. Just as doctors take their oaths in memory of Hippocrates, we teachers commit ourselves to tradition and bring the past into the present; we build new technologies using old techniques, address contemporary questions through classical themes, reinvent questions, and reconstruct problems.

Thus, overcoming these biases requires constant reflection on the ideas and discourses circulating in education—on how they become naturalized or reified into certain beliefs, and how the results of certain research studies are misinterpreted (Ruiz, 2023). In short, the best way to overcome pedagogical biases is through epistemic thinking, which does not begin by hastily making predicative statements about educational reality, but rather by prioritizing questions and doubt over certainty (Zemelman, 2005).

Finally, in the face of the confusion of discourses that have condemned education faculties to a “hundred years of solitude,” we must revisit old themes as if for the first time. We must invoke the oracle: call upon Comenius, Pestalozzi, Rousseau, Herbart, Simón Rodríguez, Freire, and others to address new disputes by standing on their shoulders. As Meirieu and Develay (2003) would say: “Emilio, come back they’ve gone mad.”



Bibliography

- ARENDT, Hannah
1996 *Entre el pasado y el futuro*. Barcelona: Península.
- BACHELARD, Gaston
1993 *La formación del espíritu científico*. México DF: Siglo XXI.
- BÁRCENA, Fernando, LÓPEZ, Maximiliano & LARROSA, Jorge
2020 *Elogio del estudio*. Buenos Aires: Miño y Dávila.
- BARRIO, José
2025 Contra la gamificación: una interpretación de la escuela donde el conocimiento es lo que verdaderamente importa. *Revista Internacional de Teoría e Investigación Educativa*, 3, e102830. <https://doi.org/10.5209/ritie.102830>
- BIESTA, Gert
2016 Devolver la enseñanza a la educación: una respuesta a la desaparición del maestro. *Pedagogía y Saberes*, (44), 119-129. <https://doi.org/10.17227/01212494.44pys119.129>

BIESTA, Gert

2017 *El bello riesgo de educar*. Madrid: Ediciones SM.

BIESTA, Gert

2021 Por qué la forma de la enseñanza importa: una defensa de la integridad de la educación y del trabajo de los profesores más allá de programas y buenas intenciones. *Revista de educación*, 394, 13-27. <https://doi.org/10.4438/1988-592X-RE-2021-394-503>

BIESTA, Gert

2022 *Redescubrir la enseñanza*. Madrid: Morata.

BERNSTEIN, Basil

1998 *Pedagogía, control simbólico e identidad*. Madrid: Morata.

BUSTAMANTE, Guillermo

2013 *Sujeto, sentido y formación*. Bogotá: Universidad Pedagógica Nacional.

BUSTAMANTE, Guillermo

2015 La literatura y su enseñanza segundo llamado. *Revista Pedagogía y Saberes*, (43), 79-89. <https://doi.org/10.17227/01212494.43pys79.89>

BUSTAMANTE, Guillermo

2019 *La formación como efecto*. Bogotá: Aula de Humanidades.

BUSTAMANTE, Guillermo, CARVAJAL, Germán, RODRÍGUEZ, Carolina, DÍAZ, Carlos, DOMÍNGUEZ, John, FLORES, Rossy, VILLAMIL, Sonia & CASTAÑEDA, Steven

2017 *Investigación y educación: hacia una teoría de campo*. Bogotá: Universidad Pedagógica Nacional.

CALAMET, Fernando, BENITO, Fiorella, DA SILVA MUÑOZ, María & OLIVERA, Ana

2022 Estado del arte sobre concepciones de la calidad de la educación superior. *Sophia, Colección de Filosofía de la Educación*, (32), 119-150. <https://doi.org/10.17163/soph.n32.2022.03>

CEPEDA SÁNCHEZ, Jonathan

2022 Devenir sujeto en la configuración de prácticas pedagógicas incluyentes. *Sophia, Colección de Filosofía de la Educación*, (34), 207-236. <https://doi.org/10.17163/soph.n34.2023.07>

CHARLOT, Bernard

2008 *La relación con el saber, formación de maestros y profesores, educación y globalización*. Montevideo: Trilce.

CHARLOT, Bernard

2024a Educación o barbarie: pensar la pedagogía más allá del bricolaje de supervivencia. *Ensaio, Avaliação e Políticas Públicas em Educação*, 32(122). <https://doi.org/10.1590/S0104-4036202400320240222>

CHARLOT, Bernard

2024b Aprender é entrar no mundo humano em ele produzir-se como sendo humano (A educação como fundamento antropológico). *Revista Internacional Educon*, 5(1), e24051001. <https://doi.org/10.47764/e24051001>

CONCHA, Daniela, BILBAO, María, GALLARDO, Ismael, PÁEZ, Darío & FRESNO, Andrés

2016 Sesgos cognitivos y su relación con el bienestar subjetivo. *Salud & Sociedad*, 3(2), 115-129. <https://doi.org/10.22199/S07187475.2012.0002.00001>

CRESWELL, John

2013 *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publication.



- CRITCHLEY, Simon
2010 *La demanda infinita*. Madrid: Marbot.
- CUESTA, Óscar
2018 Reconocimiento social del docente universitario: subjetividad agobiada, puja por el prestigio académico y reivindicación del acto educativo. *El Ágora USB*, 18(1), 55-72. <https://doi.org/10.21500/16578031.3292>
- CUESTA, Óscar
2019 Funciones del reconocimiento en la práctica educativa. *Teoría de la Educación*, 31(1), 81-101. <https://doi.org/10.14201/teri.19336>
- CUESTA, Óscar
2021 El enseñar como incomodar: una propuesta para la formación universitaria y de sujetos investigadores. En: Óscar Cuesta (ed.), *Enseñanza universitaria* (pp. 15-34). Bogotá: Pontificia Universidad Javeriana.
- CUESTA, Óscar & REYES, Rafael
2024 La práctica pedagógica: consideraciones críticas a propósito de las pruebas Saber Pro para licenciados. *Nodos y Nudos*, 8(53), 104-118. <https://doi.org/10.17227/nyn.vol8.num53-14466>
- DÍAZ, Mario
1993 *El campo intelectual de la educación en Colombia*. Cali: Universidad del Valle.
- DE LIMA, Carolina
2025 Los jóvenes españoles triplican la brecha con la media de la OCDE en matemáticas y comprensión lectora respecto a la generación de la EGB. *El País*. 8 de octubre. <https://bit.ly/4vhlub>
- DELGADO, José & GUTIÉRREZ, Juan
1999 *Métodos y técnicas cualitativas de investigación en ciencias sociales*. Madrid: Síntesis.
- DURIEZ, Frédéric
2023 *Mitos educativos: ¿solo son útiles si no te los crees!* Thot Cursus. 15 de noviembre. <https://bit.ly/3QcO5SE>
- DURKHEIM, Émile
2003 *Educación y sociología*. Península.
- DURWIN, Cheryl Cisero & REESE-WEBER, Marla
2019 *EdPsych Modules*. Sage Publications.
- DUSSEL, Inés
2009 *Escuela y cultura de la imagen: los nuevos desafíos*. *Nómadas*, 30, 180-193. <https://www.redalyc.org/pdf/1051/105112060014.pdf>
- ENKVIST, Inger
2009 La influencia de la nueva pedagogía en la educación: el ejemplo de Suecia. *Estudios Públicos*, (115). <https://bit.ly/4v1x2N2>
- FREUD, Sigmund
2022 *El malestar en la cultura*. Lebooks Editora.
- FRYD, Adela
2018 *Los niños amos*. Buenos Aires: Gramma.
- GARCÍA, Fernando
2018 Los sesgos cognitivos limitantes del desarrollo de competencias TIC. *Revista Logos Ciencia & Tecnología*, 10(3), 114-120. <https://doi.org/10.22335/rlct.v10i3.536>





- GARCÍA CAMPOS, Jonatan, SARABIA LÓPEZ, Saúl & HERNÁNDEZ CHÁVEZ, Paola
2022 Tres grandes enigmas de los sesgos cognitivos. *SCIO, Revista de Filosofía*, (22), 99-125. https://doi.org/10.46583/scio_2022.22.1031
- GRAEBER, David
2018 *Trabajos de mierda*. Barcelona: Ariel.
- GRAEBER, David
2020 *La utopía de las normas*. Barcelona: Ariel.
- GUTIÉRREZ POZO, Antonio
2023 Aproximación filosófica a la pedagogía paidocéntrica. *Sophia, Colección de Filosofía de la Educación*, (34), 159-179. <https://doi.org/10.17163/soph.n34.2023.05>
- HONNETH, Axel
2011 *La sociedad del desprecio*. Madrid: Trotta.
- HOUSSEY Jean, SOËTARD Michel, HAMELINE, Daniel & FABRE, Michel
2004 *Manifiesto a favor dos pedagogos*. Artmed.
- JACKSON, Philip
1999 *Enseñanzas implícitas*. Buenos Aires: Amorrortu.
- JIMÉNEZ, Luis
2023 Competir por la atención en el aula: conectados al mundo, desconectados de la clase. En: Manuel Sánchez Cid, Alberto García & Ignacio Martín Moraleda (eds.), *Ciencias de la comunicación: valoraciones y experiencias académico-profesionales* (pp. 109-122). Madrid: Dykinson.
- KANT, Immanuel
2009 *Sobre pedagogía*. Universidad Nacional de Córdoba.
- LARROSA, Jorge
2018 *Elogio de la escuela*. Buenos Aires: Miño y Dávila.
- LARROSA, Jorge
2019 Vindicación del estudio como concepto educativo: a propósito de aprender/estudiar una lengua. *Teoría de la Educación*, 31(2), 129-149. <https://doi.org/10.14201/teri.20260>
- LUCIO, Ricardo
1989 Educación y pedagogía, enseñanza y didáctica: diferencias y relaciones. *Revista de la Universidad de la Salle*, 1(17), 35-46. <https://bit.ly/4vnp4De>
- LURI, Gregorio
2022 Lo que permanece en educación. *Teoría de la Educación*, 34(2), 177-188. <https://doi.org/10.14201/teri.27573>
- MATURANA, Humberto & VARELA, Francisco
2003 *El árbol del conocimiento: las bases biológicas del entendimiento humano*. Buenos Aires: Lumen.
- MEIRIEU, Philippe & DEVELAY, Michael
2003 *Emilio vuelve pronto... se han vuelto locos*. Cali: Nueva Biblioteca Pedagógica.
- MIALARET, Gaston
1977 *Ciencias de la educación*. Barcelona: Oikos-Tau.
- MIALARET, Gaston
1984 *Diccionario de ciencias de la educación, español-francés, francés-español*. Barcelona: Oikos-Tau.

- MILES, Matthew & HUBERMAN, Michael
 1994 *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks: Sage Publications.
- MIÑO ARMIJOS, Edison & POZO AÑAZCO, José
 2023 Tres modos de mercantilización en la salud mental: servicios de atención, medicalización y autoayuda. *Killkana Salud y Bienestar*, 7(2), 11-26. <https://doi.org/10.26871/killcanasalud.v7i2.1214>
- MOCKUS, Antanas
 1995 *Lugar de la pedagogía en las universidades: reforma académica*. Documentos. Universidad Nacional; Vicerrectoría Académica; Comité de Programas Curriculares.
- NIÑO, Libia & GAMA, Antonio
 2013 Los estándares en el currículo y la evaluación: ¿relaciones de medición, control y homogenización o, posibilidad de formación, diversidad y evaluación crítica? *Revista Electrónica Interuniversitaria de Formación del Profesorado*, 16(3), 163-176. <https://doi.org/10.6018/reifop.16.3.185941>
- OBSERVATORIO PEDAGÓGICO DE MEDIOS
 2017 *El estereotipo educativo al poder*. 1 de noviembre. <https://bit.ly/4egZfij>
- PERRENOUD, Philippe
 2004 *Desarrollar la práctica reflexiva en el oficio de enseñar*. Colofón.
- PRENSKY, Marc
 2001 *Digital Natives, Digital Immigrants*. On the Horizon.
- POZO, Juan
 2003 *Adquisición de conocimiento: cuando la carne se hace verbo*. Madrid: Morata.
- PRIETO, Miriam
 2018 La psicologización de la educación: implicaciones pedagógicas de la inteligencia emocional y la psicología positiva. *Educación XX1*, 21(1), 303-320. <https://doi.org/10.5944/educxx1.20100>
- RANCIÈRE, Jacques
 2003 *El maestro ignorante: cinco lecciones sobre la emancipación intelectual*. Barcelona: Laertes.
- RINCÓN GALLARDO, Santiago
 2024 ¿Educar para qué? Los propósitos de la educación en y más allá del colapso. *Revista Latinoamericana de Estudios Educativos*, 54(1), 71-92. <https://doi.org/10.48102/rlee.2024.54.1.608>
- REDONDO, Andrés
 2020 Sesgos cognitivos en la ciencia. *Revista Española de Física*, 34(2), 18-22. <https://bit.ly/4dZ5m9Q>
- RÍOS, Rafael
 2006 *Las ciencias de la educación en Colombia: una investigación histórica sobre su proceso de institucionalización y apropiación en el saber pedagógico colombiano, 1926-1954*. Tesis doctoral. Universidad de Antioquia, Medellín. <https://bit.ly/4dW8dQR>
- RUIZ, Héctor
 2023 *Edumitos*. International Science Teaching Foundation.
- RUNGE PEÑA, Andrés Klaus
 2013 Didáctica: una introducción panorámica y comparada. *Itinerario Educativo*, 27(62), 201-240. <https://doi.org/10.21500/01212753.1500>



- RUNGE PEÑA, Andrés & MUÑOZ, Diego
 2012 Pedagogía y praxis (práctica) educativa o educación. De nuevo: Una diferencia necesaria. *Latinoamericana de Estudios Educativos*, 8(2), 75-96. <https://bit.ly/4ao692W>
- SÄFSTRÖM, Carl & RYTZLER, Johannes
 2023 La enseñanza como improvisación. *Teoría de la Educación*, 35(2), 139-155. <https://doi.org/10.14201/teri.30155>
- SANTIZO, Claudia
 2022 Percepciones y sesgos cognoscitivos en la educación básica. *Revista Iberoamericana de Evaluación Educativa*, 15(2), 25-42. <https://doi.org/10.15366/riee2022.15.2.002>
- SHAPIRO DONATO, Carmina
 2022 Relaciones políticas entre la metáfora filogeniaontogenia y el “ser adulto” como télos escolar. *Sophia, Colección de Filosofía de la Educación*, (32), 299-321. <https://doi.org/10.17163/soph.n32.2022.10>
- SIMONS, Maarten & MASSCHELEIN, Jan
 2014 *Defensa de la escuela: una cuestión pública*. Buenos Aires: Miño y Dávila.
- SIEGEL, Stefan & BIESTA, Gert
 2022 El problema de la teoría de la educación. *Teoría de la Educación*, 34(1), 33-48. <https://bit.ly/4eiq0CY>
- SOLÉ BLANCH, Jordi & MOYANO, Segundo
 2017 La colonización Psi del discurso educativo. *Foro de Educación*, 15(23), 101-119. <https://bit.ly/4ediFVn>
- TVERSKY, Amos & KAHNEMAN, Daniel
 1981 The Framing of Decisions and the Psychology of Choice. *Science*, 211(4481), 453-458. <https://doi.org/10.1126/science.7455683>
- TAMAYO, Mario
 2001 *El proceso de la investigación científica*. México DF: Limusa.
- WILSON, Eric
 2008 *Contra la felicidad: en defensa de la melancolía*. Madrid: Taurus.
- ZEMELMAN, Hugo
 2005 *Voluntad de conocer: el sujeto y su pensamiento en el paradigma crítico*. Madrid: Anthropos.
- ZULUAGA, Olga
 1999 *Educación y pedagogía: una diferencia necesaria*. Bogotá: Magisterio.



Statement of Authorship—CrediT Taxonomy	
Authors	Contributions
Óscar Julián Cuesta Moreno	Conceptualization, formal analysis, research, visualization, writing, review, editing
Rafael Reyes Galindo	Conceptualization, formal analysis, research, visualization, writing, review.

Statement on the Use of Artificial Intelligence

The authors Óscar Julián Cuesta Moreno and Rafael Reyes Galindo of the article titled “Pedagogical Bias and the Relevance of Pedagogy” declare that the preparation of this document did not involve the use of artificial intelligence (AI).

Date received: October 27, 2025
Review date: November 20, 2025
Date of approval: December 22, 2025
Publication date: July 15, 2026

THE PARADOX OF HEUTAGOGY AND ARTIFICIAL INTELLIGENCE

La paradoja de la heutagogía y la inteligencia artificial

LUIS ALBERTO TRIANA LLANO*

Universidad Pontificia Bolivariana, Medellín, Colombia

<https://ror.org/02dxm8k93>

luis.triana@upb.edu.co

<https://orcid.org/0000-0003-4367-2977>

Suggested citation: Triana Llano, Luis Alberto. (2026). The Paradox of Heutagogy and Artificial Intelligence. *Sophia*, Colección de Filosofía de la Educación, (41), pp. 177-212.

Abstract

This recapitulative study examines the intersection between the use of Artificial Intelligence (AI) and heutagogy, understood as self-determined learning. This combination may give rise to the paradox of autonomy versus dependence. The analysis is justified insofar as the emergence and exponential use of AI in educational environments raise the urgent need to explore how its integration transforms learning processes and the ways in which subjects construct their cognitive subjectivity. The central problem lies in the coexistence between the emancipatory potential of AI in a heutagogical key and the risk of a new form of technological subjection that limits the student's cognitive autonomy. The thesis defended is that AI is not, in itself, either emancipatory or alienating: its educational impact depends on the pedagogical, ethical, and epistemological frameworks from which it is integrated. A qualitative interpretive methodology was used, combining a systematic review of specialised literature with case analysis, employing conceptual analysis matrices and evaluative rubrics as instruments. The conclusions indicate that the combination of heutagogy and AI (referred to here as heutagogAI) promises innovative and emancipatory educational experiences; however, it requires designing systems that promote critical and reflective learning, ensuring that students develop skills to question and analyse the information received, a fundamental condition for a truly emancipatory education.

Keywords

Artificial Intelligence, Critical Thinking, Educational Autonomy, Educational Philosophy, Heutagogy, Self-instruction.

* Ph.D. candidate in Philosophy at Universidad Pontificia Bolivariana (Medellín, Colombia); Master's degree in Philosophy for Contemporary Challenges from the Universitat Oberta de Catalunya (Spain); a degree in Philosophy from the National Open and Distance University (UNAD, Colombia), a degree in Occupational Safety and Health Engineering from the Jaime Isaza Cadavid Colombian Polytechnic (PCJIC, Colombia), and a current law student at UNAD. His research focuses on education in incarceration settings, philosophy, ethics, and risk management. Google Scholar: <https://scholar.google.es/citations?user=PezDoIUAAAAJ&hl=es> h-index: 2.

Resumen

El estudio recapitulativo acá presentado examina la intersección entre el uso de inteligencia artificial (IA) y la heutagogía, entendida como aprendizaje autodeterminado. Esta combinación puede devenir en la paradoja de la autonomía frente a la dependencia. El análisis se justifica en tanto la irrupción y el uso exponencial de la IA en entornos educativos plantean la necesidad urgente de explorar cómo su integración transforma los procesos de aprendizaje y los modos en que el sujeto construye su subjetividad cognitiva. El problema central reside en la coexistencia entre el potencial emancipador de la IA en clave heutagógica y el riesgo de una nueva forma de sujeción tecnológica que limite la autonomía cognitiva del estudiante. Se defiende que la IA no es, en sí misma, ni emancipadora ni alienante: su impacto educativo depende de los marcos pedagógicos, éticos y epistemológicos desde los cuales se integre. Se empleó una metodología cualitativa interpretativa que combina revisión sistemática de literatura especializada con análisis de casos, usando matrices de análisis conceptual y rúbricas evaluativas. Las conclusiones indican que la combinación de heutagogía e IA (denominada “heutagogIA”) promete experiencias educativas innovadoras y emancipadoras; no obstante, exige diseñar sistemas que promuevan un aprendizaje crítico y reflexivo, asegurando que los estudiantes desarrollen habilidades para cuestionar y analizar la información recibida, condición fundamental para una educación verdaderamente emancipadora.

Palabras clave

Autoaprendizaje, autonomía educativa, filosofía de la educación, heutagogía, inteligencia artificial, pensamiento crítico.

Introduction

The Sciences of the Artificial do not merely aim to understand and explain phenomena (in this case, educational ones), but rather seek to improve things by introducing new possibilities (Alonso Rodríguez, 2021, p. 132).

Contemporary education faces perhaps its greatest historical challenge: we are witnessing an unprecedented educational revolution, driven in particular by the emergence and rapid evolution of artificial intelligence (AI) —an evolution that has been accelerated by the emergence of machine-learning AI models capable of processing and generating text in a coherent, contextual manner using natural language, such as ChatGPT, Perplexity, CoPilot, Gemini, and others, which have been rapidly integrated into the teaching-learning process (Caldeiro et al., 2024; García Peñalvo, 2024; García Peñalvo et al., 2024; Peñalver Higuera et al., 2024). This integration is neither a marginal nor a future phenomenon; it is a present reality that challenges teachers, students, institutions, and philosophers of education alike.

In this context, drawing on the principles of Knowles (1970), “heutagogy” is applied as self-determined learning, a process in which the student assumes an active role in the planning, direction, execution, and evaluation of their own educational process. Heutagogy promotes the autonomy of the student as a subject, in contrast to traditional pedagogi-



cal approaches in which the teacher is the primary mediator. However, the emergence of AI in this framework introduces a tension that cannot be ignored: if the heutagogical learner increasingly relies on algorithmic systems to make decisions about what and how to learn, are they truly autonomous, or do they transfer that autonomy to an opaque computational logic that they themselves neither control nor understand?

From this tension emerges the central problem that guides this research: the coexistence of AI's emancipatory potential in a heutagogical context and the risk of a new form of technological subjugation that limits the student's cognitive autonomy. In particular, the study examines whether the growing use of AI systems in education effectively promotes self-determined learning or whether, on the contrary, it shifts decision-making away from the individual toward opaque algorithmic logics that constrain thought, creativity, and critical reflection. This question is not rhetorical; it has major pedagogical, ethical, and political implications for the design of twenty-first-century educational systems.

The research posits as its central thesis that AI is, in and of itself, neither emancipatory nor alienating; rather, its educational impact depends on the pedagogical, ethical, and epistemological frameworks within which it is integrated. In this regard, the study argues that, within a critical-reflective heutagogical approach, AI can serve as a tool to enhance self-directed learning, provided that educational experiences are designed to foster critical thinking, ethical awareness, and the students' ability to question both the content and the algorithmic systems themselves that mediate their learning. This stance avoids both uncritical enthusiasm for technology and reactive rejection, advocating instead for a reflective and politically conscious adoption of AI in education.

The importance and timeliness of this study are indisputable. With the widespread adoption of generative language models, the discussion about AI in education has shifted from being prospective to becoming urgent and immediate. International organizations such as UNESCO (2022) and the European Parliament (2024) have begun to establish regulatory and ethical frameworks to govern the use of these technologies, explicitly recognizing that their implementation without clear pedagogical criteria can deepen inequalities, perpetuate biases, and erode the individuals' intellectual autonomy. In Latin America, where digital and educational divides have historically been pronounced, this debate takes on an additional dimension of cognitive justice and social equity. Analyzing this transformation through the lens of heutagogy is particularly relevant, as it allows us to critically examine discourses on educational innovation



and place the learner's autonomy at the center in the face of risks of dependence, homogenization, and algorithmic subjugation.

The main objective of this study is to critically analyze the intersection between heutagogy and AI to determine the conditions under which the latter can genuinely promote self-determined learning rather than creating new forms of technological dependence. The discussion is organized into eight sections that progress step by step from conceptual foundations to concrete proposals.

The first section describes the interpretive qualitative methodology employed. The second establishes the theoretical framework that articulates autonomy, technology, and self-determined learning as the analytical axes of the study. Starting with the third section, the analysis unfolds in depth: it examines heutagogy and its relevance to AI, identifying the tensions that arise when self-determined learning is mediated by algorithmic systems; it then characterizes artificial intelligence as a disciplinary field and analyzes its applications in educational contexts. These two sections converge in the fifth, dedicated to "heutagogIA" as a neologism and pedagogical proposal that names this intersection.

The following three sections move toward a critical and propositional dimension: forms of resistance to algorithmic subjugation are explored under the title "Freeing Ourselves from AlgoritmoIA"; a proposal for emancipatory heutagogical education that places the subject's autonomy at the center is articulated; and a guiding decalogue for the implementation of heutagogy based on ethical, inclusive, and reflective criteria is formulated. The study concludes with a summary that outlines the objective, the research problem, the difficulties encountered, and projections for future research.

Methodology

The research adopts an interpretive qualitative approach aimed at understanding the processes, meanings, and implications associated with the use of AI in educational contexts from a heutagogical perspective. This approach is appropriate given that the object of study does not lend itself to direct quantification; rather, the goal is to explore conceptual relationships, epistemological tensions, and ethical implications that require comprehensive analysis and interpretation grounded in explicit theoretical frameworks.

The research strategies and techniques combined a systematic review of specialized literature with a particular focus on the analysis of



case studies involving the use of AI in educational settings. The literature review was conducted comparatively, allowing for the identification of trends, gaps, and relevant contributions at the intersection of AI and heutagogy, with particular attention to publications from recent years that reflect the emergence of generative language models in educational contexts.

The research procedure was structured into three sequential phases. In the first phase, an exhaustive literature review was conducted to establish the state of the art and delineate the main debates and theoretical perspectives surrounding heutagogy, AI in education, and the ethical and political implications of algorithmic systems. In the second phase, representative cases of AI applications in education that incorporate heutagogical elements were identified and analyzed, focusing on learning processes, human-machine interaction, and the possibilities for technological emancipation or subjugation. In the third phase, an integrative conceptual framework was developed based on the findings from the previous phases, culminating in the formulation of a set of ten recommendations for the design of critical, reflective, and emancipatory AI-mediated educational experiences.

The data collection and analysis tools included, first, conceptual analysis matrices designed to systematize and categorize the reviewed literature based on four dimensions:

- Conception of the learner.
- The role assigned to technology in the educational process.
- Tensions between autonomy and dependence identified in the studies.
- Proposals for—or the absence of—an emancipatory approach.

These matrices made it possible to compare perspectives from different disciplinary traditions—pedagogy, philosophy of education, computer science, and technology ethics—to identify substantive convergences and divergences.

Second, evaluation rubrics were used to analyze cases of AI implementation in education, organized around criteria such as the degree of student agency in the process, the transparency of the algorithmic system used, the presence or absence of instances of critical reflection on the tool, and alignment with principles of equity and inclusion. These rubrics made it possible to evaluate the cases not only in terms of their instrumental effectiveness but also in terms of their consistency with the values of an emancipatory education.



Autonomy, Technology, and Self-Determined Learning

This research is grounded in a theoretical framework that articulates three fundamental conceptual axes: the learner's autonomy in learning, technological mediation, and the critical dimension of education. These three axes are not independent of one another; rather, they are dialectically interrelated, generating productive tensions that constitute the philosophical core of the research problem.

The autonomy of the learner

The first conceptual axis is built upon the traditions of critical pedagogy and andragogy. Knowles (1970) identified in the adult learner a capacity for self-direction that traditional education tends to suppress rather than foster—an argument that laid the groundwork for rethinking the role of the teacher as an epistemic authority and that of the student as a passive recipient. Building on this foundation, Hase and Kenyon (2001) formulated heutagogy as a move beyond the andragogical model: whereas in andragogy the teacher facilitates adult learning within a predefined curricular framework, in heutagogy the learner fully assumes responsibility for the planning, design, development, and evaluation of their own learning process. This distinction is not merely instrumental but epistemological; it entails a conception of the learner as an agent capable of defining their own questions, selecting their own methods, and evaluating their own results, without relying on a preestablished curriculum or the teacher's mediation.

This concept resonates with Jacques Rancière's (1996) proposal in *The Ignorant Schoolmaster*, where intellectual emancipation does not stem from the teacher's instruction but from the recognition of the equality of intelligences. For Rancière, the learner does not need a teacher to impart knowledge; rather, the learner needs someone who challenges them to use their own intelligence. The "ignorant teacher" does not instruct because they do not know; they challenge because they trust in the other's capacity. This relational architecture of learning proves philosophically fruitful when AI is introduced into the heutagogical setting: an AI system does not "know" in the full sense of the term (it does not understand, it has no consciousness, and it does not experience the world); however, it can facilitate genuine learning processes in those who interact with it. In this sense, AI could function as a sort of technological "ignorant teacher"—a device that does not possess the knowledge it appears to convey but which can engage the student in ways that activate their own critical in-



telligence. The risk, however, is that this analogy obscures a fundamental difference: while Rancière's "ignorant teacher" respects and encourages the student's intellectual emancipation, a poorly designed AI system can produce exactly the opposite effect, homogenizing responses, discouraging genuine questioning, and reinforcing cognitive dependence.

Blaschke and Marín (2020) have clarified that heutagogy is not equivalent to self-regulated learning or self-directed learning, with which it is frequently confused. The fundamental difference lies in the degree of agency the learner possesses: whereas in self-regulated learning the student manages their process within a given curricular framework—selecting strategies, managing time, and monitoring their performance—in heutagogy that very framework is defined by the student. It is the learner who decides what is worth learning, through which means, and according to which assessment criteria. This distinction becomes crucial when AI is introduced, as the risk lies precisely in algorithmic systems imposing an implicit curricular framework—determined by training data and the system's objectives—which the student perceives as their own but which has in fact been designed by others. This surreptitious reimposition of a heteronomous curriculum under the guise of personalization constitutes one of the deepest tensions in heutagogy and demands constant philosophical and pedagogical vigilance.



Technological Mediation and the Production of Subjectivities

The second conceptual axis is based on the premise that all technology participates in the production of subjectivities. This assertion should not be read as a naive technological determinism—according to which technology inexorably dictates the ways in which subjects think and act—but rather as a critical acknowledgment that technological artifacts are not neutral: they embody values, interests, and power relations that condition, in more or less subtle ways, the ways in which subjects relate to knowledge and to themselves.

Foucault (2002) analyzed, in the context of disciplinary institutions, how apparatuses of knowledge-power produce docile subjects through surveillance, norms, and examination. Power is not exercised solely over the body; it is inscribed in practices, routines, and the ways of evaluating and being evaluated. The traditional school has been one of the primary spaces for this disciplinary production. Deleuze (2006), for his part, adapted this analysis to "societies of control," in which regulatory mechanisms no longer operate through confinement and direct surveillance, but rather through the continuous modulation of behaviors via networks, flows, and computerized systems. What is significant about this shift is

that subjection is no longer visible or traceable: it permeates interfaces, algorithmic recommendations, and scoring and gamification systems that silently shape the subject's decisions. This historical progression—from sovereign power to disciplinary power and from there to modulated control—takes on a new dimension with educational AI: algorithmic systems not only monitor student performance but also predict their trajectories, suggest their paths, and shape their expectations, thereby shaping what might be called algorithmic subjectivity. In this scenario, the question of heutagogical autonomy becomes philosophically pressing: Can a subject be truly autonomous when their learning decisions are guided, filtered, and fed back by a system that operates under an opaque logic?

Stiegler (2015), drawing on the philosophy of technology, has argued that any externalization of thought onto technical media carries the risk of what he calls “cognitive proletarianization”—the progressive loss of know-how and life skills when cognitive functions are delegated to devices that perform them more efficiently. This assessment is particularly relevant in the context of educational AI: if students externalize to the system the selection of what to learn, the formulation of their questions, and the evaluation of their answers, they not only lose practice in these skills but may also lose awareness that they ever possessed them. Winner (2008) and Collins and Pinch (1996), for their part, have emphasized that technological artifacts embody political and moral choices that are not apparent to the user. An AI system trained on specific datasets, designed to optimize specific metrics, and deployed in specific institutional contexts is not a transparent window into knowledge; rather, it is an artifact that reflects the interests, biases, and values of those who built it. This reality calls for critical technological literacy that goes beyond the instrumental learning of digital tools to include an understanding of the mechanisms of power at work in algorithmic systems—which is, in itself, a philosophical and pedagogical task of the highest order.

Critical Education as Emancipation

The third conceptual axis draws on the tradition of critical pedagogy and the philosophy of emancipatory education. Garcés (2020) defines emancipatory education as that which “understands education to be a path to liberation not only for a select few but for everyone” (p. 27). This definition has an inescapable political dimension: emancipation is not an individual process of self-realization, but a collective process of building the conditions for the autonomy and dignity of all individuals. To emancipate oneself does not mean merely freeing oneself from external constraints,



but developing the capacity to recognize the conditions of one's own subjugation and to act upon them with intention and discernment.

Along these lines, Freire (1970) had already warned that “banking” education—that which deposits content into the student without involving them in its construction—is a form of oppression disguised as instruction. Freire’s critique takes on new relevance in the face of AI systems that generate “personalized” content without the student having participated in defining what they need to learn or in assessing what they have learned. The risk is not merely pedagogical; it is political, insofar as it reproduces relationships of dependency under the guise of autonomy.

De Sousa Santos (2006) warns that “we have only hegemonic instruments to try to confront all of this, because today we lack the concepts to confront the new, discontinuity, rupture, and revolution” (p. 65). This warning is particularly relevant in the context of AI in education: the available tools are, for the most part, products of technology corporations operating under a market logic that does not necessarily align with the emancipatory goals of education. However, this does not mean they cannot be appropriated in a critical and transformative way. The history of education is full of examples of the subversive appropriation of hegemonic tools—such as the printing press, radio, video, and the internet; in each case, the tool was developed with specific power dynamics in mind and was later appropriated by educational and social movements that used it to challenge those very dynamics. The learner is not a passive recipient of technology; they can interrogate it, subvert it, and redefine its meaning.

This possibility of reframing refers to Deleuze and Guattari’s (2002) concept of the “line of flight”—movements that escape established territorialities and open up new possibilities for existence. Conceiving of heutagogy as a line of flight implies viewing AI not only as a learning tool but also as an object of learning: the student who learns to question the algorithmic systems that mediate their education is, in the very act of that questioning, exercising a form of technological emancipation that transcends the instrumental use of the tool.

The articulation of these three axes—the autonomy of the subject, technological mediation, and emancipatory education—constitutes the theoretical framework from which heutagogy is approached as an educational proposal. This framework does not resolve the paradox that gives this work its title, but it offers the analytical categories necessary to think through it with rigor and depth, avoiding both techno-utopian enthusiasm and Luddite pessimism, and instead advocating for a reflective, critical, and politically conscious appropriation of AI in education.



Heutagogy and Its Relevance to AI

The act of knowing is revealed to be an activity inherent to the being, in which one glimpses—or rather, acquires meaning in one’s way of being, based on gaining knowledge of that which seems unknown to them (Obando et al., 2018, p. 96).

Heutagogy did not emerge as a response to the technological revolution, but rather as a consequence of a deep dissatisfaction with teacher-centered educational models. Hase and Kenyon (2001) formulated it as an extension and improvement upon Knowles’s (1970) andragogy: whereas in andragogy the teacher facilitates a learning process whose curriculum has been institutionally defined, in heutagogy it is the student who plans, directs, designs, develops, and evaluates their own learning. This difference is not one of degree but of nature; it implies an ontological shift in the educational subject, who ceases to be the object of pedagogical action and becomes the agent of their own learning process.

It is important, however, to avoid confusion between heutagogy and related concepts that are often used as synonyms. As Narváez and Prada (2005) point out, terms such as “self-regulated learning, autonomous learning, and self-planned learning” (p. 118) are related to heutagogy but do not define or constitute it. The central distinction lies in the object of self-determination: while self-regulated or self-directed learning operates within a given curricular framework, managing resources, time, and strategies, heutagogy involves defining one’s own framework, choosing one’s own questions, and constructing one’s own assessment criteria. This distinction takes on particular relevance when AI is introduced as a mediator, since the risk lies precisely in the algorithmic system surreptitiously reimposing an implicit curriculum that the student perceives as their own without having chosen it.

Heutagogy, although it has existed as a practice long before its conceptual formalization, experienced a notable expansion following the 2020 pandemic, when educational institutions were compelled to reconfigure their teaching models for distance and virtual learning contexts. Hairi et al. (2022) document implementations in “the United Kingdom, Cyprus, New Zealand, Germany, Canada, Rwanda, and Portugal” (p. 6693), among others. In the Spanish-speaking world, the Universitat Oberta de Catalunya (UOC) in Spain and the Universidad Nacional Abierta y a Distancia (UNAD) in Colombia stand out as institutions that have incorporated heutagogical principles into their pedagogical approaches. This geographic expansion reveals that heutagogy is not a marginal academic



approach, but rather an educational trend with growing institutional and research support.

However, what gives heutagogy particular relevance in the current context is precisely the emergence of generative AI. On the one hand, AI systems seem to offer ideal conditions for self-directed learning: unlimited access to information, immediate feedback, adaptation to the user's pace and interests, and constant availability. On the other hand, these same systems can operate as mechanisms of subjugation that erode the subject's autonomy: if the heutagogical learner delegates to AI the selection of what to learn, how to learn it, and how to assess it, self-determination becomes an illusion sustained by algorithms. This tension lies at the heart of the paradox that gives this paper its title.

To paraphrase David Miller: "In order to achieve learning, it is necessary to know something and have prior knowledge, whether in physical (face-to-face) space, intangible (virtual) space, or cyberspace as a setting where epistemological and educational debate is possible" (cited in Hermann Acosta, 2011, p. 101), we encounter an argument that runs counter to the aforementioned position of Rancière (1996), who states that "one can teach what one does not know" (p. 56)—a contradiction in which heutagogy and AI might serve as mediators.

This issue takes on even greater depth when examined through Rancière's thought, which proposes that true learning arises from the recognition of the equality of intelligences and not from the transfer of knowledge from an epistemic authority to a passive recipient. The apparent convergence between Rancière's emphasis on student autonomy—as well as on the student's inherent capacity to learn on their own—and heutagogy, in which the student takes control over what and how they learn, is defended in the French philosopher's arguments when he proposes that true learning is that which arises from the equality of intelligences in a process where the teacher does not teach in the traditional sense: the "ignorant teacher" acts as a facilitator of the student's intellectual emancipation.

Both Rancière and heutagogy reject the student's dependence on the teacher as the sole source of knowledge; both promote a model of self-determined learning—in which the student decides what and how to learn—as well as critical reflection and active exploration. Both heutagogy and Rancière's thought make it clear that meaningful learning is not imposed but is constructed through the student's own will and capacity. That said, we are concerned about whether what is taught—that which is unknown—could be an AI, given that, in essence, AI does not know what it teaches; it is something like a sophisticated technological parrot that



repeats the information previously provided to it, and in that sense, it could be analogous to Rancière's ignorant teacher, who would teach what, strictly speaking, they do not know—they merely repeat it.

It is at this point that heutagogy and AI (heutagogIA) converge for the purposes of this paper. This intersection represents a transformative possibility for emancipatory education, but it also poses a fundamental paradox: the tension between heutagogical autonomy and potential technological dependence (Morduchowicz, 2023). As Mollick and Mollick (2023) warn, the algorithmic design of AI systems tends to standardize processes, which could restrict the creative exploration inherent in self-determined learning. This leads us to ask: What mechanisms would ensure that AI functions as a facilitator rather than a limiter of students' creative agency in heutagogical contexts?

As Mollick and Mollick note: "AI can be a useful tool for promoting teaching and learning practices when implemented with caution and consideration in the classroom" (2023, p. 24). This caution should not be understood as timidity toward technology, but rather as pedagogical and philosophical rigor: the very tool that can enhance autonomy can also erode it, depending on the framework of values, intentions, and practices within which it is deployed.

Artificial Intelligence

The history of AI as a multidisciplinary field drawing on mathematics, logic, computer science, and neuroscience has evolved over several decades. For the purposes of this article, it is worth highlighting three key milestones. The first dates back to 1842, when mathematician Ada Lovelace programmed what is considered the first algorithm intended to be processed by a machine (Abeliuk and Gutiérrez, 2021, p. 15). The second milestone corresponds to Alan Turing's work in 1950, as outlined in his article "Computing Machinery and Intelligence," in which he first posed the question of whether a machine can think, thereby establishing the conceptual framework that would guide decades of research. The third milestone occurred in 1956 at the Dartmouth Conference, which Abeliuk and Gutiérrez (2021) identify as the "founding moment of 'artificial intelligence,' both in terms of the term itself and the field of study" (p. 15). Since then, AI has gone through various stages: the early rule-based expert systems, the AI winter of the 1970s and 1980s, the resurgence with neural networks in the 1990s, and the deep learning revolution of the



2010s, which made applications such as facial recognition, virtual assistants, and, more recently, generative language models possible.

AI has advanced significantly thanks to the increase in available data and hardware development, which has facilitated the emergence of advanced natural language processing models. Among these, GPT (Generative Pre-trained Transformer) models stand out; they are based on deep neural networks and are capable of generating text and sustaining natural conversations. Tools such as ChatGPT, Perplexity, Copilot, and Gemini are examples of this evolution. In particular, ChatGPT has become one of the most widespread and well-known systems, using the GPT architecture to process and generate human language, thereby expanding the applications of AI in fields such as education, which is the focus of this study.

This historical trajectory is not merely a backdrop; it reveals that the development of AI has always been shaped by available computational capabilities, the training data used, and the objectives that researchers and industries have defined as priorities. Understanding these factors is essential for critically evaluating current AI systems in educational contexts.

Among the many definitions of AI, we adopt the one provided by UNESCO in Morduchowicz (2023): “AI is the ability of a system to interpret external data, use this data to achieve specific goals, and carry out actions that maximize the chances of success in a particular task” (p. 15). This deliberately functionalist definition allows us to clearly identify both the possibilities and the limits of AI in education. Thus, if the “specific goals” that an AI system optimizes are not aligned with the objectives of an emancipatory education—the development of critical thinking, intellectual autonomy, and the ability to question—the system may achieve satisfactory performance metrics while simultaneously producing pedagogically impoverished results.

In this sense, AI can provide rapid access to resources, helping students research topics of interest. This can foster the autonomy that would allow students to delve deeper into specific areas that interest them or that they need to explore to discover their interests. AI, in its current configuration, can assume multiple roles in the educational process, as summarized by Caldeiro et al. (2024, p. 8) in a classification ranging from the role of simulator and tutor to that of dynamic evaluator and co-designer (Tables 1 and 2). Each of these roles entails both pedagogical benefits—such as personalization, immediate feedback, and deliberate practice—and significant risks: “confabulation” or the generation of false but plausible information, the undue transfer of thought to the system, and incompatibility between the system’s interaction style and that of the stu-



dent. What these classifications reveal is not only a taxonomy of uses but also a map of pedagogical tensions that require reflective management on the part of teachers and students. As Mollick and Mollick (2023) suggest, “AI can be a useful tool for promoting teaching and learning practices when implemented with caution and consideration in the classroom” (p. 24). Building on this idea, Caldeiro et al. (2024) summarize some of the benefits and risks:

Table 1
Approaches Using Prompts

Use of AI	Role	Pedagogical benefit	Pedagogical risk
Simulator	Deliberate Practice	Practicing and applying knowledge helps with its transfer.	Inappropriate fidelity.
Tutor	Direct instruction	Personalized direct instruction is very effective.	The AI’s knowledge base is inconsistent. There are serious risks of confabulation.
Mentor	Provide feedback	Frequent feedback improves learning outcomes, even if not all advice is followed.	Failure to critically analyze feedback, which may contain errors.
Motivator	Encourage metacognition	Creating opportunities for introspective analysis and self-regulation, which enhances the quality of learning.	The tone or style of coaching may not match the student’s. Risk of incorrect advice.
Peer	Improving Team Performance	Providing alternative perspectives helps learning teams function more effectively.	Inaccuracies and fabrication of data. Compatibility issues when interacting with other group members.
Student	Gaining explanations	The act of explaining things to others is a highly effective learning strategy.	Fabricating information and engaging in discussions can negate the benefits of the pedagogical approach.
Tool	Carry out specific activities	It allows learners to make greater progress in the same amount of time.	Delegate thinking, rather than work.

Source: adapted from Caldeiro et al. (2024, p. 8).

Table 1 highlights some applications that an AI-supported heutagogical program could develop, ensuring that the learner is not dependent on AI, but rather can discern, critique, analyze, and even emancipate themselves from AI through AI. However, in the education sector, can any AI be used? Should AI be designed, programmed, trained, and optimized specifically for education? It seems the answer may be implicit in the Synthesis School proposal, whose slogan states, “For kids who think for themselves” (Synthesis, 2024). These children who think for themselves will be educated using the AI employed at Synthesis School to “develop students captivated by complexity and the resolution of the unknown” (Synthesis, 2024).

At first glance, this would seem to align with Rancière; however, it may not yet be possible, as suggested by statements from Chomsky, Roberts, and Watumull published in *The New York Times*:

Its most profound flaw is the absence of the most critical capacity possessed by any intelligence: to state not only what is happening, what happened, and what will happen—i.e., to describe and predict—but also what is not happening and what could and could not happen (Kuo, 2023).

It is worth noting that these are the necessary ingredients of an explanation, as “the hallmark of true intelligence” (Kuo, 2023). Therefore, the ability to explain what is absent and consider what is not obvious is crucial for informed decision-making and the resolution of complex problems. True intelligence is not limited to the superficial; it involves depth and reflection—something that, for now, cannot be achieved by AI alone—and carries the risk of “hallucinations.”

In this regard, Caldeiro et al. (2024) state that “it can produce responses that seem plausible or reasonable but are inaccurate or irrelevant because they are not based on factual data, or due to the tool’s lack of specific skills, such as solving mathematical problems” (p. 11). This phenomenon is not a minor technical glitch; it poses a direct threat to the epistemic integrity of the learning process, especially when students lack the criteria to evaluate the veracity of the information they receive. A fundamental pedagogical conclusion follows from this: the integration of AI into heutagogical contexts cannot occur without parallel training in the critical evaluation of information and in understanding the limits and mechanisms of algorithmic systems.

Hallucinations represent one of the greatest challenges and pose a risk to the AI-mediated teaching-learning process, but it is not the only one. There is also the inability to balance creativity with responsibility,



insofar as its results may yield both truths and falsehoods, as well as bi-ased arguments that could ultimately support both ethical and unethical decisions alike (Kuo, 2023).

That said, AI can assume roles such as those listed in Table 1, but these roles can be expanded even further; for example:

Table 2
Applications of ChatGPT

Role	Description	Example
Idea Generator	The AI generates al-ternatives for express-ing the same idea.	Students can use ChatGPT and the “Regen-erate Response” feature to explore different ways of phrasing ideas.
Socratic Opponent	AI challenges ideas and arguments, promoting critical thinking.	Students can ask ChatGPT questions by structuring the interaction as a debate. Teachers can ask students to use ChatGPT to prepare arguments.
Collabora-tion <i>Coach</i>	The AI assists groups in collab-orative research and problem-solving.	Working in teams, students can use Chat-GPT to search for information that helps them complete projects and assignments.
Comple-mentary Guide	AI serves as a guide for exploring both physical and concep-tual spaces.	Teachers can use ChatGPT to create class-room materials (such as discussion ques-tions) and request suggestions on how to facilitate understanding of specific topics.
Personal Tutor	AI provides individu-alized guidance and immediate feedback on student progress.	ChatGPT can offer personalized feedback to students based on information provided by them or by teachers (for example, assess-ment results).
Co-designer	AI collaborates throughout the design process.	Teachers can ask ChatGPT for ideas on designing or updating curricula (e.g., as-sessment rubrics) or on addressing specific objectives (e.g., how to improve curriculum accessibility).
Exploratory	AI provides tools for inquiry and interpretation.	Teachers can provide students with basic information, and students can then ask ChatGPT various questions to delve deeper into the topic. ChatGPT can be useful for supporting language learning.

Role	Description	Example
Study Partner	AI helps students reflect on the learning material.	Students can explain their level of understanding to ChatGPT and ask for help studying the material. ChatGPT can also help students prepare for various tasks (such as job interviews).
Motivator	AI suggests games and challenges to expand learning.	Teachers and students can ask ChatGPT for ideas on how to expand students' learning by providing a summary of their current level of knowledge (for example, quizzes or exercises).
Dynamic Assessor	The AI provides educators with a profile of each student's current knowledge.	Students can interact with ChatGPT in a tutoring-style dialogue and then ask ChatGPT to generate a summary of their current state of knowledge to share with the teacher for assessment.

Source: adapted from Caldeiro *et al.* (2024, p. 9).



The roles in Table 2 are closer to a potential combination of AI with heutagogy; of course, heutagogical effects must be considered when designing these specific roles, both in AI training and in the students' use of the system. Finally, one of the objectives is for students to be able to discern the information provided by the AI so that they can also use more precise questions to challenge the AI's model outputs. This creates a sort of spiral of refinement for the information and knowledge acquired, in pursuit of a reflective and analytical approach that encourages the exploration of deeper aspects—the latter of which is reminiscent of Gadamer's (2003) hermeneutic spiral.

Heutagogy

The intersection between AI and heutagogy—which we have termed “heutagogIA” here—is not simply the sum of two approaches, but rather an articulation that generates its own emergent properties, both in terms of pedagogical possibilities and specific risks. Thus, heutagogy promises new forms of interaction and the empowerment of self-directed learning, which allows for “optimizing education based on each student's unique needs and development, thereby enabling the creation or adaptation of personalized learning materials and experiences” (Aguilar, 2024). This personalization,

in principle, is one of the central objectives of heutagogy: that each individual can chart their own educational path. However, it is worth critically examining what kind of personalization current AI systems actually offer.

Algorithmic personalization operates on the basis of data: the system identifies patterns in user behavior, compares them with patterns from other users, and generates optimized recommendations. But this process has a fundamental epistemological limitation: it can only personalize within the space of possibilities defined by the training data. An AI system cannot recommend to a student something that has never appeared in its data, nor can it anticipate interests the student has not yet developed, nor can it evaluate creativity that challenges preexisting categories. In this sense, algorithmic personalization is, paradoxically, a form of homogenization: all students are personalized according to the same logic, optimized according to the same criteria, and steered toward territories already mapped by the data. As Morduchowicz (2023) points out, “AI is capable of storing data, organizing it, processing it, sorting it, and drafting texts, but it lacks critical thinking, curiosity, and imagination, and is not a source of free creativity” (p. 36). This limitation does not invalidate the use of AI in heutagogy, but it does require that algorithmic personalization be complemented and constantly challenged by the genuine agency of the student as a subject—and not by the student as an object.

Although AI has the potential to adapt content and methodology to the individual needs of the user, this AI-mediated self-determination may or may not enable them to make decisions about their learning and actively participate in their educational process. Furthermore, it should foster reflective capabilities, as it can promote the ability to critically question, analyze, and construct knowledge. As Lo (2023) concludes, “its use raises several concerns, such as the generation of incorrect or false information and the threat it poses to academic integrity” (p. 12).

Plagiarism and academic integrity constitute another significant source of tension. The use of AI “faces strong cultural resistance in the academic sphere, creating tensions both in teaching practice and in the future prospects of education” (Delgado et al., 2024, p. 144). This resistance is not unfounded: if a student outsources the production of texts, arguments, or solutions to AI, they not only engage in academic dishonesty but—what is pedagogically more serious—forfeit the learning process that such production was intended to generate. From a heutagogical perspective, this represents a fundamental contradiction: the learner who delegates the task of thinking to an algorithmic system is not exercising their autonomy but rather abdicating it.



However, the opposite view also exists and deserves attention. Puente et al. (2024) report that “research indicates that students who use these platforms demonstrate better knowledge retention and achieve higher grades compared to traditional methods” (p. 61). This evidence suggests that the problem is not AI itself, but rather how it is used. A student who uses AI to compare perspectives, to generate questions that they then investigate through other channels, to receive feedback on their own arguments, and to explore areas of knowledge that would otherwise be inaccessible is exercising a form of technologically mediated autonomy that is perfectly compatible with heutagogy—and may even enhance it.

The interpretive key to this distinction lies in Gadamer’s (2003) hermeneutic spiral, in that learning—as a process of progressive understanding—involves each new horizon of meaning modifying and enriching the previous understanding. Interaction with AI can serve as a catalyst for this spiral movement, provided that the learner does not stop at the system’s first response but instead uses it as a starting point for new questions, new searches, and new syntheses. From this perspective, heutagogy is not a state to be attained but a process to be constructed: a continuous practice of critical and reflective appropriation of available technological tools.

That being the case, on the one hand, there are the enthusiasts who see in heutagogy almost infinite possibilities for advancement and progress, as if it were a new Enlightenment; and on the other hand, there are the skeptics who recognize the risk of the algorithm underlying AI and the results of an AI-led educational process—which, among other things, can become a mechanism of subjugation, with the subject algorithmically subjected within heutagogy.

At this point, it should be clarified that the individual should also be capable of critiquing the educational model itself; moreover, this would enable a contextual education to the extent that learning can be related to everyday reality and the challenges in one’s environment. This combination promises a more personalized, relevant, and emancipatory learning experience. This raises the following question: How does heutagogy relate to emancipatory education? Emancipatory education is “when we understand that education is a path to liberation not only for a select few but for everyone” (Garcés, 2020, p. 27). With AI, it is possible to reach everyone—at least in theory—although for now, inequalities and difficulties in accessing ICTs, and consequently AI, persist.

This first potential of AI does not, in principle, achieve global coverage, but as time goes on, we would expect the barriers preventing uni-



versal access to these technologies—which are here to stay—to be broken down. A second potential lies in AI’s ability to act as a personalized tutor that provides tailored tools and recommendations, further empowering individuals to make informed decisions about their education; of course, there is a risk of dependency here, which directly undermines the emancipatory purpose.

However, heutagogy itself seeks emancipatory autonomy by focusing on the learner’s autonomy, which aligns with the idea that each student has different interests, paces, and learning styles. That said, this implies that heutagogy must go beyond the mere transmission of content and allow for the holistic development of individuals, fostering their autonomy, critical thinking, and the ability to understand, make connections, and act—even regarding the educational content itself—within the “glocal” context, which is both global and local. In short, we must be cautious and not simply trust AI, but rather question it, since true emancipation involves the ability to question and decide for oneself.

196



Freeing Ourselves from Algorithmic AI

The functioning of an algorithm for the development of heutagogy could be described through the following stages:

- First, the collection of dynamic data: This means that, instead of static data, AI collects real-time information about the learner’s progress, thereby adapting teaching and learning strategies based on the learner’s program, concerns, preferences, strategies, interactions, and progress.
- Second, adaptive analysis: The data is processed using deep learning algorithms that identify patterns not only in performance but also in the learner’s style and motivation. Here it is important to note the risk involved in using black-box algorithms, “whose internal workings are unknown, cannot be explained, or are not understandable. This means that the algorithm makes its decisions and processes information in a way that is hidden, even from its own developer” (Morandín Ahuerma, 2023, p. 190). These algorithms make it difficult to understand and question their decisions, raising issues of responsibility and accountability.
- Third, the generation of personalized learning paths: In this step, rather than offering a simple assessment, unique educa-

tional pathways are designed and proposed that evolve with the learner—again using a black-box algorithm. This leads to the opacity that arises from the model's decisions, which are based on millions of internal calculations and connections that cannot be easily interpreted. These pathways provide specific—and likely unique—resources and challenges that foster student autonomy and critical thinking.

- Fourth, continuous feedback: In a successive and cyclical manner, immediate and contextualized feedback is provided, optimizing the learning environment based on the student's development and achieved goals.

The steps outlined above, which are cyclical, carry the risk of algorithmic subjugation in that the student's learning and decisions may be limited by biases inherent in the algorithm's design. This is especially true with deep learning models, since the model might reinforce preexisting patterns—such as learning styles preferred by the system—thereby ignoring cognitive diversity or limiting autonomous exploration.

What this process reveals is that each of these stages can also be a stage of subjugation. The perpetual collection of data implies constant surveillance of the subject. This raises questions regarding the individual's agency in their own educational process and the danger of excessive dependence on systems that, although adaptive, are far from neutral. Therefore, it is important to consider that the codification of training biases in algorithms (García Peñalvo, 2024) carries harmful consequences, since AI has the potential to perpetuate and amplify forms of discrimination, which justifies the need to critically analyze the ethical implications of AI in education to avoid perpetuating existing inequalities.

This dynamic of subjugation does not operate visibly. It is part of what Foucault (2006) termed “governmentality” (p. 96)—understood as the set of rationalities, techniques, and institutions that guide the behavior of subjects in a subtle and continuous manner. In the digital and algorithmic version of this concept, this steering requires neither physical institutions nor human overseers: it operates through interfaces, notifications, personalized recommendations, and gamification systems that shape behaviors and incentivize certain ways of engaging with knowledge. Deleuze (2006) anticipated this dynamic when he wrote that in “societies of control, nothing is ever finished: the enterprise, education, or service are the metastable and coexisting states of a single modulation, a kind of universal shaper” (p. 280). Educational AI systems can function



precisely as that universal deformer: they never conclude their assessment of the student, never declare their learning complete, and always suggest a next step, a further optimization.

As López (n.d.), Collins and Pinch (1996), Vallès-Peris (2022), and Winner (2008) point out, technology is not neutral. It can reflect and reinforce certain values and interests—a sort of technological delegation over lives and academic decisions—which, if automated without a deep understanding of its limitations and underlying biases, has a significant impact on the life of the heutagogical learner and on society at large. For this reason, there is a call to ensure that these systems are fair, transparent, and do not perpetuate discrimination or biases inherent in the programmers' views as written in code.

Given this landscape, it is important to identify the main ethical and technical concerns that the specialized literature has highlighted regarding the use of AI in education:

- **Algorithmic bias:** This carries the potential to maintain, exacerbate, and reproduce patterns embedded during the training of algorithms, thereby increasing inequality rather than reducing it (Ramírez, 2023; García Peñalvo, 2024). If the data used to train a system reflect historical inequalities in terms of race, gender, social class, or geographic origin, the system will tend to perpetuate them and, in many cases, amplify them, as it applies them on a massive scale and with a semblance of technical objectivity that makes it difficult to challenge.
- **Lack of transparency:** This results from the use of “black box” algorithms, which makes it difficult to understand and question their decisions, and raises potential issues of responsibility and accountability (Morandín Ahuerma, 2023). When a system determines that a student has greater or lesser potential, or when it steers the student's educational path toward certain areas of knowledge, that decision is produced through millions of internal calculations that are neither explainable nor auditable. This opacity is incompatible with an education system that aims to foster critical and autonomous individuals.
- **Technological determinism:** This reflects concerns about excessive reliance on algorithms at the expense of human judgment and discretion. When teachers and institutions delegate fundamental pedagogical decisions—such as what to learn, at what pace, with what resources, and under what assessment



criteria—to AI systems, they abdicate their own responsibility and transfer to the machine a power to define human education that no technical system should possess.

- Privacy and data protection: Serious concerns arise regarding the collection, storage, use, access, or leakage of students' personal data (UNESCO, 2022; Parlamento Europeo, 2024). Educational AI systems require massive amounts of data to function, and the collection of such data on minors or on adults in vulnerable situations raises critical questions about informed consent and about who ultimately controls the information generated during learning processes.
- Inequalities in access: Limited access—due, for example, to geographic location, socioeconomic status, prior knowledge of ICT, or age—can exacerbate existing inequalities and represents a structural barrier that may worsen existing educational inequities (Morduchowicz, 2023). Heutagogy that fails to address this access issue risks being an emancipatory approach only for those who already have basic resources guaranteed.

Identifying these concerns does not lead to the conclusion that AI should be rejected as an educational tool, but rather to the conviction that its integration requires constant critical engagement that examines its conditions of possibility, its effects, and its limits. Deleuze and Guattari (2002) introduced the concept of a “line of flight” to refer to movements that escape established territorialities and open up new possibilities for existence. The question that arises here is whether it is possible to use AI itself as a line of flight: to design, train, and use it in such a way that it generates the conditions for its own questioning and transcendence.

What appears to be a growing use of —and perhaps a growing dependence on— AI not only highlights technical and ethical concerns, such as bias and a lack of transparency; it also reconfigures the dynamics of power and control. By automating processes and decisions, algorithms not only perpetuate inequalities and biases but also become devices of a new form of governmentality (Foucault, 2006): “digital governmentality.” This change goes beyond the merely technical to become part of a socio-political transformation where power relations are diffused into algorithmic networks that shape subjectivities in a more subtle and continuous manner, integrating into the logic of the societies of control described by Deleuze (2006) and Foucault (2002), and leading to a form of subjugation that is less visible but disturbingly effective.



We are entering a historical moment in which regulatory mechanisms operate fluidly and persistently through contemporary technological environments. This historical progression reveals a shift from sovereign structures toward disciplinary systems (Foucault, 2002), culminating in the current paradigm of surveillance, as Deleuze (2006) notes: “the cybernetic machines and computers of control societies” (p. 274). Almost prophetically, Deleuze (2006) anticipated and pointed out that contemporary surveillance and regulation do not require visible institutional structures but rather operate through automated systems, foreshadowing the existence of an interconnected digital ecosystem and drawing on multiple—if not thousands—of mathematical calculations and computational procedures that power devices for monitoring and influencing people. This leads to a reconfiguration of identity in which the individual today faces new mechanisms of conditioning that continuously shape their aspirations, cognitions, and behaviors.

Advanced computational environments and mathematical and algorithmic processing systems—which, in the absence of consensus, we have come to accept as “intelligent”—have evolved toward an individualized adaptation of digital interfaces and resources, characterized by inherent biases that intensify observational capabilities and undermine individual self-determination. Thus emerges a contemporary configuration featuring a new type of subject—one not identified by traditional numerical classifications, but rather as a conditioned entity.

This is an individual whose personal imprint is under constant scrutiny, adjustment, and manifestation in digital spaces, creating an algorithmically mediated identity that raises fundamental ethical questions about decision-making capacity, independence, and the possibilities of preserving a genuine sense of identity in circumstances where control manifests itself in an inherent, imperceptible, tacit, personalized, and possibly consensual manner—by accepting contractual terms upon entering digital spaces, applications, or artificial cognitive systems. One must ask: Is there a true understanding of these agreements?

With AI in education, the logic of control takes another step forward; AI has the capacity to monitor and evaluate academic performance, but it can also predict trajectories, suggest pathways, and shape expectations. In short, it creates a new type of subjectivity—algorithmic subjectivity—in which the subject’s autonomy is called into question. This AI-mediated personalized learning is a new form of the “technologies of the self” (Foucault, 1990). Furthermore, it can be interpreted as a new form of what Foucault (2002) termed “individualizing power” (p. 198), in a loop

of constant training and consultation, to which we add Deleuze's (2006) argument: "In societies of control, nothing is ever finished: the enterprise, training, or service are the metastable and coexisting states of a single modulation, a kind of universal deformer" (p. 280). Now, Deleuze and Guattari (2002) introduce the concept of the "line of flight"—what if AI itself were used as a line of flight, an emancipatory education of AI itself?

Mezzadra (2014), drawing on Marxism, has explored the ways in which individuals constitute themselves and resist through struggles and practices of emancipation—a question that must be raised in the face of an "algorithm of subjection," as algorithmic governance desubjectivizes "the subjectivity of the individual subject" (p. 94). Subjects immersed in heutagogy can seek forms of resistance and organization to challenge the subjectification imposed by AI, which fails to consider their unique and singular perspective and which, moreover, enables digital governmentality. This approach tends to ignore subjectivity and individual particularities, which can lead to a distorted representation of their capabilities and potential.



Heutagogical Emancipatory Education

Emancipatory education cannot be merely a philosophical ideal: it must translate into concrete practices, specific institutional designs, and ways of engaging with knowledge and technology that bring its principles to life. In this sense, heutagogy offers a unique opportunity: the possibility of designing systems that not only personalize learning but also equip the individual with the ability to question the conditions of that personalization.

De Sousa Santos (2006) warns of the difficulty of this undertaking: "we have only hegemonic tools at our disposal to try to address all of this" (p. 65). The AI systems currently available are, for the most part, products of technology corporations driven by market logic and optimization that do not necessarily align with the objectives of an emancipatory education. However, this observation does not preclude the possibility of a critical appropriation of these tools. The history of education is full of examples of the subversive appropriation of hegemonic instruments: writing, the printing press, radio, video, and the internet. In each case, the instrument was developed with specific power dynamics in mind and was later appropriated by educational and social movements that used it against those very same dynamics.

AI, by providing rapid data and analysis, can be a valuable tool in this process; of course, we must remember that emancipation is not just

about accessing information, but also about questioning power structures and fighting for a more just society. Heutagogy promotes the ability to learn how to learn. This “learning how to learn” can be guided by parameters that disrupt hegemonic models and tools, linking the ability to search for, process, and evaluate automated information—but in a way that is critical and emancipatory of ideologies, sensologies, biopolitics, normalizations, and other mechanisms of subjugation of the subjugated subject.

Emancipation through heutagogy requires a critical review of assessment systems. When indicators of educational quality are reduced to metrics generated by organizations such as the Organization for Economic Cooperation and Development (OECD), “with criteria based on instrumental and efficiency-oriented reasoning” (Habermas, 1999, p. 42), a fundamental contradiction arises with the objectives of emancipatory education: the system that should liberate the individual subjects them to standardized metrics that neither capture nor value the most significant aspects of their development. Heutagogy must, therefore, also generate its own modes of assessment, focused not on the efficiency of performance, but on the depth of understanding, the quality of critical thinking, and the ability to act autonomously and responsibly in the world.

With heutagogy, the autonomous individual—who is responsible for their own learning process—makes decisions about what, how, and when to study. This is where AI can be used (and properly utilized); as noted, it may be insufficient or biased, but that does not mean this is always the case. In fact, it can be properly trained—but what does it mean to train it properly, and who should do so? More unresolved questions arise, since any bias becomes entrenched in AI, according to Angwin *et al.*: “There are cases showing how intelligent systems distort data, increasing risks” (cited in Ramírez, 2023, p. 12). In any case, at this point, the risk of biased training should be clear, and for that very reason, the code can be configured to be sufficiently broad, inclusive, and bias-resistant, thereby placing the responsibility on the individual to discern and critically evaluate what is presented to them.

It is still an idea that needs refinement, but it remains interesting, challenging, and, above all, promising to consider how to combine these approaches to achieve an emancipatory, autonomous, and heutagogical education. Below are some related points.

Consider the need to use AI in an ethical and bias-free manner, similar to what is outlined in the UNESCO document (2022) and the European Parliament regulation (2024). Likewise, one can draw on manifestos and declarations from anti-establishment groups that advocate for



ICTs and an internet that are accessible to all; one could even use AI itself to detect and resolve ethical and bias-related issues, ensuring they align with ethical values and social expectations, but without succumbing to political correctness-driven censorship.

The integration of AI into education raises important ethical questions that must be considered to ensure the responsible and beneficial use of both existing and emerging technologies, focusing on how decisions affect students as well as society as a whole. In particular, issues such as data privacy, algorithmic bias, and transparency in the use of algorithms must be addressed.

AI can provide rapid access to resources and help students research what they consider relevant. Heutagogy fosters assisted autonomy, which enables the independent exploration of knowledge and can serve as a tool to transcend the limitations of hegemonic educational paradigms. Heutagogy not only facilitates access to knowledge but also fosters emancipatory and inclusive learning, empowering learners to take control of their own learning and equipping them with the ability to question and reconstruct the traditional structures of knowledge-power (Foucault, 2002) that shape a subjectivity submissive to the hegemonic order.

AI can automate administrative tasks such as grading and performance tracking. This frees up time for teachers to focus on interacting with students. However, care must be taken to ensure that assessment is not based solely on quantitative scores generated by AI, which brings us back to the need to avoid falling into the instrumental rationality (Habermas, 1999) of indicators such as those used by the OECD.

In a future educational model such as that proposed by heutagogy, it is important to know how to balance automation with depth and the development of critical thinking, fostering in students that Kantian “dare to think” —the **sapere aude**— which, according to Kant (2003), is the motto of the Enlightenment:

If I have a spiritual guide who has faith for me, if I have a doctor who judges my diet for me, and so on, then I do not need to make an effort on my own. I have no need to think, when I can simply pay (p. 1).

Kant’s warning is perfectly applicable to the context of AI in education: a system that thinks for the student, selects for them, and evaluates for them, exactly replicates the figure of the heteronomous tutor that the Enlightenment sought to overcome. Emancipatory heutagogy must, on the contrary, use AI as a condition for autonomous thinking, not as a substitute for it. Thus, we must ensure that technology does not replace



human reflection, that AI is not that “spiritual guide” or the “and so on” indicated by Kant (2003), and, on the contrary, that the student makes an effort on their own, though, of course, they may make use of technological tools to optimize the cognitive, rational, and thinking process, as has been explored in virtual philosophy education in prisons (Sarmiento *et al.*, 2024). In this sense, heutagogy can help and empower students; of course, we must remember that true emancipation involves the ability to question and decide for oneself—even regarding the AI that drives heutagogy and heutagogy itself—as Kant (2003) would say, “*sapere aude*.”

A Decalogue for Heutagogy

204



To summarize and conclude this paper, we propose some ideas for the eventual implementation of heutagogy. As demonstrated, this self-determined educational approach necessitates a focus on fostering critical autonomy, promoting inclusive education, and ensuring that technology is used as a means to empower individuals, who should in no way be subjected to AI.

1. Prioritize human thought as the starting point. While heutagogy seeks to foster self-directed education, the individual's creativity and critical reflection must be prioritized and maintained as an indispensable goal, above and beyond the codified capabilities of any algorithmic system. One possibility is to foster “rhizomatic” thinking (Deleuze and Guattari, 2002), which offers a productive model of resistance to the cognitive homogenization that poorly managed AI tends to produce, so that it does not obey hierarchical or linear patterns, and the search for and establishment of multiple and unexpected connections between ideas and concepts is enhanced. The aim is for students to develop new intellectual and creative possibilities that are not limited to reproducing preexisting patterns. Following Foucault (1990, 2002), this resistance to homogenized thought serves as a means of subverting the disciplinary systems that shape docile subjectivities.
2. Foster synergies between the individual and technology in relation to AI and its use. This must be based on the pursuit of co-creation—not as one-way instruction—valuing human singularity and thereby considering, from the perspective of Sousa Santos (2006), a way to reinvent forms of collaboration between

humans and technology, so that the use of technology is prioritized to the extent that it helps eliminate inequalities and promotes global cognitive justice. The aim is for synchronized intelligence—human and AI—to be interpreted as an assembly of the collective machine in which each part contributes what the other lacks (Deleuze and Guattari, 2002), within a plane of ethical and political consistency that prioritizes technological use that expands possibilities over that which restricts them.

3. Strengthen autonomy in accessing and evaluating information. Education in critical autonomy must begin by recognizing and denaturalizing the power structures that shape information and determine which information is visible, valid, or permitted in digital environments. This reflective access to information must be part of the emancipatory educational process (Garcés, 2020), in which the individual navigates and frees themselves not only from social and digital mechanisms of subjugation but also avoids becoming trapped in or perpetuating digital bubbles. Universal access to ICTs and AI is key at this point, accompanied by literacy that is no longer merely digital but AI-mediated; this, in itself, is an exercise in liberation rather than subordination—an exercise in emancipation.
4. Promote self-regulated and intentional learning. Heutagogy fosters individuals' ability to design, plan, develop, evaluate, and provide feedback on their own learning within a continuous "becoming" (Deleuze, 2006). This becoming is a process in which learning is neither closed nor predetermined; it is immersed in a constant dynamic of transformation in which AI is used not as a source of dependence, but, on the contrary, as an opportunity to discover new lines of flight (Deleuze, 2006) that expand one's potential.
5. Foster ethical and pluralistic argumentation. Pluralistic thinking is a prerequisite for a democratic society (Garcés, 2020). This approach resonates with Deleuze and Guattari (2002), in that it requires learning to argue ethically—which involves navigating the realm of knowledge while respecting differences and avoiding the dogmatic territorialization of ideas. In this regard, De Sousa Santos (2006) reinforces the need to construct knowledge based on dialogue among diverse epistemologies, moving beyond monocultural perspectives and promoting the world's pluralism.





6. Promote creation with transformative impact. The capacity to create content must be pursued with a critical and emancipatory approach; this involves revealing how technologies shape subjectivities (Foucault, 1990, 2002), which must be challenged, since these subjectivities—in step with ICTs—condition and perform. This creation, as a political act, allows the subject to liberate themselves to the extent that they not only reproduce information but also reinterpret it to destabilize dominant narratives and construct alternatives.
7. Expand opportunities for active participation. Participation in glocal projects—which connect the local with the global—aligns with Sousa Santos's (2006) vision of active and solidarity-based citizenship. Garcés (2020), for his part, proposes participation as a tool for emancipation that strengthens individuals' capacity to influence their realities. This process can be understood as a Deleuzian assemblage that brings together human and non-human actors in networks of transformation.
8. Educate in the principles of reflective heutagogy. Once established, heutagogy must, of course, be explained through heutagogy itself, moving beyond mere technical proficiency to focus on a deep understanding of the power structures that govern technologies. We must analyze how algorithms perpetuate inequalities and how digital platforms operate as disciplinary devices that no longer merely control the individual but produce them: "Discipline thus manufactures subjugated and trained bodies, 'docile bodies'" (Foucault, 2002, p. 142). Heutagogy must empower individuals to dismantle these structures and build inclusive alternatives, "to explore new possibilities for rethinking existing tools and using them as devices of emancipation" (Triana Llano, 2025).
9. Build inclusive and horizontal learning communities. Educational communities should be spaces for encounter that challenge traditional structures and hierarchies. These communities should promote an "ecology of knowledge" (De Sousa Santos, 2006), where marginalized forms of knowledge are recognized and valued, and capabilities and knowledge that have been deliberately hidden or disparaged are empowered. Heutagogy can facilitate these types of processes by integrating it as an ethical mediator rather than as a hegemonic tool.

10. Rethink educational objectives in light of emerging challenges. From the perspective of Deleuze and Guattari (2002), educational objectives must be open, flexible, and adaptable to the changing and complex dynamics of the contemporary world; to this end, there is a need to educate students who are prepared to face the unknown with creativity and autonomy. This includes a critical scrutiny of the ways in which AI redefines power relations in the educational sphere.

Conclusions

The main objective of this research was to critically analyze the intersection between heutagogy and AI, with the aim of determining the conditions under which AI can genuinely promote self-determined learning rather than generate new forms of technological dependence. The analysis conducted allows us to affirm that this objective has been addressed in all its complexity, although not fully resolved—a finding consistent with the paradoxical nature of the problem at hand.

Regarding the central research problem—the coexistence of AI's emancipatory potential from a heutagogical perspective and the risk of technological subjugation—the analysis shows that this coexistence is not a contradiction that must be resolved in favor of one of its terms, but rather a productive tension that must be kept active and conscious in any proposal to integrate AI into educational contexts. AI is, in and of itself, neither emancipatory nor alienating: its nature depends on the pedagogical, ethical, and epistemological frameworks within which it is integrated, on the objectives that are defined, on the individuals who use it, and on the institutional conditions in which it is deployed. This main conclusion has an immediate practical implication: it is not possible to delegate pedagogical responsibility to the technological system. The design of AI-mediated educational experiences requires intellectual, ethical, and political work that teachers, institutions, and students themselves must actively undertake.

The analysis has also identified the main challenges facing any heutagogy initiative. First, the epistemic limitations of current AI systems: their inability to engage in genuine reasoning, their tendency to generate “hallucinations,” and their reliance on training data that often reproduces historical biases. Second, the problem of algorithmic opacity, which hinders critical scrutiny of the decisions these systems make regarding



students' learning trajectories. Third, structural inequalities in access to digital technologies, which mean that heutagogy is, in current practice, a possibility reserved for those who already have resources and favorable conditions. Fourth, cultural resistance and institutional uncertainty regarding the integration of AI into educational systems, which often leads to ad hoc regulations or bans that fail to address the root of the problem.

In the face of these challenges, the proposed ten-point guide does not aim to offer definitive solutions, but rather guidelines for pedagogical work that recognizes and manages the complexity of the problem. Emancipatory heutagogy is a work in progress, not a finished model; it requires experimentation, critical evaluation, and ongoing adjustment.

Future research should move forward in at least four directions. First, the empirical evaluation of heutagogy proposals in specific educational contexts, particularly in Latin America, where conditions of access, pedagogical traditions, and power dynamics have unique characteristics that proposals from the Global North do not fully capture. Second, the development of ethical and legal frameworks that regulate the use of AI in education based on the principles of cognitive justice and equity, moving beyond the criteria of instrumental efficiency that currently predominate. Third, research on teacher training models that equip educators not only with the technical use of AI tools but also with the capacity for philosophical and ethical reflection on their pedagogical implications. Fourth, the design and testing of AI systems specifically geared toward heutagogy, which make students' critical autonomy their primary optimization criterion, rather than standardized performance metrics.

In summary, heutagogy represents a genuine opportunity to rethink education in an algorithmically mediated world. But this opportunity can only be achieved if we approach it with full awareness of the paradox that defines it: the very tool that can enhance autonomy can also erode it, and the difference between these two outcomes lies not in the technology itself, but in the quality of the critical, ethical, and pedagogical thinking with which it is approached. Education must ultimately remain a path toward freedom: and technology, including AI, must always be a means to that end, never a substitute for it.

Bibliography

ABELIUK, Ariel & GUTIÉRREZ, Carolina

2021 Historia y evolución de la inteligencia artificial. *Revista Bits de Ciencia*, (21), 14-21. <https://bit.ly/4iEDXf0>



AGUILAR, Xavier

- 2024 *Seis casos de uso de la IA en las aulas que cambiarán la educación en 2024*. Barcelona: *Universitat Oberta de Catalunya*. <https://bit.ly/3OVSGUZ>

ALONSO RODRÍGUEZ, Ana

- 2021 Objetividad y verdad en la ciencia de la educación como ciencia de diseño. *Sophia, Colección de Filosofía de la Educación*, (31), 113-135. <https://doi.org/10.17163/soph.n31.2021.04>

BLASCHKE, Lisa & MARÍN, Victoria

- 2020 Aplicaciones de la heutagogía en el uso educativo de e-portfolios. *Revista de Educación a Distancia*, 20(64). <https://doi.org/10.6018/red.407831>

CALDEIRO, Gabriel, CHAMORRO, Florencia, GONZÁLEZ, Nicolás, KUITCA, Ariel & MILILLO, Cristian BLASCHKE, Lisa & MARÍN, Victoria

- 2024 *Inteligencia artificial y aprendizaje activo: investigación y diseño de estrategias de enseñanza con IA en escuelas*. Buenos Aires: *Fundar*; *PENT-FLACSO*. <https://bit.ly/4gBvXcM>

COLLINS, Harry & PINCH, Trevor

- 1996 *El Gólem: lo que todos deberíamos saber acerca de la ciencia*. Barcelona: Crítica.

DELEUZE, Gilles

- 2006 *Conversaciones*. Valencia: Pre-Textos.

DELEUZE, Gilles & GUATTARI, Félix

- 2002 *Mil mesetas: capitalismo y esquizofrenia*. Valencia: Pre-Textos.

DE SOUSA SANTOS, Boaventura

- 2006 *Renovar la teoría crítica y reinventar la emancipación social*. Buenos Aires: CLACSO.

DELGADO, Jorge, ALMANZA, Juan & MACÍAS, José

- 2024 Análisis bibliométrico de la inteligencia artificial como herramienta en la enseñanza en la educación superior. *LATAM Revista Latinoamericana de Ciencias Sociales y Humanidades*, 5(6), 141-153. <https://doi.org/10.56712/latam.v5i6.2997>

FOUCAULT, Michel

- 1990 *Tecnologías del yo y otros textos afines*. Barcelona: Paidós.

FOUCAULT, Michel

- 2002 *Vigilar y castigar: el nacimiento de la prisión*. México: Siglo XXI.

FOUCAULT, Michel

- 2006 *Seguridad, territorio, población*. Buenos Aires: FCE.

FREIRE, Paulo

- 1970 *Pedagogía del oprimido*. México: Siglo XXI.

GADAMER, Hans-Georg

- 2003 *Verdad y método (vol. 1)*. Salamanca: Sígueme.

GARCÉS, Marina

- 2020 *El contratiempo de la emancipación*. Recurso de aprendizaje. Barcelona: FUOC.

GARCÍA PEÑALVO, Francisco

- 2024 Inteligencia artificial generativa y educación: un análisis desde múltiples perspectivas. *Education in the Knowledge Society (EKS)*, 25, e31942. <https://doi.org/10.14201/eks.31942>





- GARCÍA PEÑALVO, Francisco, LLORENS LARGO, Faraón & VIDAL, Javier
 2024 La nueva realidad de la educación ante los avances de la inteligencia artificial generativa. *Revista Iberoamericana de Educación a Distancia*, 27(1). <https://doi.org/10.5944/ried.27.1.37716>
- HABERMAS, Jürgen
 1999 *Teoría de la acción comunicativa: racionalidad de la acción y racionalización social*. Madrid: Taurus.
- HAIIRI, Faisal, MOHAMAD, Siti, SAAD, Saiful & PINANDITA, Taufiq
 2022 A Thematic Review on the Implementation of Heutagogy in Universities. *Journal of Theoretical and Applied Information Technology*, 100(21), 6686-6701. <https://bit.ly/49EAQPZ>
- HASE, Stewart & KENYON, Chris
 2001 *From Andragogy to Heutagogy*. University of Glasgow.
- HERMANN ACOSTA, Andrés
 2011 Pedagogía del ciberespacio: hacia la construcción de un conocimiento colectivo en la sociedad red. *Sophia, Colección de Filosofía de la Educación*, (11), 83-103. <https://bit.ly/4lkQyEF>
- KANT, Immanuel
 2003 *Respuesta a la pregunta ¿qué es la Ilustración?* <https://bit.ly/3BCIo9a>
- KUO, Ryan
 2023 Noam Chomsky: The False Promise of ChatGPT. *The New York Times*. 8 de marzo. <https://bit.ly/3ZQklU>
- KNOWLES, Malcolm
 1970 *The Modern Practice of Adult Education: Andragogy versus Pedagogy*. Nueva York: Associated Press.
- LO, Chin
 2023 What Is the Impact of ChatGPT on Education? A Rapid Review of the Literature. *Education Sciences*, 13(4), 410. <https://doi.org/10.3390/educsci13040410>
- LÓPEZ, Diego
 s. f *Filosofía de la tecnología: entre lo humano y lo técnico*. Recurso de aprendizaje textual. Barcelona: FUOC.
- MEZZADRA, Sandro
 2014 *La cocina de Marx: el sujeto y su producción*. Buenos Aires: Tinta Limón.
- MOLICK, Ethan & MOLICK, Lilach
 2023 *Using AI to Implement Effective Teaching Strategies in Classrooms: Five Strategies, Including Prompts*. *The Wharton School Research Paper*. 17 de marzo. <https://doi.org/10.2139/ssrn.4391243>
- MORANDÍN AHUERMA, Fabio
 2023 *Principios normativos para una ética de la inteligencia artificial*. México DF: Consejo de Ciencia y Tecnología del Estado de Puebla. <https://bit.ly/41AXs1N>
- MORDUCHOWICZ, Roxana
 2023 *La inteligencia artificial: ¿necesitamos una nueva educación?* UNESCO. <https://bit.ly/4iErNCA>
- NARVÁEZ, Margarita & PRADA, Andrés
 2005 Aprendizaje autodirigido y desempeño académico. *Tiempo de Educar*, 6(11), 115-146. <https://bit.ly/4frmOTe>

- OBANDO, Edwin, VILLAGRÁN, Norma & OBANDO, Edson
 2018 La redefinición del sujeto cognoscente: el acto de intelección en cuanto conocimiento. *Sophia, Colección de Filosofía de la Educación*, (25), 89-109. <https://bit.ly/4kSmIHJ>
- PARLAMENTO EUROPEO
 2024 *Reglamento sobre la inteligencia artificial*. <https://bit.ly/3OXoGs4>
- PEÑALVER HIGUERA, Manuel, GUERRA CASTELLANOS, Yetzy, RODRÍGUEZ, Lino & LÓPEZ, Rosario
 2024 Transformando la educación con inteligencia artificial: hacia un aprendizaje personalizado en la Era 4.0. *Revista de Ciencias Sociales*, 30(4), 416-430. <https://doi.org/10.31876/rcs.v30i4.43040>
- PUENTE, Sonia, BAJAÑA, Luis, SERRANO, Carlos & VALLEJO, Karina
 2024 La inteligencia artificial como recurso educativo en la educación superior. *Recimundo*, 8(3), 48-67. [https://doi.org/10.26820/recimundo/8.\(3\).julio.2024.48-67](https://doi.org/10.26820/recimundo/8.(3).julio.2024.48-67)
- RAMÍREZ, Rodrigo
 2023 Sesgos y discriminaciones sociales de los algoritmos en inteligencia artificial: una revisión documental. *Entretextos*, 15(39), 1-17. <https://doi.org/10.59057/iberoleon.20075316.202339664>
- RANCIÈRE, Jacques
 1996. *El maestro ignorante*. Barcelona: Laertes.
- SARMIENTO, Ingrid, ESPARZA OVIEDO, Silvia & TRIANA LLANO, Luis
 2024 Educación filosófica virtual para la reinserción social de personas privadas de la libertad. *EducaT*, 5(1), 63-67. <https://doi.org/10.22490/unad.27452115.8932>
- SYNTHESIS
 2024 *Synthesis School*. <http://bit.ly/4fiduB0>
- STIEGLER, Bernard
 2015 *La société automatique 1: L'avenir du travail*. París: Fayard.
- TRIANA LLANO, Luis
 2025 Deleuze en la era digital: poder, diferencia y subjetividad. *Revista AION*, 66. <https://lc.cx/gLzbMw>
- UNESCO
 2022 *Recomendación sobre la ética de la inteligencia artificial*. <https://bit.ly/3OSIKwK>
- VALLÈS-PERIS, Núria
 2022 *Retos tecnocientíficos*. Recurso de aprendizaje textual. Barcelona: FUOC.
- WINNER, Langdon
 2008 *La ballena y el reactor: una búsqueda de los límites en la era de la alta tecnología*. Barcelona: Gedisa.



Author Attribution Statement—CRediT Taxonomy	
Author	Contributions
Luis Alberto Triana Llano	Since this is a single-author article, the total contribution is attributed to the same author. The content presented in the article is the sole responsibility of the author.

Statement on the Use of Artificial Intelligence
The author, Luis Alberto Triana Llano, declares that the preparation of the article titled “The Paradox of Heutagogy and Artificial Intelligence” was supported by artificial intelligence (AI). The Claude Sonnet 4.6 (Anthropic) artificial intelligence system was used exclusively as an editorial assistance tool: to improve writing, organize sections, and formally develop ideas already conceived by the author. All arguments, the central thesis, the theoretical framework, the critical analysis, and the conclusions are the author’s own. Furthermore, the author assumes full responsibility for the content of the article and has verified and validated all the information presented.

Date received: December 14, 2024

Review date: February 20, 2025

Date of acceptance: May 20, 2025

Publication date: July 15, 2026

TOWARDS A DISCONTINUIST APPROACH TO SCIENTIFIC LITERACY

Hacia un enfoque discontinuista de la alfabetización científica

KARINA SILVANA GIOMI*

Universidad Nacional de Tierra del Fuego, Río Grande, Argentina

<https://ror.org/021wj5r76>

kgiomi@untdf.edu.ar

<https://orcid.org/0000-0001-7786-9001>

Suggested citation: Giomi, Karina Silvana. (2026). Towards a Discontinuist Approach to Scientific Literacy. *Sophia, Colección de Filosofía de la Educación*, (41), pp. 215-243.

Abstract

This paper problematizes scientific literacy by analyzing the debate between continuist science (progressive accumulation) and discontinuist science (ruptures and incommensurability). It is posited that hegemonic models of scientific literacy render invisible the continuist image of science they implicitly transmit by relying on cognitivist assumptions. This operates as an epistemological obstacle to the appropriation of a discontinuist approach to science. Drawing upon the post-foundationalist influence of Bachelard, Badiou, and Lacan, among others, in the educational field, the objective is to contribute to the construction of a discontinuist approach to scientific literacy. The methodology involves the analysis of educational practices with first-year university epistemology students. As a result, obstacles to both scientific literacy and a discontinuist vision of science are identified. Furthermore, a distinction is made between a process of knowledge reception and a process of knowledge appropriation (rupture between knowledge and truth). Appropriation implies a supplementary logic that resignifies the notions of epistemological obstacle and rupture (subtraction) by asserting the materiality of language and postulating a new theory of the body. In this view, the body acts as a subtraction from prior knowledge, undergoing alteration through its incorporation into a new body of truth (subjectivation, transformation into a subject of science). Unlike the language of Generative Artificial Intelligence, science as a truth procedure demands the capacity to unlearn and to create.

Keywords

Higher Education, Literacy, Epistemology, Science, Reading, Writing.

* Full-time Assistant Research Professor at the Institute of Culture, Society, and the State at the National University of Tierra del Fuego. Professor of Philosophy (National University of Rosario), specialist in Epistemologies of the South (CLACSO), holder of a master's degree in Methodologies and Strategies for Interdisciplinary Research in the Social Sciences (National University of Southern Patagonia), and Ph.D. candidate in Philosophy (University of Buenos Aires), specializing in post-foundational thought.
h-index: 3.

Resumen

Este trabajo problematiza la alfabetización científica y analiza el debate entre la ciencia continuista (acumulación progresiva) y discontinuista (rupturas e inconmensurabilidad). Se postula que los modelos hegemónicos de alfabetización científica invisibilizan la imagen de ciencia continuista que transmiten de modo implícito al apoyarse en supuestos cognitivistas. Esto opera como obstáculo epistemológico para la apropiación de un enfoque de ciencia discontinuista. Desde la influencia posfundacionalista en el campo educativo de Bachelard, Badiou, Lacan, entre otros, el objetivo es aportar a la construcción de un enfoque discontinuista para la alfabetización científica. La metodología empleada es el análisis de prácticas educativas con estudiantes de epistemología ingresantes universitarios. Como resultado se identifican obstáculos para la alfabetización científica y la visión discontinuista de la ciencia. Asimismo, se diferencia un proceso de recepción de saberes y un proceso de apropiación de saberes (ruptura entre saber y verdad). La apropiación implica una lógica suplementaria que resignifica las nociones de obstáculo epistemológico y ruptura (sustracción) al plantear la materialidad del lenguaje y postular una nueva teoría del cuerpo como sustracción al saber y alteración por la incorporación a un nuevo cuerpo de verdad (subjektivación, transformación en sujeto de la ciencia). A diferencia del lenguaje en las inteligencias artificiales generativas, la ciencia como procedimiento de verdad exige la capacidad de desaprender y crear.

Palabras clave

Enseñanza superior, alfabetización, epistemología, ciencia, lectura, escritura.

216



Introduction

This paper examines scientific literacy from a post-foundationalist framework and contrasts the continuist view of science with the discontinuist view, exploring how each gives rise to a particular approach to teaching reading and writing in science education practices in higher education. Since the analysis is limited to science education at the university entrance level, the concepts of academic literacy and scientific literacy overlap in this case; therefore, this article will treat them as convergent concepts.

The continuist scientific approach corresponds to the consolidation of a model of science known as the orthodox naturalist consensus during the first half of the twentieth century. It is characterized by positing a single linear and progressive rationality in which scientific knowledge advances through trial and error toward a truth that functions as an epistemic value, albeit an unattainable one. Likewise, it presupposes a foundational cognitive nature of humanity, according to which the validation of statements relies on the so-called context of justification: logical coherence and empirical verification (truth as correspondence or the semantic conception of truth between a metalanguage and an object language), among other characteristics (Klimovsky, 1994).

In contrast, during the second half of the twentieth century, discontinuist currents gained momentum, sparking a debate regarding the previous consensus. Among these were hermeneutic and historical-crit-

ical approaches, structuralist and post-structuralist positions, as well as various types of pragmatist and materialist approaches. What they have in common, beyond their many differences, is their rejection of the assumption that the primary relationship with the world is one of knowledge; therefore, they do not start from the premise of a cognitive human nature as the ultimate foundation. Their anti-humanism is purely theoretical insofar as they do not abandon the idea of the human condition in its bodily, material, and historical dimensions.

Transformations in the scientific field are linked to the field of scientific-academic literacy, which is gaining increasing importance and institutionalization in higher education. In this context, the problem identified is that hegemonic approaches to scientific-academic literacy are underpinned by cognitive assumptions that are characteristic of a continuist and cumulative model of science, and that these assumptions are not sufficiently made explicit or visible; as a result, they are effectively transmitted through the practices of this field, albeit “unconsciously” to those involved in the educational setting. Consequently, the predominance of a cognitive approach to scientific-academic literacy acts as an epistemological obstacle to the teaching of a non-continuist conception of science.

Various systematic reviews in the field of academic literacy point to the predominance of two approaches. Calle Arango and Ávila Reyes (2020) argue that “previous studies’ findings regarding two major research trends —one cognitive and the other sociocognitive— were corroborated” (p. 455). Similarly, Guzmán Simón and García Jiménez (2015) identify a model known as “language for academic purposes” (focused on the student’s individual and cognitive abilities) and a model of “academic literacy” which they associate with the concept of “academic socialization” (emphasizing the situated, discursive, and contextual literacy process), highlighting the possibility of integrating these approaches. Likewise, another way to express the hegemony of two models (distinct yet articulable) is based on the distinction between form and content: “In the first case, the aim is to train students to read and write as specialists do; in the second, it is about teaching students to read and write to appropriate the knowledge produced by specialists” (Carlino, 2013, p. 370, cited in Pérez et al., 2018, p. 313). When the rules and forms used by specialists are involved, the focus is on the contextual and sociocognitive discursive approach; when the study of content is emphasized, the analysis falls under the cognitive model. Thus, while it is acknowledged that integration is possible, the distinction between these processes remains: “It involves two objectives that, although related, should be distinguished” (p. 313).

Cognitive approaches to scientific-academic literacy maintain that there is a continuum in the degree of complexity, scope, and adherence to the source, depending on the type of discursive operation required, which organizes a taxonomy of varying degrees of cognitive complexity involved (Pérez et al., 2018). Thus, they argue that one can be close to or distant from a text depending on whether the skills involved are analyzing, classifying, comparing, synthesizing, and so forth. This is consistent with sociocognitive approaches that incorporate an understanding of context and literacy practices as a situated social process. However, it does not alter the cognitive assumptions underlying reading and writing. The analysis reintroduces a separation: subject (in terms of the rational consciousness that reads), object (written text), and context or communicative situation (interaction).

In light of this problem, the objective is to contribute to the conceptualization of how to teach and learn to read and write in higher education based on the assumptions of a discontinuist view of science. The thesis defended here is that the discontinuist approach to science involves teaching the scientific-academic genre by distinguishing between a process of reception and a process of appropriation of knowledge, which requires positing the materiality of the process through a dialectic that redefines the way we understand the relationship between knowledge and truth. Furthermore, this is part of the search for a different conceptualization of the body in the field of scientific-academic literacy, understood through the line of research on the process of (in)corporating individuals into the subject-thought of a truth (García Puchades, 2021).

This is relevant because cognitively based theories focused on the mental processing of information neglect material processes, thereby creating a tension between what could be expressed as “a language without a body” versus “a body traversed by language.” This is important in the context of the question of how to read and write using generative artificial intelligence (GAI), since the inductivist, cumulative, continuist, and probabilistic view of science underlying that practice (Han, 2014; Sadin, 2020) could act as an epistemological obstacle to other visions of science and should be problematized in terms of what it conveys as a hidden curriculum: “The mass of data and information, which grows without limits, today distances science from theory and from thought” (Han, 2014, p. 76). Milner (2022) summarizes the critique of cognitivism regarding language as follows: “If it were discovered that, when it comes to language, neither the notion of information processing nor the notion of rules [characteristic of the computational framework] is appropriate, then the cognitivist program would lose the essence of its justifications” (p. 258).



This research is qualitative in nature. It consisted of an intervention (Badiou, 1999; Lewkowicz, 2007) based on the analysis of practices (Foucault, 1994; Agamben, 2009) in the educational context of the course “Epistemology of the Social Sciences” for first-year university students in social science programs. The methodology of the intervention involves theorizing practical trajectories by identifying effective processes that are not explicitly articulated in the discourse of that context, thereby leading to the generation of new knowledge.

The topic is relevant insofar as there are sufficient critical reviews of the continuist view of science; however, analyses of a persistence that occurs implicitly are scarcer. Therefore, changing the way we think about scientific and academic reading and writing practices will also transform the view of science that is transmitted. The epistemological debate regarding educational practices is important in the context of current social, scientific, and technological transformations (López, 2021; Rodríguez Mancilla et al., 2018).

This paper is structured as follows. The “State of the Art” section justifies the problem outlined in this introduction from a philosophical perspective. The second section describes the methodology employed. The third section analyzes the results, highlighting the epistemological obstacles identified for a discontinuist view of science and the contribution of two distinct categories —reception and appropriation— theorized based on classroom situations and presented using a paradigmatic case (“María”) in accordance with the methodology employed. The fourth section is devoted to theoretical discussions of the above. Finally, brief conclusions from the analysis are highlighted, and new questions are raised.

State of the Art

In the history of science, a tradition of continuity is often identified, characteristic of what is known as the “orthodox consensus” or “naturalism” (Klimovsky, 1994), which remained dominant until the 1960s. Influential works such as *The Structure of Scientific Revolutions* (Kuhn, 1990) and *The Order of Things* (Foucault, 2005) gave new impetus to a discontinuist tradition that had already been inaugurated by Bachelard decades earlier (Becerra Batán, 2021; Díaz, 2005). Furthermore, various revolutions in the field of formal science —such as the formalization of set theory, among others— had an impact on and influenced the debate over conceptions of science both in philosophy and in the Lacanian-

oriented psychoanalytic field (Badiou, 1999). This allowed for a reassessment of contributions from Bachelard's discontinuist tradition (2000): "Mathematism is no longer descriptive, but formative [...]. Once a geometric law is grasped, an astonishing spiritual inversion takes place [...]: curiosity gives rise to the hope of creating" (p. 8).

What do "curiosity" and "creating" refer to in this context? Curiosity responds to the discovery of what is supposed to have been there in some way (traditional ontology), while "creating" points to science by emphasizing its process of invention (the ontological turn of the *mathema*) and the axiomatic nature of thought (Badiou, 1999, 2008). The continuist perspective on science is grounded in traditional ontology, whereas the second perspective is rooted in the discontinuist tradition of science.

For a traditional ontology, truth is not distinct from knowledge; rather, it is a form of grounded knowledge or serves as a condition of possibility. For the discontinuist tradition, the relationship between knowledge and truth is redefined. Heidegger (1996) characterized the modern representation of the world as a process of objectivity grounded in calculation, to which he opposed an incalculable excess that cannot be captured by the former model, allowing him to establish a distinction between knowledge and truth grounded in the horizon of language. Badiou (1999 and 2010) revisits the problem of the difference between knowledge and truth, but in a different way. From an ontology of the mathem (Badiou, 1999), truth does not imply interpretation but rather rupture. In this way, he proposes a subtractive conception of truth: truth is a procedure that involves a radical novelty that alters—and pierces through—prior knowledge. This explains why Bachelard said, "to give way to creation."

These ontological and philosophical considerations have clear epistemological consequences. Badiou (2004) analyzes this through Kant, whose philosophy forms the basis of modern empirical sciences. For Kant, the phenomenon involves a sensible limit (knowledge) to the unknowable but intelligible noumenon (thought). The dichotomies of the sensible and the intelligible, the body and thought, and so forth, found in the ontological tradition are reexamined by Badiou (2004) in a different way: "The previous question was what limits the body imposes on the intelligible, whereas the new question, the new inquiry, is of what intelligible the body is the result" (p. 35). And he adds: "If one wishes to understand how the sensible arises from the intelligible, one must understand the operations of transformation [...]. Modern thought is an operative thought. That is why it is no longer exactly a theory of knowledge" (p. 36).



One of the operations of transformation in thought is how the same becomes something else; in other words, it concerns the alteration of what exists. For this reason, the author points out that “thought is a creation” (p. 37). This resonates with the notion of the epistemological obstacle in Bachelard (2000 and 2003)—a condition of possibility for the epistemological rupture implied by learning: the same (the obstacle) becomes something else (learning) through a rupture. In Badiou’s (1999) terms, this is called “supplementary logic”: something that was impossible to represent within the regime of knowledge appears; that something bursts in and, through a naming, re-signifies the regime of representation; thus, something that was impossible begins to exist (radical novelty).

It is necessary to alter the regime of representation (the symbolic ordering of prior knowledge) based on an impossibility intrinsic to its formalization; i.e., that which is an excess within that knowledge bursts forth, and to be explained requires a new form of knowledge. We are faced with a limit, but this is not the limit between phenomenon and noumenon in Kant, for whom the thought of the totality of the real is noumenal (in other words, that which is excess or incalculable remained on the side of the noumenal). Badiou (2016) offers another definition of the real, which he drew from Lacan: “The real is the impasse of a formalization” (p. 36), in the sense described above. Since novelty does not add new knowledge in a cumulative manner but rather revolutionizes knowledge, it is said to be a subtractive process or procedure of truth. For Badiou (2016), science as a procedure of truth implies creation, since the real is that which cannot be represented in a formalization and will require a new formalization to be represented—although this new formalization will also encounter a new intrinsic limit, insofar as no symbolic order is total or closed.

In Lacanian terms, one might say that truth persists insofar as it never ceases to inscribe itself, and the real persists insofar as it never ceases to fail to inscribe itself. A post-foundationalist (there are no ultimate foundations) and discontinuist framework has thus been outlined. Within this framework, the present study draws on non-clinical readings of Lacanian psychoanalysis in the field of education (Milner, 2003; Sanabria, 2014; Cuomo and Danelinck, 2017), as well as from the perspective of Bachelardian and Badiouian science, to explore new theoretical frameworks emerging from heuristic explorations in situated educational practices.

In summary, the new dialectic between knowledge and truth is as follows: representational knowledge is de-totalized by the presentation of something that could not be classified by the previous representation.



This can produce a rupture or event that gives rise to the subject-thought of a truth, which in turn generates a radical change and the production of new knowledge.

In light of the above, the question posed in this paper takes on meaning: What appears but cannot be represented within the cognitivist and continuist framework of hegemonic academic literacy theories? The body. Therefore, if previous knowledge did not sufficiently theorize the body in the teaching of academic reading and writing, a new conceptualization of the body is required to allow for its consideration in the literacy practices under discussion. The previous conceptualization of the body involved two registers: the sensible and the intelligible. The new conceptualization of the body introduces three registers: the sensible, the intelligible, and subtraction.

222



While the continuist approach operates with two registers—the sensible (empirical) and the intelligible (transcendental)—the discontinuist tradition, for its part, requires adding the dimension of the real. Lacanian psychoanalysis proposes conceiving the subtractive through a letter, which it calls the “object *a*”, allowing it to conceive of the body as an entanglement among three registers: the imaginary, the symbolic, and the real (Lacan, 1992). For Badiou (2021), the body takes on the meaning of a body of truth, a subjectivizable body (incorporation and subjectivation): “These are bodies for a new subject-form, which will be the subject of truth” (p. 81). He adds: “These bodies will be the material bearers of the subject-forms that will emerge under the condition of an event, and these forms, in turn, will bear the processes of truth” (p. 81).

It is worth noting that this work draws on a substantial body of prior research, given Badiou’s growing influence on thinking about the field of education, which has supported the articulation of ontological, philosophical, epistemological, and pedagogical levels (Cerletti, 2008; Lewkowicz, 1999; García Puchades, 2021; Cho and Tyson, 2005). Likewise, it raises questions regarding the challenges of GenAI in education (Galli and Kanobel, 2023). This context encompasses the tension between scientific discontinuity and continuity, as well as between the materiality of language and traditional cognitive positions.

It should be clarified that regarding the terminology “reception” and “appropriation,” there is prior research, albeit with differences: Corea and Lewkowicz (2010) distinguish between reception as communication and reception as subjectivation; Bigot et al. (2010) use these terms within the framework of the complexity paradigm.

As indicated, the methodology employed posits theorizations based on situational trajectories; therefore, the purpose of this paper addresses the need for mediations to provide a practical and operational grounding for these conceptualizations. How can we teach reading and writing by incorporating what constitutes the body or excess in cognitive representation: the mortal body, the sexualized body, the speaking and desiring body? These are human conditions (Alemán, 2019); therefore, what, then, is reading and writing from these premises? Are they involved in the image of science as discontinuity? This justifies the methodology of this research, which must be consistent with the non-exteriority between form and content and introduce procedures that engage with the real.

Methodology

This research is a qualitative study that employs a situational intervention research design from an immanent perspective (Lewkowicz, 2007). An epistemological analysis is conducted on the set of situated practices, producing knowledge based on the internal rationality of the observed educational situation by “transforming a practical journey into a theoretical experience” (p. 34). It is assumed that “the situational meaning of an idea lies in the network of practices in which it is carried out” (p. 64). Therefore, this methodology does not apply preexisting theories or generalize regularities: “To move beyond the opposition between empiricism and theorism, let us say that it is not a matter of grounding a theory in a practice or of grounding a practice in a theory through deduction: it is a matter of interpreting practices” (p. 34).

Regarding the notion of practices in methodological terms, a conceptual clarification drawn from Foucault (1994) is relevant. Castro (2011) points out that Foucault made an operational use of the notion without defining it, and thus proposes the following reconstruction:

In summary [...] Foucault understands “practices” to be the rationality or regularity that organizes what people do [...] which has a systematic (knowledge, power, ethics) and general (recurrent) character, and which therefore constitutes an “experience” or a “thought” (p. 428).

Regarding the data collection procedure, the analyzed corpus included records of reading and writing practices in the course Epistemology of the Social Sciences (class notes, assignments, midterms, final exams, and seminars) and a documentary corpus of current theories of academic literacy. The latter were included in the theoretical framework and ana-



lyzed as practices of knowledge in the Foucauldian archaeological sense, identifying their conditions of enunciation (Foucault, 1994). Through this procedure, the persistence of cognitive assumptions was observed in the two predominant and explicitly recognized models: the cognitive model and the sociocognitive model.

In the context shaped by the aforementioned practical framework, the methodology of intervention (Badiou, 1999; Lewkowicz, 1996 and 1999) stands out for involving an operation within immanence. Lewkowicz (1996) clarifies that “when a discipline is one of intervention, then the effective presence of the one who operates produces the phenomena they observe” (p. 3). Thus, in the practical situation, a point of excess—the real—was identified; i.e., that which “presents itself” in the educational situation but is not “represented” by established knowledge. The aim was to identify discrepancies: “What is said through discourse conceals what discourse does” (1999, p. 114).

The intervention consisted of making explicit, naming, and theorizing the ideas that operate unconsciously in the analyzed practices. In this case, we proceeded to make visible the continuist view of science that remained latent in reading and writing practices centered on cognitive approaches and lacking engagement with the bodily dimension. Likewise, we proceeded to articulate, in terms of epistemological obstacles, the assumptions that clashed with a discontinuist view of science. Furthermore, two theoretical categories—reception and appropriation—were proposed to account for, or make visible, operational logics present in the practices but not sufficiently articulated discursively.

In this sense, the intervention’s methodology involves a supplementary logic, as it introduces an assertion that names or theorizes to alter prior knowledge and bring to light—from a new regime of visibility—what had previously operated unconsciously: “Supplementation does not consist in adding to a term what it lacks to constitute a whole, but rather in introducing into a whole an extra element that de-totalizes it” (1996, p. 4). Tools for thinking are constructed within the situation that can alter what becomes visible in that situation.

To make visible the differential logic between a process of reception and a process of appropriation in classroom practices, we proceeded to construct a paradigmatic case following Agamben (2009), who takes up and explains the Foucauldian methodology as follows: “The paradigm is a singular case that is isolated from the context of which it is part only to the extent that, by exhibiting its own singularity, it renders intelligible a new set, whose homogeneity it itself must constitute” (p. 25). The María



Case is a specific instance that provides intelligibility or makes visible two distinct processes in scientific-academic literacy. A well-known example of paradigmatic logic is the famous panopticon, which, although analyzed by Foucault in the context of the prison, allows us to understand the disciplinary apparatus in other institutions such as schools, hospitals, or factories.

Regarding the criteria for scientific validation, a distinction must be made between the methodology of intervention—which involves the act of rupture and theoretical novelty—and the formalization of new knowledge. In the first case, validity corresponds to “practical efficacy” in altering prior knowledge; i.e., what was operating blindly begins to be made visible, and thus what was previously known is altered. In this case, the research has succeeded in showing that cognitively based scientific literacy did not sufficiently make explicit the continuist view of science that it blindly transmits.

In the second case, the new knowledge requires the criterion of validity based on theoretical coherence. Thus, Foucault (1994) points out that the analysis of practices requires “work carried out through diverse inquiries. These have their methodological coherence [...]. They have their theoretical coherence [...]. They have their practical coherence in the care taken to subject historical-critical reflection to the test of concrete practices” (p. 9). This theoretical coherence is transformed into the testing of situational practices and requires new interventions; in this regard, Lewkowicz (1999) emphasizes that for intervention, “the parameter of validity is not the theoretical consistency of the system but the situational efficacy of thought” (p. 110).

In this way, we can understand the dialectic that arises in a process of situational thought. The difference from the traditional view of representational knowledge—which was based on an external distance between a presupposed subject and object—is striking. This thought process continues in various classroom situations in which other teachers are involved and can transform categories operationally as tools for intervention: “The only thing that orders and hierarchizes theories and their concepts is their function as a tool, as a clinical operator, as a transformer of the world, within a practical field of engagement” (p. 112).

This rationality of engagement and intervention is a tool that alters the way we understand the traditional methodological approach to representational knowledge; as such, it also highlights and provides a tool for teachers: “The mutation of discursive realities also involves the mutation of the instruments of thought involved [...] there is no change in realities



without a change in the reality of the thought schemes that is part of that reality” (p. 106).

Lewkowicz’s (1999, 2007) major contribution lies in having applied the Badiou-based methodology of intervention to social situations. For Badiou (2021), a novelty—in this case, a conceptual one—implies the emergence of a subject-thought embedded in that truth; i.e., it implies a process of subjectivation through truths. Lewkowicz (1996) would put it another way: “There is no transformation of situations without a transformation of the strategies, tools, and agents of transformation. It is not possible to transform without transforming oneself” (p. 105).

Analysis and Results

226



In the reading and writing practices within the analyzed science teaching context, assumptions reflecting a continuist view of science were identified; these assumptions operated among students as epistemological obstacles to the adoption of a discontinuist view of science. The finding was that these assumptions—identified as obstacles in the task of science teaching—converge with the assumptions of cognitive approaches to scientific-academic literacy. Thus, the way in which reading and writing practices are carried out in the classroom is not innocuous in science teaching, as they can tacitly reinforce the very obstacles that were intended to be overcome. Various obstacles were identified that intersect with reading and writing practices focused on study skills and mental processes. They are grouped into six categories:

- Prior concepts regarding the notion of representation and the notion of science as certainty: These stem from a traditional view of knowledge understood as a relationship between a preexisting subject and a given object, where words represent things. This adds a linguistic obstacle that assigns unambiguous meanings to terms. When reading and writing practices emphasize extracting information from a text, these assumptions—which are characteristic of a common-sense view of science as synonymous with truth or absolute certainty—are reinforced. Consequently, this creates an obstacle to understanding that the categories of analysis are constitutive of the phenomena under study, making it difficult for incoming students to recognize the need to make methodological constructs explicit as a capacity or skill required by the scientific discursive genre

and by scientific know-how. This creates an obstacle to understanding the contingency of scientific knowledge construction as an intrinsic, non-dogmatic characteristic subject to provisionality. Furthermore, this leads to the obstacle of instrumental positions that disregard conceptual debates, as these are not understood as the foundation of scientific know-how.

- Scientific neutrality and abstract scenarios: The assumption that science is neutral poses an obstacle that is reinforced by the centrality of reading and writing techniques that require the erasure of conditions of enunciation and subjective markers to achieve expository objectivity. This can give rise to essentialist assumptions, rendering invisible the conditions of enunciation, value judgments, power relations, and the corpogeopolitics of knowledge that underlie the production of scientific knowledge. Furthermore, neutrality is reinforced when these techniques require identifying time and space in texts as an abstract setting or mere “backdrop” that does not influence the analysis, rather than as endogenous variables capable of constructing multiple time-spaces, scales, and levels.
- Reductionism of autonomous founding consciousness: The assumption that reduces knowledge to a cognitive action or mental processing creates an obstacle that disregards the material, symbolic, and historical conditions shaping the subject. This fosters a view of concepts as abstractions of universal essences (for instance, recognizing that childhood and madness are not given universal concepts), preventing an understanding of their genealogy within social practices of knowledge-power and as constructs that transform through different practical trajectories.
- Assumptions about reading and writing as codes (encoding-decoding): It is an obstacle to take the way a generative artificial intelligence (GAI) reads and writes as a model for humans. GAI is “an artificial intelligence (AI) technology that automatically generates content in response to written instructions in natural-language conversational interfaces known as prompts” (UNESCO, 2024, p. 8). However, GAI does not understand “real objects or the social relationships that underpin language” (p. 10). If the aim is to teach reading and writing according to the grammar of GAI, this would overlook the relational and situated ways in which humans read and write.



- Prioritizing knowledge as an end and holding a negative view of error: By downplaying the process of constructing scientific knowledge, the role of error—as part of the contingency that characterizes such knowledge—is rendered invisible. Scientific knowledge is presented primarily as a finished product or end, thereby obscuring its nature as an open, provisional process constantly subject to transformation. This creates an obstacle to understanding the epistemic value of error, as a punitive view with negative connotations is prioritized in school assessment. This hinders or obstructs student participation in class—a skill required to develop a scientific attitude capable of asking questions that go beyond what is already known, without any guarantee that there will be no error.
- Disciplinary fragmentation and institutional obstacles: The preconceived notion that disciplines correspond to fragmentations of reality hinders understanding them as constructions of objects resulting from interpretive frameworks or even from different paradigms arising from historical ruptures. This can be observed in the institutional gap between secondary education and entry into higher or university education, since at the secondary level, the presentation of isolated subjects is often prioritized over interdisciplinary dynamics. Consequently, the deep-rooted nature of this preconceived belief can act as an obstacle at the higher education level and hinder comprehensive approaches and conceptual articulation associated with concrete problem-posing—practices inherent to the construction of scientific knowledge. The type of instruction that seeks to emphasize the exercise of mental operations on a text can lead to a decontextualization of reading in practical contexts and those associated with the scientific approach to problems of social reality.

These obstacles were identified in real-world situations and help demonstrate that teaching reading and writing is not immune to reproducing assumptions rooted in a particular view of knowledge and science. Based on this framework, we proceeded to analyze an operational distinction between a process of knowledge reception and a process of knowledge appropriation, which will be illustrated through a paradigmatic case study.

Process of Receiving or Repeating Knowledge

Orthodox consensus science presupposes a cognitive human nature. Beyond variations resulting from diverse contexts, objective knowledge is determined by a structure that unifies phenomena objectively based on the assumption of the unity of consciousness. This is the basic framework of truth as correspondence in the empirical sciences, where truth is a matter of judgment—i.e., it is based on representation. Various studies on language during the twentieth century introduced variations to this framework while maintaining the core correlation. The modern version of the traditional correspondence theory of truth is the so-called “semantic conception of truth,” which establishes the correlation between a metalanguage and an object language (Klimovsky, 1994).

In the field of scientific and academic literacy, the expression “to be close to a text” is often used when students are asked to extract basic information or to paraphrase content in some way. Thus, “Freire is a Brazilian educator” is a true statement if and only if Freire is a Brazilian educator in the object language. In university assessment practices, this type of correspondence is frequently used with the set of valid statements provided within the course. This set allows statements to be classified as true or false.

From the perspective of modern institutions, planning serves the function of aligning the course with the institutional plan, and within the course itself, “it is used by the professor to carry out their role (to discipline, monitor, and assess students’ mastery of the subject). Changes may be made to the lesson plans, but they must be justified” (Corea and Lewkowicz, 2010, p. 25). In turn, the exam serves as the monitoring mechanism to ensure the alignment of this transfer of knowledge between teachers and students.

Corea and Lewkowicz (2010) point out that “this idea of access to culture or education for all is characteristic of modernity: underlying this conception is the idea of human knowledge [...] a knowable human essence” (p. 24). Within this framework, however, they propose that contemporary education can no longer be based on a cognitive essence but rather requires a practical concept of what it means to be human, grounded in thinking about it in terms of subjectivation in specific situations.

As emerged from the literature review and articulated in the theoretical framework (Calle Arango and Ávila Reyes, 2020; Guzmán Simón and García Jiménez, 2015; Pérez et al., 2018), there are two hegemonic models in the field of academic literacy: the cognitive model (in which the schema consists of the reading subject and the text as object) and



the sociocognitive model (which frames the former within a communicational context). In both models, the cognitive basis for reading and writing remains.

Likewise, continuity theories in science share assumptions with education in the modern tradition, given that knowledge is inscribed within the aforementioned consciousness-world schema. From another perspective, this research has raised the issue that cognitive models exclude the human condition of speakers as mortal, sexualized, and desiring beings. To paraphrase the psychoanalyst Gómez Camarena (2011), one might ask: Are reading and writing not permeated by these “remnants” that traditional university knowledge leaves out?

The Process of Appropriating Knowledge from the Knowledge-Truth Division

230



To understand processes of appropriation, the framework of reading and writing does not correspond to a traditional communicational model involving a reading subject, a text as object, and a context that presupposes intersubjectivity. Instead, a transferential framework—or social bond—is proposed, in which the act of reading co-determines an effect of subjectivity-objectivity that does not pre-exist that act.

Below, we present a paradigmatic case study developed in the classroom to illustrate this new theoretical framework for scientific-academic literacy. “María,” a thirty-five-year-old student, is a freshman in the Sociology program. She received a score of “4” on her first midterm exam, a grade derived from “truth” as a semantic concept —i.e., based on the assumption of a metalanguage and an object language. However, for the second midterm, she was required to give an oral presentation to the group on a written assignment she and her peers had submitted. The topics for this midterm on the Epistemology of the Social Sciences included dialectical and hermeneutic perspectives, as well as critical epistemologies.

During her presentation, María offered an example from her personal life. Her teenage son had told her that a classmate was behaving poorly and aggressively. She asked her son how he understood his classmate, and since his answers tended to disparage, degrade, or pathologize the boy, she suggested that he ask himself other questions. At that point in the classroom presentation, other students chimed in with analytical queries: “What did the family or the school do?,” “What social class does he belong to?,” “What neighborhood does he live in (because that behavior would be normal in my neighborhood)?,” “What mental illness does

he have?” Freire and Faúndez (2013) criticize this type of non-existent or superficial questioning: Today, teaching—knowledge—is an answer, not a question (p. 69).

They distinguish between apparent questions—those asked based on prior knowledge, such as answers dictated by the curriculum of a course—and another type of question that touches on the human condition: “The beginning of knowledge [...] is to ask” (p. 69). If one analyzes the students’ questions, there is an underlying body of knowledge required to answer them; for example, if a question is asked about the family, it is because the family is assumed to play a definitive role in socialization; if a question is asked about pathology, it is based on an assumption of medical normality, and so on. Therefore, it can be said that there is a question, but there is no enigma.

However, María recounted that she invited her son to ask himself a fundamentally different question: “From whom else does he seek recognition? With whom else does he link his existence?” To ask these kinds of questions, María had to set aside her prior knowledge while simultaneously demonstrating an active engagement with topics from the midterm exam, such as Hegel’s concept of recognition, Foucault’s notion of the subject-subjected, the idea that “we are spoken,” and her choice not to start from a founding individual. Thus, these kinds of questions are not underpinned by the answer that would arise from a mere particular case that can be subsumed under an already known law.

These questions generate an enigma, an unknown, because they involve thinking about that teenager within the specific context of the situation —reflecting on the truth of that situation— and not approaching it from the perspective of prior knowledge, where one asks nothing for which one does not already have a pre-existing answer (as an artificial intelligence would also do). María had internalized both knowledge and know-how. The evaluators were able to observe in real time —through the subjective effects on María and the shift in her way of thinking— that, in retrospect, there had been an appropriation of knowledge. This had not occurred with Juan, another student, even though he had earned a perfect score of ten on the midterm. Thus, María, with a four, demonstrated a greater degree of appropriation than Juan with a ten. This appropriation was evident in her ability to set aside prior knowledge to formulate a new question. In this sense, appropriation is the way in which subjectivation manifests itself in the educational context.

The bureaucratic system encourages traditional forms of assessment (Corea and Lewkowicz, 2010); however, it is important for teach-



ers to interpret classroom situations through the lens of subjectivation, to acknowledge that there is no total control over educational practice, and to avoid falling into a disempowering complaint where low grades are automatically interpreted as “how little they have learned.” Classifying students as capable or incapable based strictly on grades leads us to forget that the assessment system is neither neutral nor free of bias, and to overlook the fact that everyone is capable (Rancière, 2003; Cerletti, 2008).

On the second midterm, María raised her score to a nine. Beyond the grade that must be assigned under the current system, the evaluative reading process involved a non-bureaucratic form of assessment grounded in transfer. María formed a transferential bond with the subject and the discipline; she became “a” subject of the course Epistemology of the Social Sciences. This refers to a subject independent of the absolute number of people in a classroom; María incorporated herself into the symbolic order of that space of contingent and discontinuous thought.

To incorporate oneself is to become a subject, to form part of a “body of scientific truth” to which she was summoned in discontinuity with her prior knowledge. This structural shift moves the problem from reception (acquiring competencies) to appropriation (becoming a subject of science). The appropriation of knowledge operates as an alteration; that is why it summoned science in its dimension of invention, transmitting know-how and the most important scientific attitude: the contingency of what is not determined and could be otherwise. In that very act, María altered the class’s entire body of knowledge by interrupting the repetition of knowledge with a truth.

Finally, it is worth noting that the body, within the traditional framework, is precisely what modern knowledge has sought to normalize, classify, and serialize. From the discontinuist framework, it must be understood as that which, when removed from knowledge—since the body is what resists serialization and de-totalizes the structure—gives rise to a genuine question about the unknown and, in that process, enables the possibility of questioning a truth.

Discussion

It is important to discuss the concept of “interpretation” that emerges from the preceding findings. Following the contributions of the philosopher and psychoanalyst Lutereau (2014), interpretation is understood by situating it between the “quotation” and the “enigma”: “If this ‘in-between’ character is worth highlighting, it is because we consider that it is not a



matter of seeing the quotation and the enigma as two modes of interpretation, but rather as two conditions of interpretation” (p. 111). A quotation implies a propositional statement of knowledge with a manifest referent; i.e., something was said. In that statement, however, there is a “beyond” that can be explored and that reveals the conditions of enunciation.

Within the conditions of enunciation, there was an “act of speaking” that was later fixed in writing as “what was said,” which allows for the investigation of those traces that are partially preserved in the text. The conditions of enunciation point to the locus of truth of that act of speaking. This comes into play in scientific and academic reading and writing insofar as students are taught to recognize the historical constraints of a text’s context of emergence, biographical details of authorship, and other such markers. Since one reads both what is said (the utterance) and what is not said (the conditions of enunciation that can be reconstructed), there is an intrinsic discrepancy that prevents linear encoding and decoding. What is not said within the quoted utterance constitutes one of the conditions of interpretation.

Unlike the quotation, from which references that contribute meaning can be drawn, the enigma leaves it open for the reader to determine the meaning at that very moment of reading, within the act of speaking itself (Lutereau, 2014). For the enigma, the conditions of enunciation are indeterminate; thus, they are defined or determined by the act of reading in that new situation. Consequently, one must read and speak anew; reading a text is, in essence, to rewrite it.

The enigma is a way of formulating an utterance that does not correspond to a statement of knowledge: “In other words, the enigma is truth without knowledge [...]. Producing the utterance is left to the listener” (Solter, 1984, p. 18, cited in Lutereau, 2014). In the written context, the listener is replaced by the reader. The enigma implies that a new utterance must be produced between that text and that reader in that particular situation—i.e., within that specific act and new condition of enunciation. That is why it can be said that interpretation arises “between” the quotation of knowledge and the enigma. Interpretation is a new act of reading that occurs between knowledge and truth. In psychoanalytic terms, truth is “half-spoken” between the quotation (knowledge) and the enigma (truth). In conclusion, the quotation and the enigma are conditions of interpretation, and interpretation occurs situationally as an interpretive effect (Lutereau, 2014).

In the classroom setting, the reader does not preexist the act of reading, as the reader does not window a closed or given consciousness; nor does the written text preexist in a finished form, since the text is not closed but possesses a beyond, an excess. Both reader and text possess a



kind of consistency that intrinsically includes indeterminacy. Therefore, interpretation from a discontinuist approach to scientific-academic literacy involves positing a reading operation based on “codetermination” (Lewkowicz, 2007 and 2024).

For the continuist approach, the framework involves a sequence: it allows us to assume that, given text A, someone then reads and reproduces text B. This way of understanding the process responds to a linear and teleological rationality. In contrast, from the discontinuist perspective, there is no sequence, but rather an act of reading that simultaneously co-determines text A and text B. The first act is never witnessed; it is only through the act of reading—which produces text B (the second text, that of the reader)—that text A (the first, the written one) is realized. There is no access to the origin, since it will have as many versions as there are readers, but only to an “in-between.” Text A is not determined prior to its reading by the production of text B; text A means nothing in and of itself unless it evokes text B. Therefore, logically, B accounts for A retrospectively. In the words of Lewkowicz (2007):

The situation we study and the situation from which we study [...] we turn into an object situation and a subject situation; but that is not the case, because they are not determined separately [...] these two openings only come together in a codetermination (p. 104).

It is possible to analyze the situation in María's case in terms of codetermination. In the act of interpretation, María and the text code-terminate one another. Likewise, in retrospect, it is possible to account for the fact that appropriation took place because in the act of interpretation—the evaluative reading—there is also codetermination: teachers can observe that María has altered her thinking through an event and can ask questions in a way she did not before. María became a thinking subject within the course Epistemology of the Social Sciences, capable of the scientific attitude of creating and inquiring beyond what is already known or beyond mere repetition. In other words, she became part of a thinking subject that upholds a scientific truth.

Psychoanalysis's contribution to a discontinuist rationality of reading and writing practices requires starting from different assumptions. Language is a flawed and contingent structure that cannot say everything: the “—ontological gap’ between discourse and reality is irreducible and impossible to bridge” (Alemán, 2019, p. 28). Through language, human beings lose nature (total *jouissance*) and enter into culture, where their *jouissance* is always partial. Discourse is a symbolic order that is intrinsi-



cally incomplete; therefore, all discourse involves an excess that it cannot name. Psychoanalysis formalizes this excess as the “object *a*” or “remnant.”

Through these conceptualizations, psychoanalysis is not reduced to a hermeneutic of meanings, senses, cognitions, or imaginaries; rather, this serves to postulate an intelligibility of the body. For Lacanian psychoanalysis, the “object *a*”—the impossibility of discourse to say everything—can operate within rationality as:

- Surplus of jouissance: It is the body linked to the malaise in culture that produces a division and a clash between representations, giving rise to conflicts and symptoms.
- The cause of desire: It is the anguished and desiring body, when the impossible becomes an enigma that produces a rupture in knowledge and drives us to create and produce new codes and orders.

These conceptualizations point the way toward problematizing the idea that difficulties in learning are not cognitive deficits, but rather can be interpreted as a symptom or a particular mode of a subjective response within the material and symbolic relationships of educational practices.

It is important to note that, according to Alemán (2019), it is useful to distinguish between a structural and a historical sense of the materiality of language. In the former, “the speaking, sexed, and mortal being, made a subject by language, never finds in it a signifying representation that fully encompasses it” (p. 58). In the latter, the languages of socio-historical domination that produce subjectivities, although they oppress and control, cannot completely determine: “They never exhaust the subject in its openness to the possibilities of a transformation yet to come” (p. 58).

At this point, we turn to Badiou (2010). The way of conceiving the excess that prevents any closure implies a new conceptualization of the body. It should be clarified that “body” here does not refer to a biological organism but to the dimension of the real that is excess and cannot be captured by language. The body, in terms of what eludes knowledge, is what makes it possible to propose that reading and writing occur as open processes that require codetermination, and this is what enables the possibility of novelty, creation, and an event. Unlike perspectives that focus on a linguistic turn and rely on the dispersion of meaning, the discontinuist approach demands a rupture of meaning to make alteration and the new possible. In summary, what is subtracted from knowledge, what leaves it incomplete, what maintains openness, and what simultaneously makes the new possible is what is termed “body” in this theorization of scientific-academic literacy.



The continuist approach implies a complementary logic; in contrast, the discontinuist approach involves a supplementary logic. The former is cumulative: new meanings are added to what is already known, and new knowledge is combined and created based on what came before. This aligns with the reading and writing practices of GenAIs, which process large volumes of data.

In contrast, the supplementary logic functions as follows: within the knowledge of a given situation, there is an unrepresented excess; therefore, a naming—a creation—involves introducing an assertion of something that was impossible to articulate based on prior knowledge. By naming what was impossible, prior knowledge is de-totalized; it is a subtractive rupture that pierces it, revealing its incompleteness, and compelling it to alter itself to go further and transform itself. While repetition suffices for the reception of knowledge, the appropriation of knowledge requires alteration through a rupture.

The continuist approach involves upholding a foundational, closed-off, or essentialist cognitive assumption. In contrast, post-foundationalist criticism (Marchant, 2009) is based on the premise that there is no ultimate or essential foundation as an origin point. Without an origin, what exists is a contingent beginning—whether historical or axiomatic—and if other beginnings are possible, there is discontinuity. This is consistent with the view of science as a social practice and with contemporary theories of the subject (Palti and Polo Bonilla, 2021). Table 1 is organized to illustrate the conceptual articulations made regarding views of science, a stance toward language, and a stance toward the real.

Table 1
Categorical Framework of the Materiality of Language,
Views of Science, and Scientific-Academic Literacy

Materiality of language for scientific-academic literacy		
(Discursive) Reality		Real
Imaginary register (representations)	Symbolic Register (Conditions of Representation)	Real (unrepresentable) register, (<i>impasse</i> of formalization)
Statements Knowledge	Enunciation Truth (half-spoken)	Event (presentation) Gap or rupture “Division between knowledge and truth”
Naturalistic science + GAI	Science of the linguistic turn	Science of the ontological turn or science of the real

Materiality of language for scientific-academic literacy		
(Discursive) Reality		Real
Knowledge-knowledge	Knowledge-conditions	Knowledge-truth (creation)
Closure and totalization	Coextensiveness of utterance and enunciation	Openness and incommensurability (rejects totalization and coextensivity)
Referral: apparent knowledge refers to grounded knowledge; or to metalinguage; or to the GAI database	Remission: apparent knowledge refers to its historical conditions. The beginning of theories of the non-transparency of language and power	Immanence: materialism and division within appearance
Truth is unattainable; it is an aspirational epistemic value achieved through accumulation. It includes variants: skepticism; nihilism; etc.	Truth manifests itself in every era; as an absolute, it becomes ineffable. It is the future; it is sanctified	Truth depends on an event (in science, art, politics, or love). Truth persists by producing effects or consequences
The claim of cognitive perspectives to a single rationality, disregarding the conditions of enunciation, which contributes to their claim of technical neutrality It is the body that is rendered invisible or denied. It is learning through accumulation	A symbolic order is incomplete and includes an "impossible" or "remnant" (Lacan refers to this as "object a"). The body is that of the word, traversed by the materiality of signifiers There are symptoms or conflicts between representations; if these are denied, one is led back to thinking of them in the traditional way as deficits or difficulties of an individual	The "remainder" or impossible takes the place of agency and becomes the "object cause" of desire The body is that of anxiety, the only affect without representation (an enigma) and one that gives account of a desire. It is the body that faces the possibility of alteration (learning as appropriation) This gives rise to the possibility of a new symbolization: new encodings, new rewritings. It gives rise to speaking out
From these scientific perspectives, theory and practice are separate realms, as are form and content		No separation between theory and practice, nor between form and content



In accordance with the above, teaching interventions related to reading and writing practices do not lead back to an abstract interpretive

framework, but rather to a rigorous reflection on the materiality of educational practices. Reading and writing from the materiality of language implies reading from the tight interweaving of the imaginary, symbolic, and real dimensions.

Consequently, scientific-academic literacy should not be conceived solely as a knowledge-knowledge relationship—i.e., as the mere reception of knowledge—but as a strategic subjective positioning based on the knowledge-truth divide, which enables the genuine appropriation of knowledge or the incorporation of a truth into the thinking subject.

Conclusions

238



Through theorization grounded in practice, we have sought to make a conceptual contribution toward developing new interpretive frameworks for scientific-academic literacy. It is argued that the distinction between a “process of reception” (linked to a continuist view of science) and a “process of appropriation” of knowledge (linked to a discontinuist view of science), when used as an interpretive framework, can lead to variations in the types of reading and writing practices proposed in the classroom, specifically for science education in terms of its creative practice. It was proposed that, in the current state of the field of scientific-academic literacy, there is a predominance of assumptions underpinning a cumulative and neutral view of science. In seeking ways to promote science education from discontinuist perspectives, it was concluded that it is also necessary to alter the way in which reading and writing practices are understood in the classroom.

It was shown that there is a definitive relationship between the obstacles to constructing a new concept of science and the obstacles to acquiring literacy skills in the scientific-academic genre. Looking back on the discussion, it can be noted that, from the perspective of cognitive theories, saying that one can read and write “closer to the text” points to a repetition—to a form of knowledge that is not grounded in truth—and is practically a pure series. The series is a repetition of what is already known, which can act as an obstacle to the new. This would amount to an inability to appropriate learning—to follow Bachelard, for whom such appropriation would occur only by breaking with that series.

On the contrary, when the impossible takes the place of agency, it operates to produce something that no longer forms a series. It is not a matter of a subject repeating knowledge; rather, in the place of knowledge lies division. Consequently, the subject is exposed in their not-knowing,

and this gives rise to a search for new knowledge and a new ordering. The subject is not rendered powerless, nor are they condemned to a repeating machine; rather, knowledge comes into contact with the site of truth. The subject is restored to their symbolic capacity to produce new knowledge that reconfigures what came before, thus opening up the possibility of creating oneself through the text.

When cognitive theory speaks of “moving beyond the text” —from a discontinuist perspective— we are no longer dealing with repetition but rather with a transmission of the rupture with knowledge to alter it through a process of truth. García Puchades (2021), following Badiou, has termed this process “subjectivation through truths” in the field of education. Although this study succeeded in constructing a problematization that made the implicit visible, the conceptual approaches developed are likely still insufficient to assert that a new approach has been successfully established; nevertheless, they contribute to defining a line of research that requires further study. This line of research involves delving deeper into literacy models that recognize the materiality of their processes—and not merely the processing of information.

In light of the above, it is worth questioning whether it is reductionist to believe that humans read or write exactly the same way as a generative artificial intelligence (GenAI). GenAI works with knowledge as a series rather than as an alteration. Strictly speaking, the machine cannot read or write on behalf of a human, but only in an apparent sense and as a tool of knowledge. From our condition as mortal, sexed, speaking, and desiring beings, reading and writing means creating from an excess that creates a void in prior knowledge: we read and write to forge a self, a “we,” and to make ourselves into bodies and worlds. This contrast leaves avenues open for future inquiries that have become urgent in the current context.

In short, the division between knowledge and truth implies a dialectic that is not one of totalizing overcoming, but rather a dialectic required for an epistemology compatible with an open process; thus, these theoretical frameworks may be relevant for formalizing teaching and learning processes that do not promote logics that close off knowledge. The ultimate aim is to construct a theory of scientific literacy grounded in a materialist, contingent, immanentist, situational, and event-based epistemology—and, since it does not start from the essentialist and deterministic assumption of a cognitive human nature, one that is also eminently political and emancipatory.

Bibliography

- AGAMBEN, Giorgio
2009 *Signatura Rerum: sobre el método*. Buenos Aires: Adriana Hidalgo.
- ALEMÁN, Jorge
2019 *Capitalismo: crimen perfecto o emancipación*. Barcelona: Ned Ediciones.
- BACHELARD, Gaston
2000 *La formación del espíritu científico: contribución a un psicoanálisis del conocimiento objetivo*. Buenos Aires: Siglo XXI.
- BACHELARD, Gaston
2003 *La filosofía del no: ensayo de una filosofía del nuevo espíritu científico*. Buenos Aires: Amorrortu.
- BADIOU, Alain
1999 *El ser y el acontecimiento*. Buenos Aires: Manantial.
- BADIOU, Alain
2004 Arte, matemática y filosofía. En: Gerardo Yoel (ed.), *Pensar el cine 2: cuerpo(s), temporalidad y nuevas tecnologías*. Buenos Aires: Manantial.
- BADIOU, Alain
2008 *Lógicas de los mundos: el ser y el acontecimiento 2*. Buenos Aires: Manantial.
- BADIOU, Alain
2010 *Segundo manifiesto por la filosofía*. Buenos Aires: Manantial.
- BADIOU, Alain
2016 *En búsqueda de lo real perdido*. Buenos Aires: Amorrortu.
- BADIOU, Alain
2021 *¿Qué es vivir? Imágenes del tiempo presente III*. Buenos Aires: Amorrortu.
- BIGOT, Margot, MANINO, Carlos, TIBERI, Olga, MAGALLANES, Luciana, GIOMI, Karina, VIANA, Juan Manuel, LAVELLA, Martín, ZABOISKI, Walter, MANINO, Renata & ANTONIASI, Federico
2010 La apropiación del paradigma de la complejidad en la práctica educativa en los institutos de formación docente, territorializado en la realidad del sur santafesino: un abordaje filosófico-epistemológico. En: Lucía Bulacio, Jorge Molero & Mariana Migliaro (coords.), *Libro de las III Jornadas de Ciencia y Tecnología 2009: divulgación de la producción científica y tecnológica de la UNR* (pp. 345-347). Rosario: UNR.
- BECERRA BATÁN, Marcela Renée
2021 Gastón Bachelard y el psicoanálisis: encuentros, transformaciones y usos. *Estudios Bachelard*, (2), 25-41. <https://doi.org/10.7413/2724-5470027>
- CALLE ARANGO, Lina & ÁVILA REYES, Natalia
2020 Alfabetización académica chilena: revisión de investigaciones de una década. *Literatura y Lingüística*, (41), 455-482. <http://dx.doi.org/10.29344/0717621x.41.2280>
- CASTRO, Edgardo
2011 *Diccionario Foucault: temas, conceptos y autores*. Buenos Aires: Siglo XXI.
- CERLETTI, Alejandro
2008 *Repetición, novedad y sujeto en la educación: un enfoque filosófico y político*. Buenos Aires: Del Estante.
- COREA, Cristina & LEWKOWICZ, Ignacio
2010 *Pedagogía del aburrido: escuelas destituidas*. Buenos Aires: Paidós.



- CHO, Daniel, & TYSON, Lois
 2005 Education and event: Thinking radical pedagogy in the era of standardization. *Studies in Media & Information Literacy Education*, 5(2), 1-11. <https://bit.ly/49HhJWF>
- CUOMO, Graciela, & DANELINCK, Daniela
 2017 *La escuela entre los discursos*. IX Congreso Internacional de Investigación y Práctica Profesional en Psicología. Facultad de Psicología, UBA. <https://bit.ly/4ujNBIV>
- DÍAZ, Esther
 2005 Las imprecisas fronteras entre vida y conocimiento. *Perspectivas Metodológicas*, 5(5). <https://doi.org/10.18294/pm.2005.551>
- FOUCAULT, Michel
 1994 ¿Qué es la Ilustración? En: Autor, *Estética, ética y hermenéutica* (vol. III). Buenos Aires: Paidós.
- FOUCAULT, Michel
 2005 *Las palabras y las cosas*. Buenos Aires: Siglo XXI.
- FREIRE, Paulo, & FAÚNDEZ, Antonio
 2013 *Por una pedagogía de la pregunta: crítica a una educación basada en respuestas a preguntas inexistentes*. Buenos Aires: Siglo XXI.
- GALLI, María Guadalupe, & KANOBEL, María Cristina
 2023 ChatGPT en educación superior: explorando sus potencialidades y sus limitaciones. *Revista Educación Superior y Sociedad*, 35(2), 174-195. <https://doi.org/10.54674/ess.v35i2.815>
- GARCÍA PUCHADES, Wenceslao
 2021 Alain Badiou y la educación como proceso de subjetivación a través de verdades. *Sophia, Colección de Filosofía de la Educación*, (31), 167-188. <https://doi.org/10.17163/soph.n31.2021.06>
- GÓMEZ CAMARENA, Carlos
 2011 El discurso de la universidad como lazo. En: Joseba Buj & Carlos Gómez Camarena (coords.), *La fábrica del porvenir: el ambiguo futuro de la universidad*. México DF: Universidad Iberoamericana.
- GUZMÁN SIMÓN, Fernando & GARCÍA JIMÉNEZ, Eduardo
 2015 La evaluación de la alfabetización académica. *Relieve*, 21(1). <https://doi.org/10.7203/relieve.21.1.5147>
- HAN, Byung-Chul
 2014 *La agonía del Eros*. Barcelona: Herder.
- HEIDEGGER, Martin
 1996 La época de la imagen del mundo. En: Autor, *Sendas perdidas*. Madrid: Alianza.
- KLIMOVSKY, Gregorio
 1994 *Las desventuras del conocimiento científico*. Buenos Aires: A-Z Editora.
- KUHN, Thomas
 1990 *La estructura de las revoluciones científicas*. México DF: FCE.
- LACAN, Jacques
 1992 *El seminario, libro 17 (1969-70): El reverso del psicoanálisis*. Buenos Aires: Paidós.





- LEWKOWICZ, Ignacio
1996 *¿A qué llamamos historicidad?* 24 de octubre. Documento de conferencia. Buenos Aires: CEAP.
- LEWKOWICZ, Ignacio
1999 Glosas marginales al ensayo sobre la destitución de la niñez ("La subjetividad en los lazos"). En Cristina Corea & Ignacio Lewkowicz, *¿Se acabó la infancia? Ensayo sobre la destitución de la niñez*. Buenos Aires: Lumen; Humanitas.
- LEWKOWICZ, Ignacio
2007 Nota de I. Lewkowicz. En: Marcelo Campagno & Ignacio Lewkowicz, *La historia sin objeto. Derivas posteriores*. Buenos Aires: Tinta Limón.
- LEWKOWICZ, Ignacio
2024 *¿Qué hace un pensamiento?* Red Editorial.
- LÓPEZ, Luciana
2021 Reflexiones sobre el problema de la verdad, la ciencia y la tecnología y sus implicaciones en el campo educativo. *Sophia, Colección de Filosofía de la Educación*, (31), 137-164. <https://doi.org/10.17163/soph.n31.2021.05>
- LUTEREAU, Luciano
2014 *La verdad del amo: una lectura clínica del Seminario 17 de Jacques Lacan*. Letra Viva.
- MARCHANT, Oliver
2009 *El pensamiento político posfundacional: la diferencia política en Nancy, Lefort, Badiou y Laclau*. México DF: FCE.
- MILNER, Jean-Claude
2003 *La escuela de la producción*. Buenos Aires: Manantial.
- MILNER, Jean-Claude
2022 *Introducción a una ciencia del lenguaje*. Buenos Aires: Manantial.
- PALTI, Elías & POLO BONILLA, Rafael
2021 *El concepto de sujeto en el pensamiento contemporáneo*. Buenos Aires: Prometeo.
- PÉREZ, Inés Gimena, SERPA, Cecilia, SZRETTTER, Mariana & NATALE, Lucía
2018 Leer, escribir y exponer oralmente en la educación superior. En: Mariana Szlechter (ed.), *Teoría de las organizaciones: un enfoque crítico, histórico y situado* (pp. 313-338). Los Polvorines: Universidad General Sarmiento.
- RANCIÈRE, Jacques
2003 *El maestro ignorante: cinco lecciones sobre la emancipación intelectual*. Barcelona: Laertes.
- RODRÍGUEZ MANCILLA, Héctor Marcelo, BETANCOURT SÁEZ, Marcela Eliana & VARAS GONZÁLEZ, René Antonio
2018 La episteme neoliberal y la repolitización estudiantil emancipatoria en Brasil y Chile. *Sophia, Colección de Filosofía de la Educación*, (25), 259-286. <https://doi.org/10.17163/soph.n25.2018.09>
- SADIN, Éric
2020. *La inteligencia artificial o el desafío del siglo: Anatomía de un antihumanismo radical*. Buenos Aires: Caja Negra.
- SANABRIA, Adriana
2014 El vínculo educativo: apuesta y paradojas. El deseo de enseñar entre la función civilizatoria y el discurso universitario. *Paradigma*, 28(2), 197-210. <https://doi.org/10.37618/PARADIGMA.1011-2251.2007.p197-210.id393>

UNESCO

2024 *Guía para el uso de IA generativa en educación e investigación.* <https://doi.org/10.54675/ASAL2134>

Author Declaration—CRediT Taxonomy	
Author	Contributions
Karina Silvana Gioni	This article was written entirely by the author; therefore, the content presented in this document is the sole responsibility of the author.

Statement on the Use of Artificial Intelligence
The author, Karina Silvana Gioni, declares that the article titled “Toward a Discontinuist Approach to Scientific Literacy” was not produced with the assistance of artificial intelligence (AI).

243



Date received: July 15, 2025
Review date: September 20, 2025
Date of approval: November 20, 2025
Publication date: July 15, 2026

ETHICAL COMPASSION IN EDUCATION TO OVERCOME HATRED AND HATE SPEECH

La compasión ética en la educación para la superación del odio y sus discursos

MARIA ORTS GARCÍA*

Universitat de València, Valencia, Spain

<https://ror.org/043nxc105>

maria.orts@uv.es

<https://orcid.org/0000-0003-1885-9465>

Suggested citation: Orts García, Maria. (2026). Ethical Compassion in Education to overcome Hatred and Hate Speech. *Sophia, Colección de Filosofía de la Educación*, (41), pp. 245-273.

Abstract

At present, hate speech constitutes a growing social problem that permeates different spheres of public and private life and is deeply rooted in fears and feelings of disgust, both individual and collective. This article offers a theoretical and critical approach to the phenomenon of hatred and the discursive forms through which it is articulated, identifying its main emotional precursors and emphasizing the central role that emotions play in educational and social processes. Drawing on the philosophical work of Martha Nussbaum, the article examines how emotions such as fear and disgust function as driving forces of hatred and why appeals to empathy are often insufficient to counteract its persistence and social impact. In response to this limitation, ethical compassion is proposed as a fundamental moral value capable of guiding human actions toward justice, recognition of others, and democratic coexistence. Furthermore, the article critically analyzes how hatred can disguise itself as compassion, allowing certain victim-centered narratives to appropriate the vulnerability of genuine victims to legitimize practices of exclusion, discrimination, and violence, as occurs in cases of extreme nationalism and xenophobia. From a critical hermeneutic perspective, the article invites a reflective reading of the analyzed discourses and highlights the need to incorporate emotional education and critical thinking into educational contexts, in order to promote compassion as a moral compass against hate.

Keywords

Moral education, Moral values, Critical thinking, Hate speech, Ethics, Civic education.

* She holds a bachelor's degree in Early Childhood Education from the University of Valencia (UV) and a master's degree in Ethics and Democracy from the UV and Jaume I University. She is currently a pre-doctoral research fellow in the Department of Philosophy at the UV, thanks to a grant for University Faculty Training (FPU) from Spain's Ministry of Science, Innovation, and Universities. Her main line of research is ethics and civic education, with a recent focus on issues related to compassion and moral neuroeducation. She is the president of the Center for Philosophy for Children of the Valencian Community, as well as a board member of Escuela de Pensamiento Libre association. She is a member of the GEIMFUS-RIEF Group on educational innovation in philosophy and of the working group for training projects of the UNESCO Chair for Development, both at the University of Valencia (UV).

Resumen

En la actualidad, los discursos de odio constituyen una problemática social creciente que atraviesa distintos ámbitos de la vida pública y privada, profundamente enraizada en miedos y repugnancias, tanto individuales como colectivos. Este artículo propone una aproximación teórica y crítica al fenómeno del odio y a las formas discursivas que lo vehiculan, identificando sus principales precursores emocionales y subrayando el papel central de las emociones en los procesos educativos y sociales. Tomando como referente a Martha Nussbaum, se examina cómo emociones como el miedo y la repugnancia actúan como motores del odio, y por qué la apelación a la empatía resulta, en muchos casos, insuficiente para contrarrestar su persistencia. Frente a esta limitación, se plantea la compasión ética como un valor moral fundamental, capaz de orientar las acciones humanas hacia la justicia, el reconocimiento del otro y la convivencia democrática. Asimismo, se analiza críticamente cómo el odio puede enmascarse bajo una retórica de falsa compasión, permitiendo que determinados discursos victimistas se apropien de la vulnerabilidad de las verdaderas víctimas para legitimar prácticas de exclusión y violencia. Desde un enfoque hermenéutico crítico, el artículo invita a una lectura reflexiva de los discursos analizados y destaca la necesidad de incorporar la educación emocional y el pensamiento crítico en las aulas para promover la compasión como brújula moral frente al odio.

Palabras clave

Educación moral, valores morales, pensamiento crítico, discurso de odio, ética, educación ciudadana.

246



Introduction

In a global landscape characterized by major social challenges—such as the rise of extremist views, a loss of political and social trust, stark inequalities, and polarization—hate speech appears to be gaining ground, threatening social cohesion in our democracies. In this context, it is important to remember that such discourse often stems from deeply rooted fears—both individual and collective—and that it requires only an emotional trigger to spread easily among the public. Given the social impact of hate speech, it is essential to understand it in order to find ways to move toward its eradication. This reality reminds us that emotions play a decisive role in human actions. In this regard, can moral education offer solutions to address hate speech?

The aim of this article is to explore the phenomenon of hate speech by analyzing some of its emotional precursors, such as fear and revulsion, and to shed light on whether an education in and for compassion can serve as a good starting point for countering hate and hate speech. In this context, the argument put forward is that there is a need to reclaim or revitalize key values for our democracy, among which compassion stands out in particular. Thus, emphasis is placed on the ethical potential of compassion as an essential value for our democracies, noted for its moral strength and its capacity to serve as an ethical compass capable of guiding

and counteracting hate and its expressions. To this end, the work of philosopher Martha Nussbaum will serve as the primary point of reference.

Based on this framework, the article is structured around several research questions: What emotions foster the emergence and legitimization of hate speech? How do fear and revulsion influence the construction of exclusionary narratives? And can moral education—especially education focused on compassion—provide ethical and pedagogical tools to counteract these dynamics?

The main hypothesis guiding this research holds that hate speech cannot be understood solely from legal or political perspectives but also requires an ethical-emotional analysis that allows for the identification of the affective mechanisms that underpin it. Consequently, it is argued that compassion—understood as a moral disposition linked to the recognition of shared vulnerability—constitutes a fundamental democratic value and a key educational tool for preventing the normalization of hate and strengthening democratic coexistence.

These reflections are developed within a problematic and highly topical context. This refers to situations in which hate is disguised as “compassion,” allowing victim-blaming discourses to usurp the place of actual victims in order to justify and legitimize hate (Gracia Calandín, 2023). A clear example of this dynamic can be found in the rise of extreme nationalism and the resulting xenophobia—a trend that is spreading like a virus throughout our societies, hence the importance and urgency of this issue. In this regard, it is considered essential to incorporate emotional education into classrooms to foster deeply human values, such as the one advocated here.

The importance and relevance of this issue are further evidenced by the increase in research and institutional reports warning of the impact of hate speech on democratic coexistence, especially among young people and in digital environments. The rapid spread of polarizing and exclusionary messages through social media and other digital platforms contributes to the normalization of discriminatory attitudes and hinders the building of relationships based on mutual recognition and respect. In this regard, addressing hate speech through moral education is not merely a theoretical reflection but an urgent social and pedagogical necessity, aimed at strengthening critical judgment, ethical sensitivity, and the capacity for coexistence in increasingly pluralistic societies.

From a methodological standpoint, the article is grounded in critical hermeneutics, an approach that allows for the interpretation of the analyzed texts and discourses and enables a review of the literature across



various works and research studies. The research draws on the analysis and interpretation of philosophical, pedagogical, and socio-ethical texts relevant to the study of hate speech and the moral emotions associated with it.

The choice of critical hermeneutics as a methodological approach stems from its established status as a methodology within the humanities and social sciences, particularly well-suited for analyzing complex ethical, educational, and political phenomena. Its interdisciplinary nature allows for the integration of contributions from philosophy, pedagogy, sociology, and political theory, fostering a comprehensive understanding of hate speech and the emotions that underpin it.

The text is structured as follows: it begins with a general overview of hate, understanding it as a major social challenge. From this perspective, fear and disgust are analyzed as the roots of hate. The analysis then delves deeper into the social impact of hate speech, ultimately focusing on the tension between vulnerability and victimhood, demonstrating how, in many cases, hate cloaks itself in victimhood to legitimize itself. In light of this context, the text highlights the need to restore moral values—specifically compassion—devoting a section to this topic. Finally, it concludes by presenting education as a space in which to cultivate compassion and critical thinking, which are essential for confronting hate speech and strengthening democracy.

248



Hate and Hate Speech as a Social Challenge

Before contextualizing this problem within the ethical-educational framework, it is important to understand hate speech. To this end, this first section will provide a brief overview of hate, exploring its possible emotional roots—namely, fear and projected disgust—in order to understand how hate speech develops.

The importance of addressing hate speech lies in the fact that it constitutes one of the main ethical, social, and educational challenges facing contemporary democracies. Its effects impact not only the individuals and groups directly affected, but also the quality of democratic coexistence, the recognition of human dignity, and the building of inclusive societies. In this regard, analyzing the emotions, narratives, and social dynamics that underpin hate speech is essential to understanding the processes of exclusion and dehumanization that weaken social bonds and erode democratic values.

Fear and Disgust at the Root of Hate

Today, we are caught up in numerous social, political, economic, and cultural pressures that manifest as challenges to our societies and our democracies. One of these is hatred, which sometimes manifests as violence and intolerance, and at other times through so-called “hate speech.” These phenomena have been in the spotlight in recent years, as they pose a “threat to the lives of people belonging to the most vulnerable and traditionally most stigmatized groups” (Gracia Calandín, 2022a, p. 1).

Differences can become the ideal pretext for driving us apart (París Albert, 2020). In fact, these differences are often exploited to foster detachment or distancing from a particular culture or group, which can give rise to what are known as “social phobias.” This term refers to the many social pathologies in which a phobia —understood as an aversion to or rejection of someone or something— is directed toward a specific group, such as xenophobia, homophobia, and aporophobia. This type of aversion is unique, as it targets an individual solely because they belong to or are associated with a specific collective or social group. In other words, “the harm is directed against a specific person or a specific group of people, not because of who they are, but simply because they are one, a few, or a group” (Cortina, 2017, p. 36). That insufferable indefinite article—to borrow the words of philosopher Adela Cortina—is what seems to justify all kinds of aggression against those specific individuals. These phobias, called “social” due to their marked social component, exhibit a series of characteristics that distinguish them from other, less systematic forms of rejection or intolerance.

The distinctive feature of these phobias is that the other person is identified with or reduced to a characteristic or attribute of a specific social group or collective. In this way, the collective becomes the target upon which hatred is directed, thereby creating a collective imagination based on suspicion, rejection, fear, and hatred. Consequently, just as with projected disgust, an asymmetrical relationship emerges between the two poles that are created—”them” and “us”—in which the individual doing the rejecting assumes an attitude of superiority toward the rejected.

The moment this asymmetrical relationship is established—one in which inequality prevails between the polarized groups—it reveals a failure to recognize human dignity, specifically the dignity of that particular person, who is being denigrated and reduced to nothing. This failure to recognize the other leads to rejection and systematic hatred (Cortina, 2017), thereby causing deep social rifts.



According to the *Dictionary of the Royal Spanish Academy* (DRAE), the term “hatred” comes from the Latin *odium* and means antipathy and aversion toward something or someone whose harm is desired. In other words, the person harboring hatred harbors a desire for harm toward the other. This is often accompanied by other anti-moral feelings (Nussbaum, 2010) related to aversion—such as fear and disgust—which are at its root.

From an evolutionary perspective, fear has been key to the survival of species because it helps avoid situations that may pose a risk to one’s own life. However, in humans, fear takes on specific characteristics that make it an emotion distinct from that manifested in other species (Pinedo, 2020). One such trait is that, far from being based on accurate assessments, fear is associated with distorted thoughts and beliefs in which the other is viewed as a real or potential danger (Pinedo, 2021), often simply because they are perceived as falling outside the structures of dominant cultures. Our fears expose our human vulnerability and fragility; we can respond to this cooperatively, but also in a repressive and coercive manner. It is this latter way of confronting fear that generates and reinforces hatred, thus leading us toward the non-recognition of differences and social exclusion (París Albert, 2020). This is how the rhetoric of fear begins to gain ground.

Fear is often accompanied by another emotion that contributes to the spread of hatred: disgust. Disgust also has an evolutionary basis, as it functions as a survival mechanism by serving as a primitive rejection response to anything that could cause harm. This defense mechanism helped our ancestors stay away from certain harmful elements. In this regard, we can draw on the words of Nussbaum (2008) when she explains that disgust has to do with the boundaries of one’s own body, specifically with the idea of a problematic substance being incorporated into oneself. Consequently, what provokes disgust is that which reminds us of our own animality—that which is linked to vulnerability to decay, waste, and finitude.

Although revulsion or disgust has an evolutionary basis—and is thus an adaptive response to protect the organism—this emotion is present in many aspects of human relationships, as it provides a powerful means of transmitting cultural values. Through cultural evolution, the triggers of disgust have expanded to include objects and our perceptions of them that go far beyond human concerns about survival. In this sense, it is understood that disgust is not merely a physiological reaction, but is also a “charged emotion, full of cognitive content, linked to beliefs, associations of ideas, and perceptions (often entirely unreflective), and that has to do with imaginary or metaphorical contamination rather than actual contamination” (León, 2014, p. 28).



From this, disgust is largely influenced by social learning. Consequently, by “teaching what to be disgusted by and how to feel disgust, societies have an effective means of channeling certain attitudes” (Nussbaum, 2008, p. 239). Thus, the emotion takes on strong social, political, and moral dimensions, since “society exerts a tremendous influence on the form and direction that revulsion takes —i.e., in determining the objects that we will find repulsive” (León, 2014, p. 25). Thus, disgust and its projection are influenced by different traditions, social policies, education, and cultural practices.

It is understood, therefore, that cultural forces can foster the association between typically repugnant qualities and certain classes of people, thereby provoking responses of disgust toward specific social groups—a kind of exaggerated disgust that ultimately dehumanizes. This gives rise to a social dynamic based on fear and segregation, in which disgust is no longer merely projective but also moralized, encouraging the classification of others into morally questionable groups (Pinedo, 2020).

These types of emotions—which belong to the family of aversion, such as disgust, fear, and hatred—influence, generate, or exacerbate social distinctions of all kinds, whether based on social status, religion, race, ethnicity, or gender. Such categorization establishes a hierarchy, since one group asserts its superiority over the rest, even coming to feel invulnerable. Hierarchies, although a component of our evolutionary heritage, pose an obstacle to the recognition of equality in human dignity when taken to this extreme of competition for superiority (Nussbaum, 2014).

In order to perpetuate this social distinction —and thereby guarantee that supposed superiority— there is a tendency to stigmatize certain individuals or social groups, associating them with animal-like attributes and characteristics that inspire revulsion. “When a social group is stigmatized, the people who belong to it are identified with what is inferior, contaminated, to be excluded, ignoble, and unworthy [] they are stripped of their humanity and dignity” (León, 2014, p. 33). Through this projection of disgust, stigmatized individuals or social groups become repulsive, inanimate objects devoid of humanity and, therefore, groups with whom contact and interaction are denied.

This dehumanization of individuals through disgust and revulsion has been a mechanism that, unfortunately, has been employed throughout history.¹ Nussbaum explains that “disgust, which always serves the purpose of keeping us at a distance from our own animality and mortality, will easily take as its object other people and groups, who come to represent what is avoided in the self” (Nussbaum, 2008, p. 387). For



this reason, this projected disgust is occasionally conceptualized as a social phenomenon that tends toward the segmentation or splitting of the world, in which there is a self, other beings similar to the self, and others close to animality to whom repugnant properties are attributed.

In light of all the above, it can be concluded that disgust provokes fears and rejection, which quickly degenerate into hatred directed toward other individuals and groups. All of this creates the ideal breeding ground for the spread of so-called “hate speech.”

Hate Speech

At the conclusion of the previous section, reference was made to how this social aversion and phobia manifest through other pathologies such as “hate speech” (cf. Gracia Calandín and Suárez Montoya, 2023), which operates as “a tool that allows the actual realization of the desire to cause harm through concrete actions” (París Albert, 2020, p. 148). The term originates from the English expression *hate speech*, although its translation into Spanish presents certain challenges. Nevertheless, over time it has become established as the standard concept used to describe discourse directed against people who are part of marginalized or stigmatized groups (Gracia Calandín, 2026).

It is worth noting the contribution of Adela Cortina (2017), who clearly and concisely outlines a distinction between three related but distinct phenomena: incidents, crimes, and hate speech. She states that, according to the Ministry of the Interior, the term “hate crimes” refers to:

All criminal and administrative offenses committed against people or property on the basis of race, ethnicity, religion or religious practice, age, disability, sexual orientation or gender identity, poverty and social exclusion, or any other similar factor, such as ideological differences (p. 32).

With regard to hate incidents, “they occur when there is evidence of behavior involving contempt and mistreatment of people because they belong to a particular group, but that behavior does not meet the legal threshold to be classified as a crime” (p. 32). In contrast, hate speech consists of any form of expression intended to spread, incite, promote, or justify hatred toward specific social groups, stemming from a position of intolerance. In other words, it targets an individual simply because they belong to a specific group or collective that is stigmatized and denigrated.

This definition can be expanded upon with contributions from the European Commission against Racism and Intolerance. In its General



Recommendation No. 15 concerning the fight against hate speech, it defines it as:

The encouragement, promotion, or incitement, in any form, of hatred, humiliation, or contempt toward a person or group of people, as well as harassment, discrediting, or stigmatization [...] with respect to such a person or group of people, and the justification of such expressions on grounds of race, color, descent, national or ethnic origin, age, disability, language, religion or belief, sex [...] and other personal characteristics or conditions (ECRI, 2016, p. 4).

The same general recommendation states that hate speech is based on the assumption that one group or person is superior to another, incites discriminatory acts or violence, damages social cohesion, and undermines respect for minority groups. Cortina (2017) explains that this type of discourse is typically monological rather than dialogical, since the speaker does not view the other as a valid interlocutor capable of participating in dialogue, but rather as a mere object that does not deserve respect. The very definition of dialogue implies an inclusive activity, and this type of discourse loses that inclusivity by silencing the other and reducing them to a mere recipient of hatred. It is, furthermore, a type of discourse lacking valid argumentation, since its sole purpose is to express contempt and hatred and to incite others to share it.

The philosopher also explains that discourse itself can be harmful, since this communicative act constitutes a performance and, as such, is capable of causing harm in and of itself. Finally, it is argued that this type of discourse undermines one of the basic principles of the *democratic ethos*, since it manifests a relationship of asymmetry and inequality between an “us” and a “them.” Consequently, hate speech can weaken—and does weaken—social cohesion and potential interpersonal bonds among members of a society.

These pathologies reveal certain shortcomings that affect the individuals who exhibit them. On the one hand, their vision is restricted; their lack of open-mindedness prevents them from seeing others without dissociating them from the group or collective. One of the most pronounced shortcomings, according to José Barrientos (2022), is their lack of critical thinking skills; since those who adopt these hateful attitudes, by clinging to the collective imagination, become “passive instruments of the ideology they uphold or blind slaves to their group” (p. 3). Another shortcoming highlighted by the author relates to the individual’s own identity, since



the narrowness of perspective and the walls emerged as a result of that hatred hinder the enrichment that “the other” can provide.

All of this leads to an even greater deficiency, if that is possible, related to affection and care, since these discourses negate the recognition of the other’s human dignity and, with it, the capacity and willingness to care. To summarize, it can be said that these perpetrators of hate exhibit multiple shortcomings related to the narrowness of their vision, the deficiency of their critical thinking skills, and their poor sense of self-identity, since the denial of equal dignity nullifies their capacity and willingness to care.

Hate speech manifests itself in various ways—orally, in writing, and through audiovisual media. The relevance of this issue is particularly evident in the rise of polarizing discourse in digital spaces and on social media, as well as in the surge of extremist movements and exclusionary narratives present in various contemporary political and social contexts. “It is no longer confined to physical, tangible spaces; rather, it has now migrated to the largest space of all time—and the one where it is most difficult to curb—the internet, and specifically, social media” (Martínez et al., 2019, p. 27). Through the internet, these messages spread like an epidemic throughout society. They take deep root, perpetuate themselves, and gain momentum and speed across multiple platforms and social media networks—such as X, Instagram, and TikTok—where it seems that anything goes, even denigrating others and reducing them to less than nothing.

The spread of these messages through digital platforms has multiplied their reach and influence, contributing to the normalization of discriminatory attitudes and the weakening of democratic bonds, particularly among children, youth, and adolescents. For this reason, we are witnessing a surge in hatred toward “otherness” on various digital platforms, as social media and other virtual spaces allow for the public display of attitudes of hatred and rejection toward what is termed the “out-group” (Arcila Calderón et al., 2020).

All of this presents a threefold problem. First, the ease and volatility with which these discourses spread online make them truly difficult to curb. Second, the demographic that uses social media the most—children, youth, and adolescents—consists of individuals who are at a critical stage of growth and character and personality development, and they are exposed to messages where “the word has been devalued by sensationalist narratives, caricatured portrayals of the adversary, and derogatory clichés about members of other groups” (Gracia Calandín, 2022a, p. 2). Thus, these discourses not only endanger social cohesion in increasingly pluralistic societies but also spread and perpetuate their message among



young people. Third, the blurring of the concept of vulnerability occurs to the point where its true meaning is lost, leading to a victim-centered ideology.

These issues highlight the importance of developing educational approaches aimed at strengthening critical thinking, emotional education, and the recognition of human dignity. From this perspective, moral education plays an essential role not only in preventing attitudes of intolerance and exclusion but also in fostering a democratic citizenry capable of coexisting in contexts of diversity and pluralism. From Vulnerability to Victimhood: Hatred Hidden Behind False Compassion

Hate speech often has two sides. While spreading hatred, it simultaneously conveys a message of “protecting our own” against the out-group, which is supposedly the enemy. These exclusionary and hateful attitudes, coupled with this message of assumed protection, trigger a contagious sentimentality that—fueled by word of mouth—spreads perceptions marked by suspicion toward certain individuals or groups, who are perceived as potential threats to the cohesion and balance of community life (Pinedo, 2020). This contagious sentimentality is sometimes legitimized under the guise of false compassion—a disguise that, in addition to distorting the true meaning of compassion, tends to blur the distinction between vulnerability and victimhood.

According to the *Dictionary of the Royal Spanish Academy* (DRAE), the term “vulnerable” derives from the Late Latin *vulnerabilis*, which in turn comes from the Latin *vulnerāre* (“to wound”) and the suffix *-bilis* (“-able”), and means capable of being wounded or injured, either physically or morally. In other words, it indicates the possibility of being hurt, a fact that highlights the ontological vulnerability of every human being. However, this conception has not always been clear or accepted as such, since one of the great myths, as Brown (2016) points out, is the erroneous analogy drawn between vulnerability and weakness. This myth is widespread and highly dangerous because the fear and discomfort that vulnerability—understood as weakness—causes us transform the value hidden behind it into reductive judgments and criticism (Orts García, 2023).

Vulnerability is neither inherently good nor bad; it is not what we call a “dark emotion,” nor is it always a positive or uplifting experience. Rather, vulnerability is the essence of all emotions and feelings. To feel is to be vulnerable. To believe that vulnerability equals weakness is to believe that feeling itself equals weakness (Brown, 2016).

With this idea that “to feel is to be vulnerable,” vulnerability can be understood as an inherent part of our humanity and, in a certain sense,

explains the structural interdependence among people. Gracia Calandín (2022b) also defends this idea when she refers to vulnerability as a fundamental anthropological trait of every human being—one that manifests differently in each person and, therefore, requires distinct needs and forms of care. Recognizing our vulnerability allows us to access a fuller form of humanity. Being aware of and self-conscious about our fragility is an essential condition for genuine human openness.

However, it is important to emphasize that “vulnerability is neither a merit nor a privilege, and being vulnerable does not imply actually being or having been harmed, nor is it enough simply to believe oneself to be vulnerable” (Gracia Calandín, 2023, p. 26). This point is key, since it is vital to distinguish between real victims and those who are feigning or imagining victimhood. This distinction is essential for dismantling the confusion that arises when a victimhood culture appropriates the concept of vulnerability.

Victimhood is not the same as being a real victim. It refers to the attitude by which a person or group constantly presents themselves as a victim. Most of the time, they do so by exaggerating or distorting discourse, appropriating it and the narratives of real victims in order to disguise it as the compassionate sentimentality alluded to above. It is precisely this victimist ideology that, in part, tends to fuel phobic messages and hate speech that project evil onto a specific group.

To move beyond the false analogy between vulnerability and victimhood, we must understand that recognizing vulnerability as a constituent trait of human beings does not mean identifying or defining individuals—insofar as they are vulnerable—as victims in general, thereby attributing to them passivity or resignation (Gracia Calandín, 2023). In fact, the ethical conception of vulnerability advocated here stands in direct contrast to that idea of victimization and passivity. This ethical view of vulnerability recovers the critical and self-critical dimension that is often lacking in those who adopt a victim-centered mindset; by failing to examine themselves, they tend to attribute all responsibility for their situation to a supposed external enemy. This rejection of victimhood should not be confused with a lack of recognition and compassion for real victims (Gracia Calandín, 2023); on the contrary, it aims to be a call to focus attention where it is truly needed.

Hence, it is essential to reclaim the meaning of vulnerability as a constitutive element of every human being—a vulnerability related to feeling. This vulnerability must be framed within an ethics of care, which is what can truly offer us the mutual interdependence that unites us as



human beings and forms the foundation of moral responsibility, which must necessarily take shape or be expressed through care. This is a kind of care that moves away from that contagious yet empty sentimentality, which finds no fertile ground in which to take root. Based on this idea of vulnerability, such care is neither partial nor selective, for it is capable of recognizing human dignity wherever it has been violated.

Restoring Moral Values

The context outlined above highlights several profoundly troubling issues. On the one hand, there is a distinct weakening of democracy, since hate and hate speech—which champion asymmetry and inequalities between “them” and “us”—undermine one of the basic principles of the *democratic ethos*, thereby eroding social cohesion. The significance of this problem lies in the fact that it not only affects certain vulnerable groups, but also undermines the ethical foundations of contemporary democracies, eroding essential values such as equality, mutual recognition, solidarity, and respect for human dignity.

Likewise, this rhetoric based on fear and hatred leads to a failure to recognize the human dignity of others, and with it, a decline in the capacity and willingness to care, as well as a loss of genuine interest in others. All of this gives rise to even greater concern, as it reveals a profound crisis in the way we conceive of the meaning of existence, the most evident manifestation of which is insensitivity to the suffering of others (Pinedo, 2018). Given this landscape, this section will seek to defend the thesis that we must restore the moral values essential to the well-being of our democracies.

The relevance of this debate is particularly evident in a social context marked by political polarization, the rise of extremist rhetoric, and the spread of exclusionary narratives in digital and media spaces. This reality, steeped in undeserved suffering, injustices, exclusion, and rejection, calls for “alternative models of coexistence and moral sensitivity that respond to the essential fragility that defines us” (p. 30). To this end, building a framework of values based on equality is key (Modzelewski, 2016). In this regard, it is considered advisable to strive to rehabilitate fundamental values such as love, solidarity, responsibility, and compassion in order to strengthen the meaning of our democracies.

The term “rehabilitate” is used intentionally because this is not the first time in human history that the aspiration has been expressed to find a guiding principle to steer our societies. In this context, marked by mul-



multiple social problems, it is pertinent to delve into values because they are seen as a source of inspiration for renewing our understanding of what it means to be human and for strengthening democracy.

Achieving this goal, explains Modzelewski (2016), involves moving beyond a notion of justice reduced exclusively to the functioning of institutions. If citizens are expected to be active participants in the pursuit of justice, it is essential to consider the factors that foster their willingness to get involved; thus, special attention must be given to emotions. In this sense, emotions play a fundamental mediating role and must be recognized as a key element in empowering and strengthening individuals to engage in social life, particularly within the framework of a democratic society (Modzelewski, 2016 and 2017). The key will be to discern which specific emotions and values we should reclaim and cultivate for this purpose.

258



Compassion as the Key to Cultivating a Democratic Ethos

Given all of the above, and in light of the contemporary need to strengthen democratic bonds and combat the dynamics of exclusion and dehumanization, there is a commitment to compassion due to the ethical and political force it can exert in public life. Along these same lines, Nussbaum argues for the need to revive concepts such as compassion, understanding them as ethical principles that must be incorporated into moral reflection so that they can guide the functioning of today's democracies. For this reason, the American philosopher serves as the primary reference for this article.

Currently, there is renewed interest in the study of compassion due to its role in social and democratic life. This growing interest stems, to a large extent, from the need to find ethical and educational frameworks capable of addressing contemporary social challenges related to polarization, moral indifference, and the fragility of democratic coexistence. However, terminological confusion persists, which at times obscures or hinders a precise understanding of this phenomenon. This situation is not surprising when one considers the multiple translations and interpretations of the Greek term *éleos*. This historical difficulty has led to a diffuse use of different concepts which, although distinct, have been employed practically as synonyms: mercy, pity, compassion, empathy, and sympathy. It is not the purpose of this article to develop a phenomenological categorization of all these concepts, nor is it to trace a historical account of the

origin and uses of compassion. However, it is worth taking a brief look back to see how the sense of compassion defended here is rooted.

Through its biblical texts, the Christian tradition refers to compassion as a central attribute of God, reflected in a profound concern for the suffering of others that drives the actions of helping, healing, and forgiving—an essential quality that believers must emulate through their deeds. This idea was widely accepted until the Modern Era, when the sentimentalist ethics of the Scottish Enlightenment marked a shift away from traditional Christian piety, giving way to a more fraternal and reciprocity-based philosophical conception of the human being (Pinedo, 2018). From that point on, as the author notes, a philosophical tradition began that sought to justify compassion without relying on the theological categories that traditionally gave meaning to a virtue considered essential for social coexistence.

In recent years, driven by a renewed interest in Aristotelianism as a framework for addressing various contemporary moral concerns, a virtue-centered ethical approach has gained strength. This approach emphasizes character formation, the relevance of emotions in moral experience, and the cultivation of dispositions fundamental to building strong community bonds and a genuine concern for the well-being of others (Pinedo, 2018). In this context, as the author asserts, compassion is perceived and integrated as one of the virtues closely linked to the subject's emotional realm, as well as to their motivations and aspirations in both personal life and processes of public deliberation. It has even come to be regarded as the democratic emotion *par excellence* (Modzelewski, 2017).

Within this new framework rooted in Modernity, as has been noted, Martha Nussbaum undertakes the philosophical task of re-examining and revitalizing the notion of compassion and its relevance to contemporary societies. Drawing on the Aristotelian conception, the American philosopher defines compassion as a painful emotion arising from another person's undeserved misfortune. Nussbaum (2008) explores what she calls the "cognitive structure of compassion," positing that there is a series of beliefs or judgments that serve as prerequisites for its development. The judgments proposed by the author, which are inspired by Aristotle and ancient Stoicism, are:

- The judgment of gravity: An evaluation that the suffering or misfortune is significant and non-trivial.
- The judgment of merit: The belief that the person suffering did not fully bring this misfortune upon themselves through their own fault.



- The judgment of comparable possibilities: The recognition by the compassionate person that they share a similar vulnerability and could experience a similar misfortune.
- The eudaimonistic judgment: The cognitive placement of the suffering person within the sphere of the evaluator's own goals, concern, and sense of well-being.

For Nussbaum, compassion is an emotion closely linked to justice and occupies a fundamental place both in her educational approaches and in her project to promote a renewed culture of public politics (Pinedo, 2018). It is an emotion of great value for ethical reflection, insofar as it can be linked to human deliberation.

The philosopher's conception also aligns with current empirical and neuroscientific studies that incorporate key elements, a fact that lends it even greater interest and validity. These studies suggest that there are a series of components that make up the phenomenon of compassion: the affective component, the differentiation between self and other, a regulatory cognitive element, and, finally, a motivational and intentional component that is latent, prosocial, and aimed at alleviating the suffering of others (Stevens and Benjamin, 2018).

Among these components, the prosocial nature that accompanies compassion stands out, distinguishing it from other phenomena. Based on this idea, one could say that compassion is a feeling that involves, on the one hand, concern for another's suffering and, on the other, the motivation to help and improve that person's well-being (Klimecki, 2015). In other words, the feeling moves us, allowing us to experience another's suffering, and at the same time motivates us to act to alleviate that suffering, thereby taking on the other's pain as a shared responsibility. Thus, it can be concluded that compassion actively drives moral action, seeking to alleviate another person's suffering.

Despite its ethical potential, compassion is not without its critics. In fact, throughout the history of philosophy and moral thought, compassion has been subject to highly contradictory interpretations. These range from the outright rejection by the Stoics and Spinoza to Nietzsche, who considers it a symptom of decadence and a weakening of the will to live, and include Rousseau's view of compassion as the natural source of all virtue and Schopenhauer's identification with universal suffering (Boella, 2004). Such contradiction is not surprising, for as Boella (2004) points out, compassion does indeed raise the classic problem of emotions—their “irrationality” and, therefore, their unreliability and partiality—but also



the problem of the difficulty of transforming them into action, of going beyond their reactive and sentimental nature.

This problem, as the Italian philosopher points out, has today become a pressing social and political issue due to a structural disproportion between affective communication and affective action—specifically between the individual's capacity for intervention and the immense amount of suffering present in the world. This imbalance can even exacerbate the contradictory nature of compassion, leading to its instrumental and selective use. Hence, the need to restore the value and moral significance of compassion is strongly emphasized.

Arteta (2019) argues that compassion, when understood as a mere feeling, is fleeting, since what matters is the immediate moment itself; the other person's misfortune and the compassionate response it evokes tend to occur almost simultaneously. It is selective, partial, one-sided, and superficial because it requires a visible and specific form of suffering and depends on the degree of closeness to the other person. Since it is triggered by a specific form of suffering, it turns out to be a limited form of compassion. It is also a fearful feeling, since, as is clear from Aristotle's definition, compassion involves fear of the possibility of suffering the misfortune that the other person is experiencing. It can be considered, the author asserts, as directly motivated by the desire to alleviate the other's pain in order to thereby alleviate one's own distress.

When one measures another person's misfortune against one's own well-being, an imbalance can arise from compassion, causing it to become one-sided and hierarchical. It is this characteristic that could lead to a sense of superiority in the person experiencing it, thereby creating an asymmetrical relationship with a marked paternalistic component, as some critics point out. Finally, the author argues that, as an emotion dependent on the senses, compassion is passive, reactive, and to some extent involuntary and unconscious. It would therefore follow that, driven purely by this emotion, compassion lacks a reflective process and can cloud the subject's judgment.

In light of these implications, it is important to distinguish between compassion understood as a feeling—as *pathos*—that moves and sweeps us away, and compassion as an “ethical passion” guided by the exercise of reason, through which character (*êthos*) is forged from habits (*êthos*) (Gracia Calandín, 2018). In this latter sense, compassion is not understood as a mere passive feeling that comes over us, but rather implies active, virtuous action. Under this conception, we would be predisposed to restore the ethical value and moral significance of compassion. To elevate



compassion to this explicitly ethical plane, we must recognize its foundations, which rest on two pillars: human dignity and vulnerability—or the idea of finitude. It is this conception that invites us to speak of ethical compassion, insofar as it calls for the recognition of dignity in those whose dignity has been violated (Gracia Calandín, 2018).

It could be said that the foundations of compassion as a virtuous habit are these two concepts: on the one hand, the recognition of human dignity; on the other, the awareness of finitude and of our intrinsic vulnerability, since it is upon these that the ethical foundation of compassion is built. To paraphrase Arteta (2019), only from these two ideas can a theory of the moral nature of compassion and the role it plays in ethics—and even in moral education—be properly developed. In light of the above, it could be argued that at the core of compassion lies a tension between human finitude and vulnerability and human dignity—a tension that helps eliminate bias and partiality, since we are all equal before these very principles.

The moral value of compassion lies in standing with those who suffer and helping those most in need, not as a display of superiority, but to repair the harm they have suffered. It is this specific idea that links compassion to the possibility of countering hatred and its rhetoric, because compassion steps in where dignity has been violated, precisely where one is most vulnerable. It is not a feeling that simply acts for the sake of others, but rather one directed toward those who are suffering and find themselves in a disadvantaged situation.

As noted in previous sections, on many occasions hatred disguises itself as sentimentality—as a false compassion capable of moving and stirring a population on behalf of victims who are not real. In other words, this emotional appeal can be used to trigger a specific emotional contagion that sweeps us along, thereby redirecting the focus of compassion. To prevent this—or rather, to avoid becoming disoriented—compassion must be accompanied by critical thinking. From this perspective, this article argues that ethical compassion, combined with critical thinking, can serve as a fundamental pedagogical and moral tool for preventing the emotional legitimization of hate speech and strengthening a democratic culture based on the recognition of human dignity.

The Indissoluble Link Between Critical Thinking and Compassion

Ethical compassion represents a concrete exercise in discernment regarding the vulnerability of others, which necessarily involves both



criticism and self-criticism (Gracia Calandín, 2023). The author asserts that compassion, in this sense, is not reduced to feeling sorrow or pity for someone—or for oneself—at least not within the framework of the ethical compassion advocated here and considered desirable in the context of education. Understood thus, ethical compassion does not obscure reason or confuse intelligence with empty sentimentality. On the contrary, it constitutes an affective disposition that not only fosters but actively requires the exercise of discernment as an indispensable condition.

This analytical requirement is key to the problem under discussion here—namely, hatred and its discourses—since critical and self-critical capacity must be directed toward clearly distinguishing between concerns that are legitimate and those that are not (Gracia Calandín, 2023). In other words, it is necessary to carry out a rigorous process of selection and discernment, since not every feeling of unease or anxiety is inherently justified. As noted above, concern can occasionally act as a veil that conceals illegitimate motivations. To avoid falling into distorted judgments, it is essential to conduct a rigorous analysis, sharpen one's critical eye, and precisely define the true object of these concerns.

This exercise helps distinguish between illegitimate concern—which reinforces stigmas and fuels derogatory stereotypes—and legitimate concern, which, rooted in ethical compassion, drives responsible criticism and fosters the care and protection of those who find themselves in genuinely vulnerable situations. Ethical compassion invites us to cultivate a lucid and responsible sensitivity to the suffering of others, steering us away from purely reactive emotional responses that can lead to inaction, simplistic solutions, or a distorted focus on false victims.

For all of these reasons, education remains the fundamental vehicle. As Nussbaum (2010) notes, the ultimate goal of education cannot be for children to aspire to invulnerability. Quite the contrary: it consists of accepting and acknowledging our own constituent limitations, which connect us and make us structurally interdependent. It is from this perspective that compassion and care for others can be effectively fostered—a compassion that upholds human dignity, acknowledges the vulnerability that defines us, and maintains a critical and self-critical eye, ensuring we know exactly where to direct our efforts and why.

Education as a Seedbed for Compassionate and Ethical Citizenship

If we wish to counteract hatred and the rhetoric that fuels it, we must promote a conception of humanity and citizenship that places social jus-



tice and equal opportunity at its core. This must go hand in hand with respect for the dignity of all people and the recognition of vulnerability as an inherent feature of our human condition, so that these principles guide moral reflection and political decision-making (Pinedo, 2018). To this end, the idea of compassion advocated here is key, since, as the author argues, understood in this way, compassion acts as a driving force in the formation of moral consciousness and in the promotion of virtuous behaviors oriented toward the common good—not only at the individual level, but also at the social and public levels. It is in this way that we can aspire to a compassionate citizenry—a citizenry whose emotional life drives them to take an active interest in others, particularly those who, due to situations of social injustice, find themselves in a more vulnerable position and have fewer opportunities to develop fully as human beings (Pinedo, 2018).

264



How do these ideas relate to the topic at hand—namely, the idea of being able to reverse hate and its discourses? If hate speech manages to take root in our societies, it is not solely because of intolerant and malicious individuals—though they certainly play a role. Its power also lies in the fact that it feeds on social structures and images, prejudices that have become normalized, and narratives that we have internalized since childhood. Given this landscape, this paper argues that ethical compassion, combined with critical thinking, must be cultivated through education as a pedagogical tool capable of counteracting the emotional, social, and cultural mechanisms that sustain hate speech.

Education in general, and ethics in particular, as a process of holistic formation of individuals, has the power not only to impart technical knowledge but also to foster ethical and affective dispositions. This is why it enables us to recognize the suffering of others while simultaneously questioning the causes of that suffering, with the aim of dismantling the social constructs that underpin exclusionary discourses.

First and foremost, before delving into the subject, it is essential to take a self-critical look at our own educational practices. This issue takes on particular relevance in the educational sphere, since schools are among the primary spaces for moral socialization and the construction of mental frameworks regarding otherness. On many occasions, and almost without realizing it, educational systems can fuel these hateful discourses by reproducing stereotypes, silencing memories, and perpetuating exclusion. In classrooms, hatred and its discourses can be sustained through ignorance about the other, the oversimplification of complex identities, and fear of those who are different. Nowadays, it seems that “the other”

has become invisible and that the rest of us have become desensitized; we have stopped seeing others, recognizing them, and feeling their needs (Tamarit, 2025). Therefore, following Tamarit, it is necessary to first engage in a process of “unhiding” the other—of revealing a reality that exists but that we have stopped seeing—so that we can subsequently begin to recognize the other.

In this regard, it will be crucial for education to begin by conducting a self-examination aimed at dismantling the mechanisms that continue to fuel the perception of those who are different as a threat, since this creates an ideal breeding ground for hate speech. It is also essential to foster the education of the senses so that they do not become numb or overwhelmed, thereby creating spaces for openness, listening, and dialogue (Tamarit, 2025). This can be achieved, for example, through storytelling, as proposed by Modzelewski (2020 and 2017). At the same time, it will be essential to develop tolerance—but an “active” tolerance, which is the kind that can truly lead to mutual respect and the recognition of differences (Gracia Calandín, 2018).

In this sense, it is not merely a matter of fostering compassionate individuals, but of providing them with tools to question and reflect on the structures that generate suffering and exclusion. This is why the previous section referred to critical thinking as an inseparable element of compassion: we must educate individuals to be compassionate, but also critical. This idea ties into what was noted earlier regarding the development of active tolerance, since educating in compassion through critical thinking can also provide us with tools to recognize that invisible suffering—but above all, to recognize our own responsibilities.

Similarly, educating in ethical compassion has social and cultural implications, as it seeks not only the emotional well-being of the individual but also aims to make an impact and leave a mark on the social sphere. In a context where hate speech finds fertile ground nourished by fear and misinformation, schools can become spaces of resistance that help dismantle phobic discourses. Surely schools cannot be held solely responsible for a problem as vast as the one we face here, but they can certainly be the place where alternative narratives and discourses based on justice, solidarity, and active tolerance are built. To this end, the focus must be on providing an education for meaning and the common good—an education that, “from a humanistic and relational perspective, places human beings and their relationships at the center of the educational process, promoting self-determination, mutual care, and action for the common good” (Buxarraís, 2025, p. 90). Building on this idea, we might



envision an education rooted in ethical compassion. This would serve as a seedbed in which to lay the groundwork for subverting hatred and its discourses —not as something anecdotal and/or isolated, but as a commitment, a civic commitment that endures over time, in which habits will give rise to a sustained and sustainable character (Orts García, 2024) over the long term.

These ideas point to the existence of an intrinsic link between education and character development, understood as the set of habits and dispositions that guide us toward certain ways of acting and that are built day by day through our choices. The habits that incline us to act correctly are called virtues (Cortina, 2007). These virtues are habits that can be taught and cultivated (Codina, 2015); therefore, it is essential to reflect on the types of habits promoted through education, since character development—and, consequently, the way we behave—depends on them. “When schools focus exclusively on the acquisition of knowledge, the personal dimension remains neglected, leading to an impoverished character development and the underdevelopment of social empathy” (Effendi, 2024, p. 10).

Given all this, if we understand that to educate is to help cultivate character—the *ethos*—how should we educate? Based on what values? What virtuous habits should form the foundation? In light of the context of hate and hate speech, we should cultivate—as has been argued—those ethical values that help us forge a character that aspires to a more peaceful, just, and compassionate world. Hence, compassion is considered a habit that must be practiced until it becomes second nature, as it is a way to begin subverting hatred and its discourses. Cortina (2007) asserts that compassion constitutes a moral reason in the face of suffering and misfortune—a motive worth developing because it embodies the bond that unites us and that we must strengthen, since the lack of that bond is surely one of the factors that fuel hatred and hate speech.

Based on this premise, there is a whole series of habits that should be cultivated, as they nurture ethical compassion while steering clear of fleeting and empty sentimentality. This refers specifically to dialogue and active listening, civic shared responsibility, and solidarity embodied in the ethics of care, in which respect for others is neither condescending nor paternalistic, but rather a profound recognition of their human dignity.

In the educational process, there must be communication, an encounter, a genuine dialogue without belittling the other [...] the main idea is to bring what is peripheral to the center, as a participant in a whole; it is no longer a part, it is not seen in isolation, but rather as a single organism (Vivas, 2015, pp. 6–7).



Hence, it could be argued that, in the educational sphere, ethical compassion becomes an essential tool for shaping critical citizens—citizens capable of identifying the structural causes of hatred and its discourses, and of actively committing to their transformation. Understood in this way, compassion is not merely a fleeting impulse but a key component of moral education, linking the affective and emotional dimensions with the rational and ethical ones. By fostering critical reflection, ethical compassion also guides us to examine our own practices and biases, thereby promoting an education that strives for justice, solidarity, and respect for the dignity of all, and thus embraces both individual and collective responsibilities.

In this educational and social context, this is relevant because it allows us to direct critical thinking not only toward external analysis but also toward examining our own motivations and judgments. Thus, educating for ethical compassion and critical thinking means forming individuals capable of discerning when concern serves as a driving force for good and when, conversely, it becomes a pretext for hatred and intolerance. Hence, the constant practice of criticism and self-criticism, accompanied by compassion, is considered a fundamental pillar for building more inclusive and supportive societies, as it enables us to distinguish between feigned and genuine victims, and allows us to focus our attention on areas where vulnerability has left—and continues to leave—open wounds and conflicts.

Conclusions

The analysis presented in this article supports the argument that hate speech constitutes one of the most complex ethical, social, and educational challenges facing contemporary democracies. Its spread cannot be understood solely as the result of deviant individual attitudes or as a problem confined to the realm of language; rather, it must be situated within the framework of broader emotional, cultural, and political dynamics that fuel, legitimize, and normalize it. In this sense, hate manifests as a socially constructed phenomenon that finds in discourse a privileged instrument through which it translates into concrete practices of exclusion, dehumanization, and harm.

This article demonstrates that emotions such as fear and revulsion play a structuring role in the origin and consolidation of hate speech. Far from acting solely at the individual level, these emotions function as genuine cultural elements that organize perceptions, delineate moral

boundaries, and reinforce exclusionary identities. Fear triggers narratives of threat that justify defense against an “other” perceived as dangerous, while projected disgust contributes to stripping that other of their humanity, facilitating their systematic marginalization. When these emotions are reinforced by specific social and political contexts, they become a particularly fertile breeding ground for the proliferation of discourses that legitimize exclusion and violence.

From this perspective, hate speech cannot be understood as mere verbal expressions laden with aversion, but rather as social practices with a profound impact. Language not only reflects hatred but actively activates it, channels it, and turns it into action. Through such discourse, the desire to harm others is normalized, justified, and translated into policies, behaviors, and attitudes that directly affect the dignity and living conditions of specific individuals and groups. This observation reinforces the idea that the response to hate speech cannot be limited to censorship strategies, but requires a thorough examination of the emotional, cultural, and moral elements that underpin it.

Within this framework, the article has highlighted the existence of significant shortcomings among those who uphold and reproduce hate speech. These shortcomings manifest themselves, among other things, in limited critical thinking skills, fragile or impoverished identities, and structural deficits in the realm of emotions and care. These limitations hinder the recognition of the other as a dignified person and foster processes of dehumanization. Recognizing these deficiencies does not imply justifying hate, but rather understanding the conditions that make it possible and, therefore, identifying priority areas for intervention, among which education plays a central role.

Special attention should be given to the deceptive nature of certain hate discourses in the contemporary context. As has been argued, these discourses often present themselves as a victim narrative that deliberately confuses vulnerability with victimhood. By appropriating the language of care and protection, hate manages to legitimize itself as a defensive response to supposedly external threats, effectively sidelining real victims and stripping fundamental notions of democratic coexistence of their moral content. This instrumentalization of suffering not only makes it difficult to identify hate, but also contributes to its normalization and the progressive erosion of democratic values.

In light of this scenario, this article has argued for the need to reclaim a profound understanding of vulnerability as a constitutive feature of the human condition. Far from being a weakness or a moral privilege, vulnera-

bility points to our interdependence and the mutual need that defines us as human beings. Recognizing our shared vulnerability allows us to dismantle exclusionary narratives of victimhood and opens the possibility of building relationships based on care, responsibility, and mutual recognition.

At this point, compassion emerges as a key moral value for countering the logic of hatred. Following the thought of Martha Nussbaum, compassion has been understood here as a complex ethical sentiment that articulates emotional openness to the suffering of others and rational judgment oriented toward justice. This conception allows us to clearly distinguish ethical compassion from its misappropriations, preventing it from being reduced to an uncritical emotion or instrumentalized in the service of exclusion. It is precisely in the tight integration of emotion and reason that its transformative potential lies: ethical compassion is capable of recognizing suffering without hierarchizing it or using it as an excuse to deny the dignity of others.

From this perspective, education emerges as a privileged space for cultivating ethical compassion and critical thinking. Educational institutions cannot limit themselves to the transmission of technical knowledge or instrumental skills; rather, they must assume their responsibility for the moral and civic formation of individuals. In a context marked by overexposure to emotional stimuli, polarization, and emotional manipulation, it is essential to provide tools that enable students to critically interpret discourses, manage emotions, and develop dispositions oriented toward care and justice.

Finally, committing to an education in and for ethical compassion entails a commitment that transcends the individual sphere and extends into the social and political realms. This is neither a naive proposal nor an immediate solution to hatred, but rather a normative framework that guides more inclusive and humane educational and democratic practices. In times when hatred masquerades as care and suffering becomes a rhetorical device, ethical compassion emerges as an indispensable moral compass for resisting dehumanization and strengthening the values that underpin democratic life. Cultivating it is, without a doubt, a complex task, but it remains an inescapable ethical imperative of our time.



Note

1. Martha Nussbaum (2008, p. 237) explains that the things that evoke disgust are those linked to one's own vulnerability to decay, since this implies that one's self will eventually become waste. For this reason, in all cultures, the ability to wash

and dispose of waste is an indicator of human dignity. The philosopher cites Rozin and Fallon (1987) in their paper “A Perspective on Disgust,” where they explain how, based on analyses of certain prisons and concentration camps, it has been established that individuals deprived of access to bathrooms or prohibited from washing themselves could be considered subhuman, making it easier to torture and kill them, since they had been reduced to the status of animals.

Bibliography

- ARCILA CALDERÓN, Carlos, VALDEZ APOLO, María & BLANCO HERRERO, David
2020 Rechazo y discurso de odio en Twitter: análisis de contenido de los tuits sobre migrantes y refugiados en español. *Revista Española de Investigaciones Sociológicas*, (172), 21-40. <https://doi.org/10.5477/cis/reis.172.21>
- ARTETA, Aurelio
2019 *La compasión: apología de una virtud bajo sospecha*. Madrid: Frontera Digital.
- BARRIENTOS RASTROJO, José
2022 La filosofía para niños y jóvenes como prevención y antídoto frente a los discursos de odio. *Isegoría*, 67, e02. <https://doi.org/10.3989/isegoria.2022.67.02>
- BUXARRAIS, María Rosa
2025 Educando para el sentido y el bien común. Un enfoque humanista y relación de la educación. En: Vicent Gozálviz & Patrizia Panarello (eds.), *Horizontes pedagógicos para la igualdad y la justicia social* (pp. 87-105). Valencia: Tirant Humanidades.
- BOELLA, Laura
2004 *Grammatica del sentire: Compassione, simpatia, empatia*. Milán: Cooperativa Universitaria Editrice Milanese.
- BROWN, Brené
2016 *El poder de ser vulnerable: ¿qué te atreverías a hacer si el miedo no te paralizara?* Barcelona: Urano.
- CODINA, María José
2015 *Neuroeducación en virtudes cordiales: cómo reconciliar lo que decimos con lo que hacemos*. Barcelona: Octaedro.
- ECRI
2016 *Recomendación general nro. 15 relativa a la lucha contra el discurso de odio y memorándum explicativo*. <https://bit.ly/43FrP6X>
- CORTINA, Adela
2007 *Ética de la razón cordial: educar en la ciudadanía en siglo XXI*. Oviedo: Nobel.
- CORTINA, Adela
2017 *Aporofobia, el rechazo al pobre*. Barcelona: Paidós.
- EFFENDI, Yulius Rustan
2024 La educación del carácter fundamentada en los valores y normas del sistema filosófico de Indonesia. *Sophia, Colección de Filosofía de la Educación*, (37), 255-282. <https://doi.org/10.17163/soph.n37.2024.08>
- GRACIA CALADÍN, Javier
2018 *El desafío ético de la educación*. Madrid: Dykinson.
- GRACIA CALADÍN, Javier



- 2022a Combatir los discursos del odio en sociedades democráticas y pluralistas. *Isegoría*, 67, 1-4. <https://doi.org/10.3989/isegoria.2022.67.01>
- GRACIA CALADÍN, Javier
- 2022b Educación ética para el desarrollo humano y la inclusión social desde la experiencia de la vulnerabilidad. En: Javier Gracia Calandín (coord.), *Educación ética y filosófica para la inclusión social* (pp. 25-43). Valencia: Tirant lo Blanch.
- GRACIA CALADÍN, Javier
- 2023 La vulnerabilidad como condición humana desde la que educar. En: Javier Gracia Calandín (coord.), *Educación ética y filosófica en contextos de conflicto, heridas y vulnerabilidad* (pp. 25-33). Madrid: Dykinson.
- GRACIA CALADÍN, Javier
- 2026 Contribución de la educación ética en valores para eliminar los discursos de odio. *Sophia, Colección de Filosofía de la Educación*, (40), 51-81. <https://doi.org/10.17163/soph.n40.2026.01>
- GRACIA CALADÍN, Javier & SUÁREZ MONTOYA, Leonardo
- 2023 The Eradication of Hate Speech on Social Media: A Systematic Review. *Journal of Information, Communication and Ethics in Society*, 21(4), 406-421. <https://doi.org/10.1108/JICES-11-2022-0098>
- KLIMECKI, Olga
- 2015 The Plasticity of Social Emotions. *Social Neuroscience*, 10(5), 466-473. <https://doi.org/10.1080/17470919.2015.1087427>
- LEÓN, Eduardo Alberto
- 2014 El asco: una emoción entre naturaleza y cultura. *Saga, Revista de Estudiantes de Filosofía*, (26), 21-39. <https://bit.ly/4egqwkW>
- MARTÍNEZ, Laura, DE SANTIAGO ORTEGA, Pedro, MARTÍNEZ MIRO, Miguel Ángel & HIDALGO RENGIFO, Miriam Sofía
- 2019 Discursos de odio: una epidemia que se propaga en la red. Estado de la cuestión sobre el racismo y la xenofobia en redes sociales. *Mediaciones sociales*, 18, 25-42. <http://dx.doi.org/10.5209/MESO.64527>
- MODZELEWSKI, Helena
- 2017 *Emociones, educación y democracia: una proyección de la teoría de las emociones de Martha Nussbaum*. México DF: UNAM.
- MODZELEWSKI, Helena
- 2016 Fundamentos para un programa de educación de las emociones en una sociedad democrática. *Andamios*, 13(30), pp. 83-110. <https://doi.org/10.29092/uacm.v13i30.4>
- MODZELEWSKI, Helena
- 2020 *Lectores ecuanímes: una educación en ciudadanía a través de narraciones y emociones*. Universidad de la República Uruguay.
- NUSSBAUM, Martha
- 2008 *Paisajes del pensamiento: la inteligencia de las emociones*. Barcelona: Paidós.
- NUSSBAUM, Martha
- 2010 *Sin fines de lucro, por qué la democracia necesita de las humanidades*. Madrid: Katz.
- NUSSBAUM, Martha
- 2014 *Emociones políticas, ¿por qué el amor es importante para la justicia?* Barcelona: Paidós.



ORTS GARCÍA, María

- 2023 La compasión ética: una necesidad educativa ante la vulnerabilidad. En: Javier Gracia Calandín (coord.), *Educación ética y filosófica en contextos de conflicto, heridas y vulnerabilidad* (pp. 51-57). Madrid: Dykinson.

ORTS GARCÍA, María

- 2024 ¿De qué hablamos cuando hablamos de compasión? Hacia un carácter sostenible. En: Javier Gracia Calandín (coord.), *Educación ética y filosófica para el desarrollo de hábitos sostenibles*. Madrid: Dykinson.

PARÍS ALBERT, Sonia

- 2020 Hacia una educación sentimental para subvertir el odio y sus discursos. *Revista de Paz y Conflictos*, 13(2), 145-161. <http://dx.doi.org/10.30827/revpaz.v13i2.15838>

PINEDO CANTILLO, Iván Alfonso

- 2018 De la benevolencia a la ciudadanía compasiva: la recuperación de conceptos claves para el cultivo de la democracia. *Límite*, 13(41), 29-45. <http://dx.doi.org/10.4067/S0718-50652018000100029>

PINEDO CANTILLO, Iván Alfonso

- 2020 Miedo, asco proyectivo y política de la exclusión: el impacto de las emociones en la construcción de la ciudadanía democrática. *Papel Político*, 25, 1-11. <https://doi.org/10.11144/Javeriana.papo25.mapp>

PINEDO CANTILLO, Iván Alfonso

- 2021 Martha Nussbaum: la monarquía del miedo, una mirada filosófica a la crisis política actual. *Ideas y Valores*, 70(176), 202-207. <https://doi.org/10.15446/ideasyvalores.v70n176>

STEVENS, Larry & BENAJMINE, Jasmine

- 2018 The Brain that Longs to Care for Others: The Current Neuroscience of Compassion. En: Larry Stevens & Chad Woodruff (eds.), *The Neuroscience of Empathy, Compassion, and Self-compassion* (pp. 53-83). Academic Press.

TAMARIT, Isabel

- 2025 Educación por el reconocimiento del otro: una propuesta pedagógica basada en el diálogo y el pensamiento crítico. En: Vicent Gozávez & Patrizia Panarello (eds.), *Horizontes pedagógicos para la igualdad y la justicia social* (pp. 169-180). Valencia: Tirant Humanidades.

VIVAS, Jonathan

- 2015 Pensando la educación desde lo plural: el “animal educandum, exdiversitate” en el acto educativo. *Sophia, Colección de Filosofía de la Educación*, (18), 37-54. <https://doi.org/10.17163/soph.n18.2015.02>

272



Author Declaration—CRediT Taxonomy	
Author	Contributions
Maria Orts García	This article was written entirely by the author; as such, the content presented in this document is the sole responsibility of the author.

Statement on the Use of Artificial Intelligence

The author, Maria Orts García, declares that the preparation of the article titled “Ethical Compassion in Education for Overcoming Hate and Its Discourses” was supported by AI for literature search and review, as well as for paraphrasing and proofreading.

Date of receipt: July 3, 2025

Review date: September 20, 2025

Date of approval: November 20, 2025

Publication date: July 15, 2026



THE DECLINE OF REASON UNDER THE ALGORITHMIC POWER OF CONTEMPORARY DEMOCRACY

El declive de la razón bajo el poder algorítmico en la democracia contemporánea

VAN HANH NGUYEN*

Ho Chi Minh National Academy of Politics, Academy of Journalism
and Communication, Hanoi, Vietnam.

<https://ror.org/03hgy0s07>

hvbctt@ajc.edu.vn

<https://orcid.org/0009-0001-7986-8907>

Suggested citation: Nguyen, Van Hanh. (2026). The Decline of Reason under the Algorithmic Power of Contemporary Democracy. *Sophia, Colección de Filosofía de la Educación*, (41), pp. 275-303.

Abstract

This article analyzes the silent decline of reason under the influence of algorithmic power in the digital age. Once the foundation of human freedom and moral agency, reason is now increasingly subordinated to instrumental rationality embodied in algorithms designed for efficiency, prediction, and control. This topic is justified by the urgency of understanding how technological mediation affects autonomy, critical thinking, and democratic participation. The objective of the study is to examine the philosophical and political implications of this transformation. The methodology combines conceptual analysis and critical reflection based on contemporary philosophical sources. Four main propositions are developed: 1) algorithmic power extends the logic of instrumental reason and functions as a mechanism of biopolitical control; 2) critical reason is silently eroded by automated systems that limit reflective judgment; 3) this erosion contributes to an epistemic and political crisis in which public reason is manipulated and moral responsibility fragmented, thereby weakening democracy; and 4) reclaiming reason requires ethical reflection, epistemic agency, and a democratic pedagogy grounded in critical and moral education. The article concludes that defending democracy in the digital age requires more than regulatory frameworks—it demands a deep and sustained revitalization of reason as a central pillar of civic life.

Keywords

Algorithmic power, Public reason, Democracy, Digital capitalism, Critical education.

* She is a professor and researcher in the Department of Scientific Socialism at the Hanoi Academy of Journalism and Communication (Vietnam). Her research focuses on political philosophy, Marxist theory, digital capitalism, algorithmic power, democracy, artificial intelligence, and contemporary democratic crises from interdisciplinary perspectives that combine philosophy, political theory, and communication studies.

Resumen

El presente trabajo analiza el declive contemporáneo de la razón en el contexto del poder algorítmico que caracteriza a la era digital. Una vez fundamentadas la libertad humana y la agencia moral, la razón se encuentra hoy subordinada a la racionalidad instrumental, encarnada en algoritmos diseñados para optimizar la eficiencia, la predicción y el control. La justificación del tema radica en la necesidad urgente de comprender cómo esta transformación tecnológica afecta la autonomía humana, el pensamiento crítico y la vida democrática. El objetivo del estudio es explorar las implicaciones filosóficas y políticas de esta transformación mediante un enfoque teórico-conceptual, sustentado en el análisis crítico de fuentes filosóficas contemporáneas. La metodología utilizada combina la revisión bibliográfica y la reflexión argumentativa. El artículo se organiza a partir de cuatro proposiciones: 1) el poder algorítmico prolonga la lógica de la razón instrumental y actúa como mecanismo de control biopolítico; 2) la razón crítica se debilita progresivamente ante la automatización de los procesos de pensamiento; 3) esta transformación genera una crisis epistémica y política que afecta la razón pública y la responsabilidad moral; 4) defender la democracia digital requiere una pedagogía centrada en la reflexión ética, la agencia epistémica y la educación crítica. Se concluye que revitalizar la razón es condición necesaria para enfrentar los desafíos de la era algorítmica.

Palabras clave

Poder algorítmico, razón pública, democracia, capitalismo digital, educación crítica, control biopolítico.

276



Introduction

Democracy depends not only on institutions but also on the vitality of public reason: the ability of citizens to think critically, distinguish truth from falsehood, and assume moral responsibility in public life. In the algorithmic age, this foundation is increasingly under threat. As digital platforms mediate public discourse through opaque algorithms designed to maximize engagement and control, reason is subtly reshaped. These systems reinforce instrumental, emotional, and polarized modes of thinking, which erode rational deliberation and foster epistemic passivity.

This article argues that the algorithmic governance of public communication contributes to what might be called the silent death of reason: a gradual erosion of critical thinking that remains largely invisible to those affected. Individuals believe they are acting freely, but their perceptions and decisions are shaped by an algorithmic logic that eludes their awareness. The central problem addressed here is how algorithmic power transforms the cognitive conditions of democratic participation and undermines citizens' epistemic and moral agency.

The aim of this study is to offer a philosophical and political analysis of this transformation, positing the hypothesis that defending democracy in the digital age requires more than just normative solutions: it demands a fundamental revitalization of reason as an ethical, epistemological, and

pedagogical imperative. This reflection is particularly timely in a context in which democratic systems around the world are facing crises of trust, polarization, and disinformation—crises exacerbated by the algorithmic organization of knowledge and visibility. From a methodological standpoint, this is a conceptual and theoretical-critical study grounded in political philosophy, media theory, and epistemology. It employs documentary analysis, conceptual reconstruction, and normative reasoning to examine the epistemic and political implications of algorithmic mediation.

The article is structured into four sections. The first examines how algorithmic power embodies and extends the logic of instrumental rationality, transforming the cognitive environment of contemporary society. The second analyzes the silent erosion of reason in the algorithmic age, highlighting its subtle yet profound effects on critical thinking and autonomy. The third section explores the link between epistemic passivity and democratic fragility, showing how algorithm-driven knowledge systems undermine democratic deliberation. Finally, the fourth section proposes a normative response: the revitalization of reason as an ethical, epistemic, and educational imperative essential to restoring democratic accountability in the digital age.

This article addresses the problem of how algorithmic systems reconfigure public reason and democratic agency in contemporary digital societies. It asks: How does algorithmic power contribute to the erosion of critical reason, and what normative responses are required to defend democracy in the digital age? The article argues that algorithmic governance extends the logic of instrumental rationality and biopolitical control, thereby undermining epistemic autonomy and moral responsibility. Its main contribution lies in integrating critical theory, biopolitics, and studies on digital capitalism into a unified philosophical critique of algorithmic democracy.

Theoretical Framework

This study draws on critical theory, particularly the tradition of the Frankfurt School. Horkheimer and Adorno (2002) identified the rise of instrumental reason as a foundational threat to autonomy and emancipation in modern societies. In their classic analysis, rationality—when stripped of its critical and emancipatory functions—is reduced to a mere tool of domination. This insight remains deeply relevant in the digital age, where algorithmic systems intensify the logic of efficiency, prediction, and control at the absolute expense of democratic deliberation and reflection.



Complementing this perspective, Habermas (1984, 1987, 1989, and 1996) emphasized the normative importance of communicative rationality and a robust public sphere as strict prerequisites for democratic life. Algorithmic mediation structurally undermines these conditions for communicative action and public reason by systematically promoting emotional and polarized content while simultaneously suppressing discourse-oriented communication.

Furthermore, Foucault's (2008) theory of biopolitics clarifies how power in contemporary societies operates not through direct, repressive coercion, but through the continuous management of knowledge and subjectivity. Within this framework, algorithmic governance can be interpreted as a contemporary instantiation of algorithmic biopower: a sophisticated mode of regulation that operates through systematic datafication and predictive behavioral control (Yeung, 2018; Zuboff, 2019).

Recent scholarship has also highlighted the role of digital infrastructures in reinforcing epistemic inequality and cognitive manipulation. Zuboff's (2019) concept of "surveillance capitalism," Couldry and Mejías's (2019) critique of data colonialism, and Feenberg's (2005) critical theory of technology provide essential frameworks for understanding how data-driven architectures restructure social relations and epistemic authority. Moreover, the contemporary spread of disinformation and tribalized cognition (Zollo et al., 2017; Ecker et al., 2022; Wardle and Derakhshan, 2017) empirically demonstrates the severe epistemological consequences of algorithmic content curation.

In summary, this theoretical framework integrates the critiques of instrumental reason, biopolitical control, and algorithmic regulation to examine how the overarching logic of digital capitalism erodes public reason, weakens democratic participation, and fragments moral responsibility. Rather than treating the decline of reason as an isolated or purely technological phenomenon, this study situates it within broader structural transformations of knowledge, power, and political agency.

Methodology

This study adopts a theoretical and critical approach that combines a literature review, discourse analysis, critical hermeneutics, and ideological critique to examine the erosion of public reason under algorithmic power. The analysis draws on a diverse theoretical foundation, drawing inspiration from the Frankfurt School—particularly the critical theories



of Adorno, Marcuse, and Habermas—whose reflections on instrumental reason, the culture industry, and communicative action provide a conceptual framework for understanding the manipulation of public reason. The study also addresses Hannah Arendt’s reflections on totalitarianism, the banality of evil, and the collapse of judgment in modern societies, offering important insights into the moral dimensions of epistemic decline. Guided by dialectical materialism, the study situates algorithmic power within the broader socioeconomic structures of digital capitalism. From a dialectical materialist perspective, algorithmic systems are not neutral technological tools, but rather expressions of the economic logic of digital capitalism. The business models of large technology corporations—centered on data extraction, behavior prediction, and the monetization of attention—shape the cognitive environments in which individuals think, interact, and form political judgments. Therefore, the transformation of public reason cannot be separated from the material infrastructures and economic interests underlying algorithmic governance. The analysis unfolds in three stages. First, it reconstructs the philosophical critique of instrumental reason and biopolitical control. Second, it examines how algorithmic systems put this logic into practice within digital capitalism, reshaping public cognition, normalizing epistemic passivity, and contributing to the silent decline of critical and divergent thinking. Third, it assesses the democratic, moral, and educational implications of this transformation through a normative critique, focusing on the crisis of democratic agency and moral responsibility, as well as the urgent need to revitalize reason through ethical and pedagogical frameworks in the digital age.



Algorithmic Power and the Instrumentalization of Reason

This section examines how algorithmic systems embody the logic of instrumental rationality in contemporary digital capitalism. First, it reviews the philosophical concept of reason and then analyzes how algorithmic infrastructures transform rationality into mechanisms of prediction, efficiency, and behavioral control.

The Concept of Reason and the Rise of Instrumental Rationality

Philosophical conceptions of reason have evolved over time, reflecting specific historical contexts. For Immanuel Kant (2004), reason in its broadest sense refers to human intelligence, while in its strictest sense it

constitutes the highest stage of cognition, serving as the foundation for both knowledge and morality—albeit within recognized limits. From a Marxist-Leninist perspective, reason arises from socio-historical conditions, shaped by productive activity and class struggle, and is aimed at rationally organizing society for collective emancipation.

The Frankfurt School, however, issues a critical warning: reason itself can become distorted. Horkheimer and Adorno (2002) argue that, under modern capitalism, reason degenerates into instrumental reason—a form of rationality focused exclusively on efficiency and utility. Instead of fostering moral judgment and critical reflection, instrumental reason reduces both nature and humanity to objects of calculation and control. As they write: “What is in fact destroyed is the dialectic of reason, since instrumental reason turns every relationship into a calculable and controllable process” (p. 97).

This regression, they suggest, begins with the Enlightenment, where the emancipatory promise of reason turned into domination. Human beings became measurable units within production systems, stripped of dignity and redefined by their function. The bureaucratic state and capitalist markets increasingly rely on this logic, reinforcing existing power structures (Habermas, 1984). As Feenberg (2005) points out, this technocratic rationality erodes self-reflection and critical agency.

From this perspective, reason no longer liberates but rather administers. As Horkheimer and Adorno (2002) conclude: “In the administered world, instrumental reason extends its dominion over all spheres of life, dissolving both critical thinking and dialectical reason” (p. 119). The trajectory of reason—from Kantian morality to Marxist emancipation and the pessimism of the Frankfurt School—reveals its alienation under modern conditions. Reason, far from being neutral or immutable, must be examined within its social, economic, and political context.

If algorithms represent the technological embodiment of instrumental reason, the next question is how such systems reshape human cognition and public judgment in everyday digital life.

Algorithms as Technological Embodiments of Instrumental Reason

In contemporary digital capitalism, algorithms—particularly those driven by artificial intelligence (AI) and big data—have become concrete technological embodiments of instrumental reason. Rather than seeking understanding or emancipation, knowledge is increasingly valued for its utility in prediction, control, and optimization (Zuboff, 2019). This log-



ic underpins algorithmic governance, which prioritizes “computability” over deliberative or ethical considerations (Yeung, 2018). Commercially driven algorithms amplify sensationalist and divisive content, reinforcing patterns of behavioral manipulation and epistemic conditioning.

In the late 20th and early 21st centuries, as traditional models of economic growth increasingly revealed their structural limits—such as rising resource costs, market saturation, and the declining efficiency of industrial infrastructure—capitalism faced growing pressure to expand into new spaces of accumulation. Under these conditions, a seemingly limitless digital sphere emerged. Digital platforms became the dominant organizational form of the post-industrial era because they could coordinate multilateral markets, control intermediary infrastructures, and, above all, accumulate data as a strategic asset.

Within these vast and ever-growing repositories of digital information, behavioral data has become one of the most valuable resources. Through the extraction of behavioral surplus, advertising no longer operates through generalized mass exposure, but rather through an increasingly precise alignment with users’ interests, preferences, and consumption patterns. From this transformation emerged a new model of accumulation commonly described as surveillance capitalism. The extraordinary growth of large technology companies over the past two decades has been driven largely by data-centric advertising models built on this logic of behavioral data extraction (Zuboff, 2019, pp. 112–113). As Zuboff argues, surveillance capitalism uses AI to maximize the predictability and control of behavior, institutionalizing instrumental rationality at the core of digital infrastructure. In a “datafied” society, algorithms process enormous sets of behavioral data to optimize performance across all domains—from marketing to police surveillance—at the expense of autonomy and reflexivity (Zuboff, 2019, pp. 241–243).

Mittelstadt et al. (2016) emphasize that “algorithmic systems are designed to optimize predefined objectives—whether click-through rates, user engagement, or revenue generation—through mathematical processes” (pp. 1–2). These systems quantify behavior and automate decisions, reducing freedom to a set of calculated outcomes.

Following the Frankfurt School, Marcuse (2013) warned that the reality principle had been transformed into a performance principle, demanding conformity to productivity and efficiency. As he later observed, “performance and efficiency have supplanted ethical and emancipatory values in advanced industrial society, subjecting human capacities to technological imperatives” (Marcuse, 2013, pp. 17–18). By their very de-



sign, algorithms model and digitize reality according to technical criteria. In doing so, they blur the line between what is rational and what is normatively legitimate. Thus, the warning from the Frankfurt School is no longer theoretical: it is algorithmically encoded in the dominant infrastructures of contemporary life.

Marx and Engels (2002) described capitalism as a system driven by the infinite accumulation of capital and the continuous incorporation of new spheres of life into market relations. From a Marxist perspective, surveillance capitalism represents a new regime of accumulation directed at human life experience, transforming all dimensions of life—search, communication, movement, emotions, and everyday interaction—into data assets subject to capitalist ownership and exploitation. As algorithmic systems increasingly penetrate everyday life through the logic of surveillance capitalism, their influence extends far beyond economic behavior and begins to reshape the cognitive and cultural foundations of democratic society. Thus, the erosion of critical thinking is not limited to individual cognition; ultimately, it transforms democratic culture itself.

282



Algorithmic Governance and the Biopolitical Management of Life

Beyond their instrumental logic, algorithms also function as tools of biopolitical governance. Following Foucault's (2008) concept of biopolitics—the political rationality that governs life and populations—algorithms now manage human existence through data-driven modulation. Rouvroy and Berns (2013) describe algorithmic governance as “a new biopolitical regime in which data-driven processes regulate life, shaping the conditions of existence for populations” (pp. 164–165). With their ability to collect, analyze, and predict behavior on a large scale, algorithmic systems fundamentally reconfigure the structures of life (Cheney-Lippold, 2017).

Zuboff (2019) frames this phenomenon within surveillance capitalism, where human experience becomes raw material for predicting behavior and generating profit. Algorithms silently structure choices, influence attention, and manipulate preferences, often without informed consent. What emerges, is “a coup from above,” in which the private power of data eludes traditional democratic oversight. The result is a new form of domination—psychological rather than physical.

Today, surveillance is no longer limited to the state. As Lyon (2006) argues, the proliferation of digital technologies has expanded the scope of surveillance to the most private aspects of daily life, going beyond the traditional panopticon model (pp. 4–5). Zuboff (2019) expands on Foucault's

metaphor: constant observation through digital platforms invisibly shapes behavior (pp. 234–235). Individuals are continuously monitored, adjusted, and classified—not only as consumers but as governable subjects.

Couldry and Mejías (2019) characterize algorithmic power as a technopolitical assemblage that fuses instrumental reason with biopolitical control (p. 73). Optimization becomes the norm: individuals unconsciously conform to the metrics defined by the system. Although platforms proclaim their neutrality, they actually serve the interests of dominant powers, shaping what is visible, valuable, and legitimate.

Mir (2025) warns that these monopolistic platforms—though efficient—concentrate political and economic influence. Based on Metcalfe’s law, the value of these platforms grows exponentially, as does their potential for manipulation. Once behavioral data is sufficiently comprehensive, users can be “read”—even before they are self-aware—and guided accordingly. In Canada, for example, 80.5% of the population was using Facebook by the end of 2023 (Napoleon Cat, n.d.), giving Meta immense influence over public opinion.

The consequences are not abstract. The Cambridge Analytica scandal revealed how data and algorithms were used to deliver micro-targeted political messages designed to provoke emotional responses and influence undecided voters during the Brexit campaign (Cadwalladr and Graham-Harrison, 2018; Cadwalladr and Townsend, 2018). Thus, disinformation now functions as a strategic form of political communication.

In the 2024 U.S. presidential election, Elon Musk—through platforms such as X and Tesla’s digital ecosystem—used targeted media campaigns to amplify his political influence (Financial Times, 2024). These examples reveal how algorithmic power—once limited to commerce or communication—now extends deeply into the political sphere, reshaping public discourse and challenging the foundations of democratic agency.



The Silent Decline of Reason in the Algorithmic Age

The silent decline of reason in the algorithmic age manifests itself through subtle transformations in the way people think, judge, and engage with information in digital environments. This process not only weakens critical and reflective abilities, but also limits exposure to diverse perspectives, thereby fostering polarized forms of consensus and undermining the conditions necessary for democratic deliberation.

The Erosion of Critical Thinking and Reflective Judgment

The erosion of critical thinking under algorithmic power is not an unforeseen phenomenon. As early as 1964, Herbert Marcuse diagnosed the loss of critical consciousness among modern individuals in a world dominated by technological rationality and consumerist ideology. In *One-Dimensional Man*, he warned that the optimization of commercial interests leads to the atrophy of social criticism, reducing individuals to passive consumers molded by a preconfigured system. New forms of control, masquerading as progress and efficiency, erode freedom by dulling critical faculties—a dynamic that is now intensifying in the algorithmic age. As reason recedes, individuals no longer question the structures around them; they come to desire and accept only what the system offers. Today's digital propaganda aims not only to persuade but also to generate cognitive submission: a population that no longer asks "why" (Bennett and Livingston, 2018).

Despite unprecedented access to information, users are increasingly suffering from cognitive overload. This saturation fosters susceptibility to conspiracy theories and disinformation, which have been key factors in recent global upheavals (Ecker et al., 2022). In Canada's 2025 federal election, for example, the online environment became a chaotic space flooded with misleading content that fractured public opinion, turning democratic discourse into a volatile arena governed more by prejudice than by reason (The White Hatter, 2025). Similar dynamics are observed around the world. TikTok, for example, has become a powerful vector for disinformation regarding events such as the war in Ukraine (Bösch and Divon, 2024).

Online conspiracy theories have succeeded in shaping segments of public consciousness, generating a false consensus around issues such as COVID-19 vaccines or the 2020 U.S. elections (Skafle et al., 2022). This manipulation no longer requires state censorship; it is enough to flood social media feeds with algorithmically targeted narratives. Through calculated amplification, digital platforms enable a form of "manufactured consent" under a new guise. A fragmented public self-organizes around engineered narratives, bypassing deliberation and critical scrutiny.

Platforms such as Meta, Google, and YouTube operate according to a consistent logic: the more they understand users, the longer they can retain their attention, and, consequently, the greater the economic value they can extract. The paradox lies in the fact that this very capacity for "perfect service" also signals an increasingly deep form of dependence.



The more personalized the content and the smoother the experience, the more individuals become integrated into an invisible system of behavioral extraction and modulation. On a cognitive level, this mechanism produces a form of “voluntary orientation,” in which individuals believe they are choosing freely, while the range of available options has already been structured by algorithms optimized for engagement. The result is the gradual erosion of autonomy, as the boundary between authentic needs and artificially constructed desires becomes increasingly blurred. Human beings no longer appear as self-reflective subjects but are reduced to sets of behavioral signals that can be measured, predicted, and exploited within an ever-expanding cycle of data accumulation.

The profits of digital platforms depend directly on their ability to retain users’ attention for as long as possible. Consequently, these platforms have developed an addictive architecture based on psychological mechanisms such as instant rewards and dopamine feedback loops. In other words, the platforms deliberately construct psychological cycles that encourage users to continually seek immediate stimulation, thereby maintaining uninterrupted engagement. This helps explain why many forms of digital psychological distress should not be understood as accidental side effects but rather as predictable outcomes of intentional design. A transnational study conducted by Cheng et al. (2021) across 32 countries revealed that approximately 24% of users show signs of social media addiction. Similarly, a report by the U.S. Department of Health and Human Services (2023) indicated that adolescents who spend more than three hours a day on social media face approximately double the risk of experiencing mental health issues, such as anxiety and depression. These figures reveal the magnitude of the problem and demonstrate the connection between platform structures and the psychological transformation of users.

Paradoxically, while AI chatbots are becoming increasingly intelligent thanks to the data generated by billions of users, humans face a growing risk of what digital culture often describes as “brainrot”—a colloquial term referring to the deterioration of concentration and critical thinking caused by the excessive consumption of brief, repetitive, and low-value digital content, especially on social media platforms, which fosters addictive behavior patterns and reduces people’s ability to engage with more in-depth forms of information. At the same time, the commodification of images, emotions, and online self-presentation increasingly reduces personal value to engagement metrics such as “likes,” “shares,” and “followers.” In this sense, individuals are not only subjected to surveillance but are also valued and quantified within a digital marketplace, contributing to a broader iden-



tity crisis in contemporary society. These developments reflect the widespread nature of the problem and reveal the profound relationship between platform structures and the psychological transformation of users.

The result is troubling: truth becomes fragile and public reason collapses. As Hannah Arendt warned, a society inundated with distorted media loses the foundations of shared reality and, with it, the conditions for sound judgment. Truth, she argued, is “extremely fragile” and can be “manipulated and eliminated from the world by political power” (Arendt, 1972). In such a climate, citizens overwhelmed by contradictory messages are less likely to seek clarity. Instead, they retreat into passivity, becoming vulnerable to carefully designed disinformation campaigns. Algorithms, as discussed earlier, serve as mechanisms for disseminating these campaigns, whether driven by political or commercial objectives. Social media bots further amplify falsehoods, reinforcing cognitive biases and accelerating the spread of unverified claims. Gombar (2025) aptly describes this as a cognitive war, in which public perception is manipulated through digital media ecosystems.

This environment produces a “virtual consensus,” not based on rational debate, but shaped by the control of information. The goal of disinformation is no longer merely deception but disorientation, emotional disengagement, and passive acceptance. The long-term danger is the gradual erosion of the public’s intellectual vitality. Surrounded by personalized content streams, users increasingly consume content without reflection, clicking “like” on entertainment content while disengaging from substantive issues. Over time, this weakens the habits of civil discourse and critical inquiry.

As Van Badham (2024) observes, young people—who are most immersed in digital environments—show early signs of a decline in critical thinking and a decrease in autonomy in their responses to online content. Their social realities are confined to screens where manipulated information is conflated with the truth. In such a world, as O’Hara (2022) warns, digital environments can either enhance or erode human rationality, depending on how they are structured and regulated. In fact, the very process of identity formation is increasingly shaped by these environments. As Alegría Morán (2025) points out, “young people, by shaping the spaces they occupy, also mold their expressions of identity, shaping their virtues, beliefs, and meanings” (p. 274), which highlights that digital spaces are not neutral arenas but rather environments that actively participate in the construction of subjectivity.



The Suppression of Divergent Thinking and the Rise of Polarized Consensus

The algorithmic structuring of digital environments increasingly suppresses divergent thinking and fosters the illusion of consensus through polarization. Arguedas et al. (2022) describe how algorithms trap users in echo chambers or filter bubbles, selectively reinforcing preexisting opinions while excluding opposing perspectives. Under this regime, individuals are no longer exposed to difference but encounter only algorithmically selected affirmations of what they already believe. Traditional gatekeepers—such as editors, journalists, and public intellectuals—have been largely displaced by algorithmic logics that determine visibility based not on truth but on engagement. Platform algorithms increasingly rely on users' immediate behavioral responses, often encouraging forms of engagement that do not necessarily reflect their more profound interests, long-term intentions, or genuine preferences.

Following this logic, personalization fragments the public sphere; algorithms such as Facebook's News Feed and TikTok's "For You" page select content based on behavioral profiles (Mittelstadt et al., 2016), producing what has been described as a "mirror of the self." On TikTok, this process reaches extreme levels: the platform quickly learns users' preferences and offers them a constant stream of content that reinforces them. As *The Verge* noted, TikTok functions as "a TV channel perfectly calibrated to the user's brain" (Sato, 2024). While this hyper-personalization maximizes user engagement, it also limits cognitive exposure and stifles the development of divergent or critical thinking. The 2024 U.S. presidential election vividly illustrated this danger. In the run-up to the election, TikTok became an "optimistic bubble" for Harris supporters, feeding them only content that reinforced her likely victory, which led many to ignore conflicting signals (Sato, 2024).

Such environments foster ideological isolation. People are drawn to like-minded communities, which become isolated enclaves of affirmation rather than spaces for dialogue. In these environments, sensational or emotionally charged content is more likely to spread than measured, fact-based discourse (Dunaway, 2024). The logic of participation favors the provocative over the reflective. Zollo et al. (2017) observe that, within echo chambers, even attempts to correct false beliefs fail because users prioritize identity over evidence.

Polarization is not limited to a single platform. It unfolds in parallel across all digital spaces—including X, YouTube, and Reddit—each of which



cultivates its own internal consensus. Users who express minority opinions face algorithmic invisibility, reduced reach, and, ultimately, self-censorship (Kaiser et al., 2020). As Gearhart and Zhang (2015) point out, this dynamic reflects the “spiral of silence,” in which opinions perceived as minority views are suppressed, allowing dominant narratives to appear hegemonic. The absence of visible dissent should not be confused with genuine agreement; it often reflects the silencing effects of algorithmic control.

Beyond personalization, algorithms actively shape the visibility and popularity of content. Major platforms highlight posts based on engagement metrics, creating an implicit attention economy. Content that performs well—regardless of its factual basis—receives algorithmic rewards, while nuanced or unpopular truths are marginalized. Pennycook et al. (2018) point out that this model prioritizes sensationalism over accuracy, making truth a casualty of the digital competition for attention. The epistemic landscape becomes distorted: what circulates widely is not what is true, but what provokes a reaction.

The political implications are serious. In deeply polarized environments, different communities live in incompatible realities. The absence of shared facts erodes the common ground necessary for rational deliberation. Ecker et al. (2024) warn that this fragmentation fosters mistrust and radicalization. Individuals increasingly perceive their own group as morally correct and numerically dominant, while dissenters are viewed as aberrant or manipulated. When political outcomes challenge these insular expectations, the resulting disillusionment can lead to a breakdown of trust—and even to violent backlash.

The decline of reason does not manifest as overt coercion but rather as the silent disappearance of dissent. Digital publics may appear harmonious, but beneath the surface lies a deeply fragmented epistemic order. The algorithmic suppression of minority opinions creates an artificial consensus, concealing the absence of pluralism (Arguedas et al., 2022). As Marx and Engels (2000) foresaw, modern progress often results in the externalization of the intellect into systems, while human subjectivity is reduced to mechanical responsiveness. In today’s digital age, algorithmic systems seem to possess intellectual life—selecting, predicting, and optimizing—while human reason is reduced to passivity, eroded by patterns it no longer shapes (Marx and Engels, 2000).



From Epistemic Passivity to Democratic Fragility

The erosion of critical reason in digital environments eventually extends beyond the sphere of individual cognition and begins to affect the very foundations of democratic life itself. As citizens become increasingly dependent on algorithm-mediated information systems, epistemic passivity gradually transforms into democratic fragility. This process manifests itself not only in the manipulation of public reason through algorithmic control and disinformation but also in the weakening of democratic agency and moral responsibility in contemporary society.

Algorithmic Power and the Manipulation of Public Reason

Hannah Arendt (1951) famously warned that the blurring of the boundaries between truth and falsehood is one of the most insidious tools of totalitarian control. In her view, the ideal subject of a totalitarian regime is not the committed ideological fanatic, but rather those for whom the distinction between reality and fiction—between the true and the false—no longer exists. This epistemological confusion marks a critical rupture in public reason.

When reason quietly declines, society loses its ability to question, verify, and judge. The result is an epistemologically vulnerable public, highly susceptible to fake news, populist rhetoric, and conspiracy theories. Extremist groups, armed with microsegmentation tools on social media, exploit this vulnerability to spread propaganda tailored to specific psychological and demographic profiles, thereby shaping behavior and influencing election results. Neudert (2017), for example, documented the coordinated use of political bots and German fake news during the country's federal elections, demonstrating how algorithmic agents can be deployed to systematically manipulate democratic processes.

Algorithmic systems trained on biased data further perpetuate structural discrimination. Buolamwini and Gebru (2018) demonstrated how facial recognition systems exhibit severe racial and gender biases, revealing how technological rationality can reinforce existing inequalities rather than dismantle them.

The paradox of digital modernity is that, while information is abundant, public discourse is impoverished. In this post-truth era, noise drowns out the signal, critical perspectives are silenced, and clarity gives way to confusion. McIntyre (2018) described this as a social shift in which truth no longer carries normative weight in public debate. The weaken-



ing of critical reason, accelerated by algorithmic amplification, opens the public sphere to cognitive domination by corporate and political elites.

The philosopher Herbert Marcuse (2013) foreshadowed this dynamic in his analysis of “sublimated slavery”—a state in which individuals internalize domination and confuse coercion with freedom. In today’s digital context, control is no longer exercised openly but is disseminated through algorithmic logics that push, influence, and condition choice. In this way, public reason is not only silenced but also subtly reprogrammed.

The Loss of Democratic Agency and the Crisis of Moral Responsibility

The manipulation of public reason inevitably leads to the erosion of democratic agency. Consent no longer stems from deliberation and understanding but rather from a manipulated perception and an emotional response. As Zuboff (2019) points out, surveillance capitalism introduces “a new form of power that is not based on democratic oversight, but on unilateral knowledge, asymmetry, and behavioral control” (p. 8). Individuals, increasingly influenced by micro-targeted messages, begin to act not as autonomous citizens but as behavioral subjects responding to invisible stimuli.

This situation undermines the ethical foundations of democracy. Nyhan (2020) argues that political advertising often reinforces voters’ misperceptions, while Ranjan and Upadhyay (2024) observe that such advertising tends to oversimplify complex issues, thereby distorting the public’s understanding. Far from empowering citizens, algorithmically curated content narrows their interpretive frameworks and amplifies biases, producing a kind of informational despotism disguised as freedom of expression. The illusion of choice replaces autonomy.

Fragmented audiences, each living in their own personalized information environment, are becoming increasingly polarized. Social media platforms function as polarization machines, eroding common ground and fostering epistemic tribalism. Ecker et al. (2024) warn that such environments foster the illusion that one’s own group is dominant and morally correct, while opponents are perceived as irrational or dangerous. When expectations clash with electoral realities, the result is not reflection but outrage, which fuels political instability.

The consequences are not limited to discourse alone. Digital incitement can translate into real-world violence. Müller and Schwarz (2020) document how far-right propaganda on platforms such as Facebook and Twitter has contributed to hate crimes against immigrants and Muslims. This breakdown of epistemic and social trust weakens society’s ability to



respond collectively to crises such as pandemics, climate change, and economic inequality.

The global dominance of a few digital corporations also threatens national information sovereignty. The case of Meta's (Facebook) 2023 decision to block Canadian media outlets in response to regulatory measures (Patterson, 2024) demonstrates the extent to which corporate power can prevail over democratic governance. This is no longer simply a matter of media bias, but of supranational platforms exercising unilateral control over access to information.

Today, the decline of democracy is less a matter of authoritarian repression than of algorithmic normalization. Digital oligarchs—armed with vast datasets and insights into behavior—exercise subtle control over the public consciousness. They shape not only what people see and believe, but also how they interpret reality and relate to one another. This power, though largely invisible, is deeply political—and deeply moral.

The Enlightenment ideal of democracy is based on the premise that free individuals, guided by reason and capable of exercising moral judgment, can shape their collective destiny. In a world where public opinion is manufactured and moral agency is eroded, that ideal becomes increasingly fragile. The decline of reason, accelerated by algorithmic governance, thus signals not only a crisis of knowledge but also a crisis of moral and democratic responsibility.

291



Revitalizing Reason and Responsibility in the Digital Age

Revitalizing reason and responsibility in the digital age requires more than just technological regulation; it demands the reconstruction of the ethical, epistemic, and educational foundations of democratic life. This renewal involves both reclaiming individual epistemic agency in the face of algorithmic manipulation and fostering a democratic culture based on critical thinking, moral responsibility, and communicative rationality.

Reclaiming epistemic agency through ethics, truth, and pedagogical commitment

Revitalizing reason in the digital age requires a collective commitment to restoring critical reflection and epistemic agency. The first imperative lies in the ethical governance of data and algorithms. As O'Hara (2022) notes, "digital modernity is a subjective world in which reflexivity and choice are externalized to the ambient data infrastructure" (p. 53). In such a world,

individuals lose their autonomy unless mechanisms are put in place to reaffirm control over the infrastructures that shape their cognition.

Big data, now considered the “oil” of the digital economy, is increasingly concentrated in the hands of a few powerful corporations. However, unlike traditional resources, data is intangible, infinitely replicable, and flows at an unprecedented speed. According to Couldry and Mejías (2019), digital capitalism transforms users into unpaid laborers whose behavioral data is collected for profit. Under this regime, democratic oversight is replaced by algorithmic governance, and user autonomy is undermined by opaque infrastructures.

To reverse this dynamic, legal and institutional mechanisms must be strengthened. The UNDP (2019) highlights the need for antitrust regulation and data-sharing obligations to limit monopolistic power and promote democratic transparency. Lessons drawn from the European Union’s (EU) Digital Services Act (DSA) and Digital Markets Act (DMA) suggest that reining in the power of platforms is not only necessary but also possible. Governments must enact robust data legislation, enforce algorithmic transparency, and ensure citizens’ access to pluralistic information.

However, the challenge of regulating algorithmic power cannot be reduced solely to issues of legal transparency or institutional oversight. It also concerns the structural asymmetry inherent in the very forms of “consent” that govern contemporary digital life. In practice, clicking the “I Agree” button has become a mandatory condition for accessing services within the ecosystem of big tech—a vast network of interconnected digital platforms, infrastructures, and services that includes search engines, social media, e-commerce, cloud computing, and AI systems. Formally, these agreements are presented as consensual arrangements between users and platforms. However, they operate according to a coercive “take it or leave it” contractual logic: users must accept the terms or forfeit their participation in essential digital environments.

In contemporary society, where daily life has become deeply dependent on the internet and digital services, people are effectively forced to click “accept” as a procedural necessity rather than as an expression of genuine voluntary choice. Even assuming that users could read these agreements in their entirety, the complexity of the legal structures and specialized technical language makes it difficult for them to understand or critically assess the implications of what they are consenting to. These agreements allow technology companies to unilaterally establish rights to access, extract, analyze, and reuse behavioral data without meaningful negotiation or genuine democratic consent. In this sense, the power



of platforms often sets normative practices before citizens—and even governments—are fully aware of the transformations taking place. The phrase “I Agree,” therefore, does not mark the beginning of a transparent relationship but rather functions as a legal gateway that legitimizes a preconfigured system of power and data surveillance. For this reason, the question of how democratic societies can regulate surveillance capitalism and limit the exploitative extraction of user data has become one of the major legal and political challenges of the digital age.

In the context of data capitalism and the expanding power of global digital platforms, the EU’s General Data Protection Regulation (GDPR) has been regarded as a significant step toward protecting privacy and human dignity in digital spaces. The GDPR asserts that personal data should not be treated merely as an economic resource but as an issue closely tied to citizens’ fundamental rights. Consequently, it establishes strict principles regarding transparency, informed consent, and accountability in data processing. At the same time, the regulation reflects the EU’s broader effort to limit the commercialization and exploitation of behavioral data by transnational technology companies (EU, 2016).

In light of the rapid development of AI, big data, and the platform economy, the GDPR also faces new challenges. In 2025, the EU continued to introduce regulations such as the Data Act and the AI Act, demonstrating that the power of data is no longer limited to the issue of individual privacy but has evolved into a strategic issue involving digital sovereignty, algorithmic power, and social control. This evolution reflects Europe’s broader effort to build a human-centered model of digital governance, aimed at limiting the widespread commodification of human life under the logic of data capitalism and the growing dominance of transnational technology companies (EU, 2016). Although the GDPR and the EU’s most recent data regulations are generally considered significant advances in protecting privacy and limiting the power of digital platforms, their practical effectiveness remains constrained by enforcement challenges and uneven regulatory capacities among EU member states. While regulatory agencies often lack sufficient resources and must contend with lengthy legal proceedings, large tech companies continue to hold significant advantages in terms of financial resources, algorithmic infrastructure, and control over global data ecosystems. As a result, existing regulations serve primarily to restrict and partially regulate data extraction practices, rather than fundamentally transforming the logic of behavioral data accumulation that underpins surveillance capitalism.



Recent analyses of data legislation in 2025 indicate that the United States still lacks a comprehensive federal data protection law comparable to the EU's GDPR: "The United States lacks a comprehensive federal data privacy law comparable to the GDPR. Instead, the responsibility for protecting personal data falls to individual states, many of which have enacted their own privacy laws. Although there have been several attempts to introduce a comprehensive national data privacy law, no such legislation has been enacted to date" (EU, 2016). Precisely because of the absence of a unified federal legal framework, control over personal data in the United States remains largely concentrated in the hands of major digital platforms, making it more difficult to protect personal data compared to the EU's data governance model. These examples demonstrate that personal data protection systems continue to evolve and are far from achieving global coherence or consistency. In this ongoing process, education remains one of the most important solutions.

Equally important is the role of education. Regaining epistemic agency requires a pedagogical transformation. Schools and universities must instill digital literacy, critical thinking, and algorithmic awareness. Citizens must be trained not only to detect fake news but also to question the very structures that mediate the truth. As Nobel laureate Maria Ressa warns (ITN Business, n.d.), exposure to disinformation acts like a slow-acting poison, ultimately reshaping users' perceptions and cognition. Only an educational approach grounded in epistemic vigilance can inoculate people against this erosion. Education enables modern individuals to develop an internal protective shield rooted in each person's cultural values. While legal frameworks continue to evolve, defending reason against algorithmic manipulation ultimately requires recognizing that "culture is the system that regulates development itself" (Partido Comunista de Vietnam, 2026). Culture plays a fundamental role in establishing norms, guiding values, and regulating behavior. In this sense, culture functions as a self-regulatory mechanism for both society and the individual, contributing to the formation of a generation of digitally resilient citizens, endowed with critical awareness, cognitive autonomy, and the ability to resist algorithmic power. These individuals are less likely to become caught up in endless cycles of consumption and entertainment; they can distinguish truth from falsehood, recognize how digital platforms exploit their data, and know when to set limits against the temptations generated by digital conveniences.

Finally, scholars and journalists play a crucial role in deciphering the black-box mechanisms of algorithmic systems. Transparency and ac-

countability must become democratic standards, not technical luxuries. Algorithmic fairness, as Mittelstadt et al. (2016) argue, must be based on ethical and political norms, not merely on computational optimization. The future of democratic life depends on the restoration of public reason through reflective, inclusive, and rules-based digital governance.

Toward a Democratic “Ethos” of Critical and Moral Education

There can be no strong democratic society without citizens capable of exercising reasoned judgment, assuming moral responsibility, and achieving mutual understanding. The Enlightenment legacy of democracy as a project of rational autonomy must be reaffirmed through education and public discourse. As Habermas (1996) states, “democracy depends on the communicative power generated through discourse that approximates the ideal speech situation, thereby guaranteeing the legitimacy of collective decisions” (p. 305). Therefore, education must cultivate the capacities necessary for democratic action. As Durkheim (1951) warned, without moral cohesion, societies sink into anomie and individuals drift away from collective norms (p. 241). Public education must foster a democratic ethos rooted in reason, empathy, and ethical deliberation. This requires that institutions provide not only information but also spaces for discursive participation where conflicting viewpoints can be debated on an equal footing and with mutual respect. Empirical studies underscore that effective democratic education goes beyond rote learning, emphasizing critical thinking, open dialogue, and civic participation (Burbules, 2023; Teegelbeckers et al., 2023). For example, Burbules (2023) observes that the lack of critical thinking skills among a large proportion of citizens leaves democracies “vulnerable to demagoguery and blatant deception” (p. 189). Furthermore, he argues that fostering a commitment to critical inquiry requires not only individual skills but also “networks of social support and encouragement,” so that when one “asks difficult questions or challenges orthodoxies” (p. 189), one is not entirely alone. In practice, this means that educational policies must prioritize curricula and teaching methods that foster debate, ethical reasoning, and collaborative problem-solving. Recent studies on citizenship education suggest that participatory, debate-oriented teaching methods—such as small-group work, civic projects, and democratic decision-making activities—can effectively promote democratic knowledge, political engagement, critical thinking skills, and students’ ability to deal with differences (Teegelbeckers et al., 2023). Therefore, educational systems should aim not only to produce



academically competent graduates but also citizens capable of engaging in rational public dialogue, reflective judgment, and ethical deliberation within the framework of democratic life.

In the digital age, democratic citizenship can no longer be understood solely in legal or institutional terms. Increasingly, citizens are required to navigate complex information ecosystems shaped by algorithms, data mining, and platform governance. Consequently, democratic participation now depends not only on political rights but also on epistemic competencies: the ability to critically evaluate information, recognize manipulation, and participate responsibly in digital public spaces. This transformation requires a redefinition of civic education itself. Schools and universities must cultivate forms of digital citizenship based on ethical responsibility, communicative rationality, and critical self-reflection. Citizens should not limit themselves to passively consuming information but should actively participate in shaping democratic discourse. In this sense, democratic education becomes inseparable from epistemic empowerment. Without these capabilities, individuals risk becoming vulnerable to algorithmic influence, emotional polarization, and manufactured consensus. The defense of democracy depends, therefore, not only on institutional reforms but also on the formation of citizens capable of resisting epistemic manipulation and upholding public reason in increasingly complex technological conditions.

Habermas (1984, 1987, and 1989) developed the concept of communicative rationality as the foundation of democratic legitimacy. In his view, only discourse governed by the force of the best argument—and free from coercion—can generate a legitimate consensus. In an era of algorithmic manipulation, this model is more relevant than ever. Modern societies face a deluge of fragmented information and opinions, often selected by opaque algorithms that amplify sensationalism or reinforce biases. Digital media environments, structured around personalization and microsegmentation, tend to create “echo chambers” and filter bubbles that can erode the common ground of public debate. If left unchecked, these systemic imperatives threaten to colonize the lifeworld, undermining citizens’ ability to engage in genuine dialogue. Algorithmic communication poses profound challenges to democracy. Practices such as filtering, “hyper-boosting,” and microsegmentation on social media increasingly polarize the electorate and weaken the deliberative foundations of democratic society through the large-scale circulation of disinformation. These processes distort the public’s epistemic environment and also create inequalities of influence, as certain actors use data and algorithms to shape



public opinion, while many citizens lack the ability to recognize or resist such manipulation. To counter these trends, institutional spaces dedicated to communicative reason must be strengthened. This involves both reinforcing normative commitments (ensuring that public discourse adheres to the pursuit of truth and respect for individuals) and implementing structural safeguards in the media and technology sectors.

To safeguard democracy, we must move beyond fragmented, algorithm-shaped opinion toward a shared deliberative understanding. This means building infrastructures that support public reasoning: independent journalism, civil society forums, transparent media regulation, and inclusive educational systems. A free and pluralistic press and public-interest media provide forums for the deliberative exchange of ideas and act as a counterweight to disinformation. Similarly, fostering regular civic forums or citizens' assemblies can enable diverse groups to reason together on an equal footing. In the digital sphere, policy interventions are needed to ensure that technology serves democratic ends. This includes greater oversight of social media algorithms and data practices—for example, requiring algorithmic transparency and restrictions on micro-targeted propaganda—as well as robust measures against online disinformation. Emerging AI technologies have the capacity to flood digital media environments with low-quality content, manipulation, and disinformation on a massive scale, thereby undermining social trust and democratic accountability. In response to these risks, increasingly robust measures are needed, including reliable systems for detecting AI-generated content, greater platform accountability, and broader forms of digital and media literacy among citizens. Indeed, media and information literacy must be improved so that citizens can critically evaluate news sources, recognize manipulation, and engage responsibly online. Ultimately, defending democracy in the digital age demands more than reactive regulation: it requires a cultural and philosophical commitment to human dignity, epistemic justice, and moral autonomy. The collective task is to prioritize reason over automation, reaffirm the ethical essence of civic life, and ensure that digital technologies serve the ideals of democratic discourse rather than subverting them. Only through progressive educational policies and resilient communication infrastructures can we equip citizens with the reasoning skills necessary to maintain a truly democratic spirit in the 21st century.



Conclusions

In the digital age, algorithms, big data, and platform infrastructures are no longer limited to mediating communication; they are actively reshaping the cognitive, moral, and political architectures of democratic life. Today, the manipulation of information rarely takes the form of overt censorship. Instead, it is embedded in algorithmic recommendation systems, personalization engines, and predictive analytics that subtly govern visibility, engagement, and beliefs. The rise of filter bubbles, echo chambers, manufactured consensus, and data-driven behavioral control signals a profound epistemic shift: algorithmic power—rooted in instrumental reason and sustained by biopolitical mechanisms—now penetrates the very heart of public reason and political autonomy.

298



This algorithmic colonization marks a technological evolution and a philosophical regression: the decline of reason itself. Modern democracy, which was once founded on critical thinking, communicative action, and rational consensus, now faces an erosion that stems not from dramatic ruptures but from the gradual normalization of irrationality. As transparency gives way to opacity and deliberation is displaced by manipulated participation, the foundations of democratic legitimacy begin to crumble.

However, this decline is not inevitable. It is neither irreversible nor immune to resistance. The challenge before us is not merely normative or technological but deeply philosophical and civic: to reaffirm human reason as the guiding principle of digital society. This means confronting the instrumental rationality underlying algorithmic systems and replacing it with a normative commitment to truth, justice, and democratic accountability.

Reversing this trajectory requires a multifaceted strategy. It calls for legal mechanisms to curb monopolistic data power and enforce algorithmic transparency. It demands that public institutions and educational systems foster digital literacy, moral judgment, and epistemic vigilance.

In this collective effort, communicative rationality must be restored as the cornerstone of public life. In the face of the pressures of algorithmic governance, citizens must be empowered to deliberate, dissent, and decide together. Only by restoring the primacy of reason over code—of human agency over algorithmic determinism—can we hope to safeguard the moral integrity of democracy. The future of freedom in the digital age depends on our willingness to defend reason itself.

Bibliography

- ALEGRÍA MORÁN, José Rolando
 2025 La relación entre jóvenes y redes sociales en el habitar espacios virtuales. *Sophia, Colección de Filosofía de la Educación*, (39), 257-280. <https://doi.org/10.17163/soph.n39.2025.08>
- ARENDT, Hannah
 1951 *The Origins of Totalitarianism*. Harcourt: Brace.
- ARENDT, Hannah
 1972 *Crises of the Republic: Lying in Politics, Civil Disobedience, on Violence, Thoughts on Politics and Revolution*. Londres-Nueva York: Harcourt Brace & Company. <https://bit.ly/4x7KRR4>
- ARGUEDAS, Amy Ross, ROBERTSON, Craig, FLETCHER, Richard & NIELSEN, Rasmus
 2022 *Echo Chambers, Filter Bubbles, and Polarisation: A Literature Review*. Reuters Institute; University of Oxford. <https://bit.ly/4xc7sMo>
- BADHAM, Van
 2024 Social media is making kids sad-and it's bad news for democracy. *The Guardian*. 23 de marzo. <https://bit.ly/3S2skp3>
- BENNETT, Lance & LIVINGSTON, Steven
 2018 The disinformation order: Disruptive communication and the decline of democratic institutions. *European Journal of Communication*, 33(2), 122-139. <https://doi.org/10.1177/0267323118760317>
- BUOLAMWINI, Joy & GEBRU, Timnit
 2018 Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification. En: *Proceedings of the 1st Conference on Fairness, Accountability and Transparency*. <https://bit.ly/4uRXRbY>
- BÖSCH, Marcus & DIVON, Tom
 2024 The sound of disinformation: TikTok, computational propaganda, and the invasion of Ukraine. *New Media & Society*, 26(9), 5081-5106. <https://doi.org/10.1177/14614448241251804>
- BURBULES, Nicholas
 2023 Critical thinking and the conditions of democracy. *Education Policy Analysis Archives*, 31(104). <https://doi.org/10.14507/epaa.31.8062>
- CADWALLADR, Carole & GRAHAM-HARRISON, Emma
 2018 Revealed: 50 Million Facebook Profiles Harvested for Cambridge Analytica in Major Data Breach. *The Guardian*. 17 de marzo. <https://bit.ly/4en2gh2>
- CADWALLADR, Carole & TOWNSEND, Mark
 2018 Revealed: The ties that bound Vote Leave's data firm to controversial Cambridge Analytica. *The Guardian*. 24 de marzo. <https://bit.ly/3S4pdwV>
- CHENG, Cecilia, LAU, Yan-Ching, CHAN, Linus & LUK, Jeremy
 2021 Social media addiction across 32 nations: A meta-analysis. *Addictive Behaviors*, 117, 106845. <https://doi.org/10.1016/j.addbeh.2021.106845>
- CHENEY-LIPPOLD, John
 2017 *We Are Data: Algorithms and the Making of Our Digital Selves*. New York University Press.



COULDRY, Nick & MEJÍAS, Ulises

- 2019 Data colonialism: Rethinking big data's relation to the contemporary subject. *Television & New Media*, 20(4), 336-349. <https://doi.org/10.1177/1527476418796632>

PARTIDO COMUNISTA DE VIETNAM

- 2026 *Resolution No. 80-NQ/TW on the development of Vietnamese culture*. <https://bit.ly/4vjMIR4>

DUNAWAY, Roger

- 2024 Rage Clicks: Study Shows how Political Outrage Fuels Social Media Engagement. *Tulane University News*. 9 de octubre. <https://bit.ly/4o6mYoE>

DURKHEIM, Émile

- 1951 *Suicide: A Study in Sociology*. Free Press.

ECKER, Ullrich, LEWANDOWSKY, Stephan, COOK, John, SCHMID, Pascal, FAZIO, Lisa, BRASHIER, Nadia, KENDEOU, Panayiota, VRAGA, Emily & AMAZEEN, Michelle

- 2022 The psychological drivers of misinformation belief and its resistance to correction. *Nature Reviews Psychology*, 1, 13-29. <https://doi.org/10.1038/s44159-021-00006-y>

ECKER, Ullrich, TAY, Lisa, ROOZENBEEK, Jon, VAN DER LINDEN, Sander, COOK, John, ORESKES, Naomi & LEWANDOWSKY, Stephan

- 2024 Why misinformation must not be ignored. *American Psychologist*, 80(6), 867-878. <https://doi.org/10.1037/amp0001448>

EU (EUROPEAN UNION)

- 2016 *Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation)*. *Official Journal of the European Union*. <https://bit.ly/4vkYj2a>

FEENBERG, Andrew

- 2005 Critical Theory of Technology: An Overview. *Tailoring Biotechnologies*, 1, 47-64. <https://bit.ly/4ue4pAy>

FINANCIAL TIMES

- 2024 *Elon Musk's riskiest bet yet: Donald Trump*. <https://bit.ly/4o1Sns0>

FOUCAULT, Michel

- 2008 *The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979*. Palgrave: Macmillan.

GEARHART, Sherice & ZHANG, Weiwu

- 2015 "Was it something I said?" "No, it was something you posted!" A study of spiral of silence in social media contexts. *Cyberpsychology, Behavior, and Social Networking*, 18(4), 208-213. <https://doi.org/10.1089/cyber.2014.0443>

GOMBAR, Marija

- 2025 Algorithmic manipulation and information science: Media theories and cognitive warfare in strategic communication. *European Journal of Communication and Media Studies*, 4(2), 1-11. <https://doi.org/10.24018/ejmedia.2025.4.2.41>

HABERMAS, Jürgen

- 1984 *The Theory of Communicative Action, Volume One: Reason and the Rationalization of Society*. Boston: Beacon Press.



HABERMAS, Jürgen

1987 *The Theory of Communicative Action, Volume Two: Lifeworld and System: A Critique of Functionalist Reason*. Boston: Beacon Press.

HABERMAS, Jürgen

1989 *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Boston: MIT Press.

HABERMAS, Jürgen

1996 *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy*. MIT Press.

HORKHEIMER, Max & ADORNO, Theodor

2002 *Dialectic of Enlightenment: Philosophical Fragments*. Stanford University Press.

ITN BUSINESS

s. f. Nobel Prize laureate Maria Ressa on fighting misinformation online. <https://bit.ly/4x6WJm9>

KAISER, Jonas, RAUCHFLEISCH, Adrian & BOURASSA, Nikki

2020 Connecting the (far-)right dots: A topic modeling and hyperlink analysis of (far-)right media coverage during the US elections 2016. *Digital Journalism*, 8(3), 422-441. <https://doi.org/10.1080/21670811.2019.1682629>

KANT, Immanuel

2004 *Critique of Pure Reason*. Văn học Publishing House.

LYON, David

2006 *Theorizing Surveillance: The Panopticon and Beyond*. Willan Publishing.

MARCUSE, Herbert

2013 *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society*. Boston: Beacon Press.

MARX, Karl & ENGELS, Friedrich

2000 *Collected Works* (vol. 12). Hanói: National Political Publishing House.

MARX, Karl & ENGELS, Friedrich

2002 *Collected Works* (vol. 23). Hanói: National Political Publishing House.

McINTYRE, Lee

2018 *Post-Truth*. Boston: MIT Press. <https://doi.org/10.7551/mitpress/11483.001.0001>

MIR, Andray

2025 The Benefits of Platform Monopoly. *Pro Market*. 6 de abril. <https://bit.ly/3S2i3Jw>

MITTELSTADT, Brent, ALLO, Patrick, TADDEO, Mariarosaria, WACHTER, Sandra & FLORIDI, Luciano

2016 The ethics of algorithms: Mapping the debate. *Big Data & Society*, 3(2), 1-21. <https://doi.org/10.1177/2053951716679679>

MÜLLER, Karsten & SCHWARZ, Carlo

2020 Fanning the flames of hate: Social media and hate crime. *Journal of the European Economic Association*, 19(4), 2131-2167. <https://doi.org/10.1093/jea/jvaa045>

NAPOLEON CAT

s. f. Facebook users in Canada December 2023. <https://bit.ly/4dLEBa2>

NEUDERT, Lisa-Maria

2017 Computational Propaganda in Germany: A Cautionary Tale. En: *Computational Propaganda Research Project*. University of Oxford. <https://bit.ly/4en7Q2Y>





NYHAN, Brendan

- 2020 Facts and myths about misperceptions. *Journal of Economic Perspectives*, 34(3), 220-236. <https://bit.ly/43MzEry>

O'HARA, Kieron

- 2022 *Digital Modernity. Foundations and Trends® in Web Science*, 9(1-2), 1-254. <https://doi.org/10.1561/18000000031>

PATTERSON, Jessica

- 2024 How Meta's news ban reshaped Canadian media. *Digital Content Next*. 12 de septiembre. <https://bit.ly/4uKYnbB>

PENNYCOOK, Gordon, BEAR, Adam, COLLINS, Evan & RAND, David

- 2018 The Implied Truth Effect: Attaching warnings to a subset of fake news stories increases perceived accuracy of stories without warnings. *Management Science*, 66(11), 4944-4957. <https://doi.org/10.1287/mnsc.2019.3478>

RANJAN, Ashwini & UPADHYAY, Ashwani Kumar

- 2024 Exploring the continuity and change in political advertising research: A systematic literature review. *Cogent Social Sciences*, 10(1), 2376853. <https://doi.org/10.1080/23311886.2024.2376853>

ROUVROY, Antoinette & BERNS, Thomas

- 2013 Algorithmic governmentality and prospects of emancipation. *Réseaux*, 177(1), 163-196. <https://doi.org/10.3917/res.177.0163>

SATO, Mia

- 2024 Pro-Harris TikTok felt safe in an algorithmic bubble—until Election Day. *The Verge*, 14 de noviembre. <https://bit.ly/4fkpFAT>

SKAFLE, Ingjerd, NORDAHL-HANSEN, Anders, QUINTANA, Daniel, WYNN, Raymond & GABARRON, Elia

- 2022 Misinformation about COVID-19 vaccines on social media: Rapid review. *Journal of Medical Internet Research*, 24(8), e37367. <https://bit.ly/3Skcwhx>

THE WHITE HATTER

- 2025 *Canada's 2025 federal election: A digital battleground for misinformation & disinformation—A teachable moment for youth*. 14 de abril. <https://bit.ly/4uj8YJZ>

TEEGELBECKERS, Jip, NIEUWELINK, Hessel & OOSTDAM, Ron

- 2023 School-based teaching for democracy: A systematic review of teaching methods in quantitative intervention studies. *Educational Research Review*, 39, 100511. <https://doi.org/10.1016/j.edurev.2023.100511>

UNDP (UNITED NATIONS DEVELOPMENT PROGRAMME)

- 2019 *2019 Human Development Report: Inequality in Human Development in the 21st Century: Not Just About Income, Averages, and Present*. UNDP. <https://bit.ly/4x4Jtyq>

U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

- 2023 *Social Media and Youth Mental Health: The U. S. Surgeon General's Advisory*. <https://bit.ly/43QBI1C>

WARDLE, Claire & DERAHKSHAN, Hossein

- 2017 *Information Disorder: Toward an Interdisciplinary Framework for Research and Policy Making*. Council of Europe. <https://bit.ly/4dYZWvs>

YEUNG, Karen

- 2018 Algorithmic regulation: A critical interrogation. *Regulation & Governance*, 12(4), 505-523. <https://doi.org/10.1111/rego.12158>

ZOLLO, Fabiana, BESSI, Alessandro, DEL VICARIO, Michela, SCALA, Antonio, CALDARELLI, Guido, SHEKHTMAN, Liron, HAVLIN, Shlomo & QUATTROCIOCCI, Walter

2017 Debunking in a world of tribes. *Plos One*, 12(7), e0181821. <https://doi.org/10.1371/journal.pone.0181821>

ZUBOFF, Shoshana

2019 *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. Public Affairs.

Author Declaration—CrediT Taxonomy	
Author	Contribution
Van Hanh Nguyen	Conceptualization, research, drafting of the original manuscript, review, and editing. As this is a single-authored document, the author bears sole responsibility for the entire research presented herein.

Statement on the Use of Artificial Intelligence
The author, Van Hanh Nguyen, of the article titled “The Decline of Reason Under Algorithmic Power in Contemporary Democracy,” declares that artificial intelligence (AI) tools were used to a limited extent (less than 5%) during the preparation of the manuscript. AI was used exclusively for: 1. Assist in searching for and consulting academic references related to the article’s topic. 2. Support the translation of the abstract and keywords into Spanish. All results generated with the help of AI were critically reviewed, verified, and edited by the author. AI was not used in the development of the main arguments, the theoretical framework, the analysis, or the fundamental academic content of the article.

Date received: July 3, 2025
Review date: September 20, 2025
Date of approval: November 22, 2025
Publication date: July 15, 2026

THE LOGICAL GAPS IN CONTEMPORARY NEOSTOICISM

Las lagunas lógicas en el neoestoicismo contemporáneo

JOSÉ BARRIENTOS RASTROJO*

Universidad de Sevilla, Spain

<https://ror.org/03yxnp24>

barrientos@us.es

<https://orcid.org/0000-0002-0127-2644>

Suggested citation: Barrientos Rastrojo, José. (2026). The Logical Gaps in Contemporary Neostoicism. *Sophia*, Colección de Filosofía de la Educación, (41), pp. 305-336.

Abstract

Over the past two decades, Stoicism has experienced a renewed revival across diverse contexts. Unfortunately, this restoration has distorted it due to narcissistic and capitalist biases. This neo-stoicism has turned stoicism into an instrument for purposes that are far removed from its origins. This is the case of Donald Robertson's therapeutic approach, Ryan Holiday's business approach, and Francisco Vázquez's approach connected to resilience for physical training. It is therefore necessary to expose the shortcomings of these authors and other phenomena associated with this movement. In addition to uncovering the gaps in this neo-Stoicism in relation to logic, one of the three pillars of this philosophy, this article aims to recover the fundamental notions of logic ignored by this new movement. To this end, it uses a methodology of analysis of primary sources and secondary literature in order to restore stoic original foundations and interests. The results and conclusions demonstrate that there is a significant list of elements unknown to the aforementioned neo-Stoicism that must be restored for academic research and social dissemination. It also concludes that the eradication of the fundamental elements of logic in the Stoic reading distorts other Stoic pillars, particularly ethics.

Keywords

Philosophical schools, Knowledge, Education, Ancient era, Philosopher, Philosophy.

* Professor at the University of Seville (Spain). He has directed seven national and international research projects (funded by the European Union, the John Templeton Foundation in the United States, and the University of Chicago). He has also supervised ten doctoral dissertations in various countries (Spain, Italy, Mexico, Argentina, and Colombia) and serves as editor-in-chief of the world's leading academic journal in applied philosophy—and the second-leading journal in the field of philosophy in Spain—the *HASER International Journal of Applied Philosophy*. h-index: 14.

Resumen

Las dos últimas décadas han sido testigos de la enésima recuperación del estoicismo en contextos plurales. Desgraciadamente, esta restauración lo ha deformado debido a sesgos narcisistas y capitalistas. Ítem más, este neoestoicismo ha convertido el estoicismo en un instrumento para fines que son ajenos a sus orígenes como sucede con la terapeutización de Donald Robertson, la introducción en moldes empresariales de Ryan Holiday y el uso para la resiliencia ante el entrenamiento del cuerpo realizado por Francisco Vázquez. Por ello, se hace necesario el desenmascaramiento de las lagunas de estos autores y del resto de fenómenos que se incardinan en este movimiento. Este artículo además de destapar las lagunas de este neoestoicismo en relación con la lógica, uno de los tres pilares de esta filosofía, pretende recuperar las nociones fundamentales de la lógica ignoradas por este nuevo movimiento. Para ello, usa una metodología de análisis de fuentes primarias y literatura secundaria con el fin de restaurar las bases e intereses originales. Los resultados y conclusiones demuestran que existe un listado importante de elementos desconocidos por el citado neoestoicismo que debe ser restaurado para la investigación académica y para su divulgación social. Asimismo, se concluye que la erradicación de los elementos fundamentales de la lógica en la lectura estoica tergiversa otros pilares estoicos, muy particularmente la ética.

Palabras clave

Escuelas filosóficas, conocimiento, educación, edad antigua, filósofo, filosofía.

306



Introduction

Toward a Critical Perspective on Neo-Stoicism

The last twenty years have seen the publication of a series of self-help books written by American and British authors, peppered with neo-stoic moral slogans. Likewise, Stoic theory has spread through social media and schools that seek to revive the ideas of Seneca or Marcus Aurelius. Unfortunately, their theories distort the original sources. They transform these philosophers' maxims into narcissistic interpretations and exploit them for purposes unrelated to these philosophical traditions.

The aim of this work is, on the one hand, to unmask these distortions and, on the other, to reveal the gaps in contemporary neo-stoicism. By "gaps," we refer to the shortcomings of the neo-stoic trend in relation to the theory found in the original sources. In this sense, neo-stoicism exhibits philosophical deficiencies stemming from a flawed reading of the sources. Furthermore, this is due to the authors' integration into non-philosophical frameworks such as psychology (as in the case of Donald Robertson), business studies (as seen in Ryan Holiday), or sports science (as in the case of Marcos Vázquez).

Following this line of reasoning, the general hypothesis of this work posits that the most widespread trends in contemporary Stoicism are flawed due to an insufficient study of this school of thought and, fur-

thermore, utilize the ideas of these thinkers in contexts far removed from their roots. Thus, the classical Stoic quest for *logos* does not align with the use of the works of Marcus Aurelius or Epictetus to enhance consumer success, increase resilience in relation to physical training, or reduce anxiety or stress.

The prominence these trends are gaining in contemporary society calls for an academic examination of their tenets to prevent the spread of Stoic interpretations that run counter to the original sources.

The methodology for conducting our study is based on several pillars. First, the tracing of neo-stoicism, linking this task both to the study of bestsellers and the most widely read authors (Robertson, Holiday, Pigliucci, Vázquez) in this field as well as to Stoic sources (works of late Stoicism —Seneca, Epictetus, Musonius Rufus, Marcus Aurelius— and works or fragments of middle and early Stoicism —Zeno, Cleanthes, Chrysippus, Diogenes of Babylon, Posidonius, and Panaetius). In addition, we have drawn upon secondary literature (highlighting classic works such as those by Hadot, Foucault, Pohlenz, Brun, and Elorduy, among others). The analysis of neo-stoicism has required us to examine phenomena in audiovisual culture, such as films and social media, to gain a comprehensive view of Stoicism. This exploration allows us to synthesize the fundamental features of Stoic theory. Furthermore, the investigation helps identify the gaps in Neo-stoicism regarding one of its three pillars: logic, which is the subject of this work. Finally, we conclude with a proposal for steps that anyone trained in Neo-stoicism should take to conduct a study of this school of thought that is more faithful to the sources.

The preceding paragraph serves to explain the structure of the article. It consists of three parts: a study of the dimensions and gaps in Neo-Stoicism, an analysis of the elements of Stoicism overlooked by Neo-Stoicism, and proposals for how Neo-Stoicism can improve its approach to Stoic philosophy.

Neo-Stoicism

As noted above, Neo-Stoicism is a multifaceted phenomenon. In addition to written works, it includes social media profiles, courses offered by organizations, and even movies and TV series. This section examines this phenomenon and, in its second subsection, summarizes the characterization of Stoicism presented by its proponents.



Neo-Stoicism in “Best-Sellers”

Donald Robertson (2013), an English psychologist, discovered two decades ago that Stoicism offered a set of tools useful for his work as a therapist and for cultivating “calm and self-control in the face of life’s difficulties” (p. 11). These connections between Stoicism and cognitive-behavioral therapy grew ever closer, leading him to publish several studies (Robertson, 2000, 2013, 2016, 2019, and 2020; Robertson and Codd, 2019), most notably *Stoicism and the Art of Happiness: Practical Wisdom for Everyday Life* (2013) and *Think Like a Roman Emperor* (2020). It should be noted that he also conducted studies on mental illness from a philosophical perspective (Raabe, 2010). In parallel with these endeavors, he launched the “Stoic Mindfulness and Resilience Training” course in 2014, which views the teachings of Marcus Aurelius and Seneca as a tool for building resilience.¹ He later achieved success with his “Stoic Week,” which has now reached more than forty thousand people.²

Although the American Ryan Holiday took courses in political science and creative writing in college, he never graduated. Despite this, he knew how to capitalize on the marketing classes he took to devise a clever ploy that made him famous: he appeared on television shows using fake profiles to complain about various companies. These strategies laid the groundwork for him to become the CMO of American Apparel and to write books such as *Trust Me, I’m Lying: Confessions of a Media Manipulator* (2013). However, for nearly a decade, his main source of income has been teaching courses and writing books on Stoicism (Holiday, 2014, 2016, 2021, and 2023; Holiday and Hanselman, 2014 and 2020).

Marcos Vázquez, a university-trained engineer certified in nutrition and fitness, is the author of another neo-stoic bestseller: *Undefeated: Achieve More, Suffer Less* (Vázquez, 2021). He had a sickly childhood due to physical problems such as asthma and allergies. As a teenager, he joined a gym in hopes of strengthening his physique and overcoming his limitations; however, the results were meager, so he created his own methodology: “revolutionary fitness.” His program integrates several pillars: nutritional recommendations, strength-building exercises, and philosophical activities designed to enhance mental clarity and decision-making through critical thinking. This last aspect is cultivated through meditation exercises and Stoic philosophy. This is where his book *Invicto* comes into play. Unlike the authors mentioned earlier, Vázquez has written only this one book on Stoicism, devoting the rest of his publications to nutrition or fitness.



Massimo Pigliucci, a professor at City College of New York, continues the tradition of neo-stoic bestsellers with *How to Be a Stoic* (2018), *The Forging of Character* (2023), and *My Stoic Notebook* (Pigliucci and López, 2019). Although the first text presents a form of Stoicism aligned with the ideas of classical thinkers, the volume co-authored with López veers off course by mixing the intentions of Seneca or Epictetus with psychological ideologies, endowing this philosophical tradition with an instrumental pragmatism foreign to the primary sources.

These authors have promoted neo-stoic courses, conferences, and institutions that share the philosophy's instrumental spirit. The program with the highest number of participants is the aforementioned Stoic Week, created in 2012 as a study group for students at the University of Exeter. Its success was stratospheric: during the first week, more than 150 people signed up, and, as noted, it has now reached more than 40,000 people. This group trains its participants over seven days through philosophical exercises and three daily meditations linked to five pillars (Modern Stoicism Team, 2020):

- Happiness
- The four Stoic virtues: wisdom, courage, justice, and moderation
- Individual ethical development
- Emotions
- Contemplation of Nature

Building on this success, Stoa centers have opened their doors in various countries, offering similar educational programs (Pohlenz, 2022). Such is the case with the Stoa in Madrid, founded by a foreign economist enamored with Roman Stoicism, which offers courses and seminars organized into three programs: a philosophical gym, a “mentoring” program that—inspired by Robertson—combines Stoicism and “rational emotive behavior therapy,” and an assessment of progress through individualized monitoring.

Neo-stoicism has also proliferated on social media. There are dozens of Stoicism groups on Facebook that bring together thousands of followers, such as “Estoicos-estoicismo” (424,000 members), “Estoicismo/ estoicos Bogotá Colombia. Path to Holistic Development” (334,000 members), “Stoic Journal” (73,000 members), “Stoicism for Beginners” (11,000 members), “Stoicism” (3,700 members), “Stoicism in Spanish” (8,000 members), “Practical Stoicism: Journals, Meditations, and Reflections” (6,400 members), and “Stoicism. Colombia” (5,200 members). It should be noted that membership numbers are constantly increasing, and the figures presented here are as of August 20, 2023. Furthermore, this num-



ber is higher when groups on other platforms such as Telegram or TikTok are taken into account. Finally, we must include TikTokers and influencers who have used Stoic slogans to achieve success—as defined within the ideological framework of capitalist society.

Added to this social media explosion is Hollywood's commodification of the Stoic spirit through characters who display a theatrical control over their emotions. The stern, furrowed-browed gazes of gunfighters in Western films set an important precedent. Recent years have seen franchises like *Star Trek* (remember Mr. Spock) and *Star Wars* continue to rake in dollars and euros by leveraging the Stoic emotional profile. The Jedi's mastery of the Force (and their passions) is a prime example (even though George Lucas has indicated that his source of inspiration is more Eastern in origin—i.e., derived from bushido and Buddhism). The Jedi have been joined by new faces and new galactic tribes. The latest has been the series about the Mandalorians (*The Mandalorian*, *The Book of Boba Fett*), who reaffirmed their loyalty to a rationalist creed of honor ("This is the way") that echoes Stoicism. In fact, Mandalorians and Jedi have ultimately merged in television productions such as the recent *Ahsoka*.

310



Basic Characteristics of Neo-Stoicism

Neo-Stoic authors share the following common traits

- Lack of familiarity with (or significant gaps in knowledge regarding) primary sources. Although they often cite Epictetus, Marcus Aurelius, and Seneca (frequently using somewhat careless translations), it is less common to find ideas from Cicero or Chrysippus in their writings. Even more serious is the complete absence of citations from Zeno, Cleanthes, Diogenes of Babylon, Panaetius, Posidonius, or Musonius Rufus. Furthermore, there are no references to academic secondary literature; i.e., there are no references to the studies by Barth (1930), Pohlenz (2022), Brun (1977), or Elorduy (1972a and b), with the sole exception of Pierre Hadot (2006). This omission obscures contentious aspects of Stoicism that conflict with contemporary values, such as the defense of slavery (Seneca, 1986, pp. 55–56) or of divination (Cicero, 1988).
- The authors come from professions and fields of knowledge outside of philosophy, such as psychology, business and marketing, or physical education and nutrition. The only exception

is Pigliucci, although his most recent works have been carried out in collaboration with López, a psychologist by profession.

- Instrumentalization of Stoicism. As a result, Stoicism is treated as a tool for purposes unrelated to philosophy. The objectives of their work are therapeutic in nature (Robertson, 2000, 2013, 2016, and 2019; Robertson and Codd, 2019; Brown et al., 2022; MacLellan and Derakhshan, 2021; Ohayon and Flanagan, 2019; Gill, 2016), seek physical improvements (Vázquez, 2021), or succumb to normalized capitalist productivism (Holiday and Hanselman, 2020) —all of which are far removed from the goals of a philosophical education (Silva Carreño et al., 2023, pp. 183-205). This is driven by the fact that the cited authors understand and explain Stoicism from within the extra-philosophical ideological frameworks in which they were trained.
- Individualism. Since narcissism is one of the dominant characteristics of the Western social system, these authors fail to separate it from the objectives of their proposals (Holiday and Hanselman, 2020, p. 119), prioritizing it over the original cosmopolitan and political character of classical Stoicism (Marcus Aurelius, 2005, pp. 123, 139–140, 199).
- Lack of critique regarding capitalist social excesses. The previous point is reinforced by a lack of critical and analytical tools among these authors to challenge the ideologies and sensibilities of the economic system.
- A focus on morality and a neglect or ignorance of Stoic physics and logic (Vázquez, 2021; Robertson, 2020; Holiday and Hanselman, 2020).

This study will focus on the last point and leave the remaining topics for future research. Thus, the objective is twofold. The first is to expose the shortcomings of neo-stoicism regarding logic. This negative goal is complemented by a second, positive one: to identify and clarify the elements of logic that complete the theories of the new Stoics.

The Dominance of Morality in Neo-Stoicism

One of the main errors of neo-stoicism is to characterize the Stoic movement exclusively from a moral perspective. This section examines this deviation and lays the groundwork for a critique in the following section.



The latter will focus on the logical dimensions and demonstrate why neo-stoicism's excessive moralizing is fundamentally flawed.

Morality as a “Leitmotif” in Neo-Stoicism

Social media platforms portray Stoicism as an exclusively ethical-moral movement. The Facebook group “Estoicismope” (see <https://bit.ly/4eeTjX7>) describes its teachings as “an individual’s ability or willpower to control their feelings and emotions.” Similarly, “Stoic” censors “opinions or articles [...] that do not contain a Stoic commentary, moral lesson, or teaching.” The group “Estoicismo” (see <https://bit.ly/4fQIpIf>) is aimed at “all those who share the Stoic philosophy (especially Stoic morality or ethics).” The slogans shared within these groups—often presented as if they were academic citations—rely on a simplistic moralizing with little documentary basis and never include logical maxims, save for a reference to acting in accordance with reason that is so extremely generic it could justify any kind of behavior.

These tendencies are consistent with the work of Holiday and Hanselman (2020), who state that the goal of Stoicism is to “help you live a better life” (p. 15). This approach uncritically accepts the normative frameworks of capitalist society, lacking the logical tools to question its ends or to recognize how one’s ideology and sensibilities are being shaped. Thus, when they ask, “What would you rather do: risk drowning by crossing a dangerous stretch in a few weeks, or cross now while it is easy?” (p. 184), death is acknowledged as an evil to be avoided and life as an indisputable good. This directly conflicts with the Stoic defense of suicide—namely, the view that one should live only when existence remains dignified. Following Holiday’s line of questioning, it is hard to imagine that Marcus Aurelius would have accepted the rule of Rome or that Seneca would have undertaken the education of Nero.

The pragmatism of this question raises further queries, such as: Does this not advocate a hedonistic and pragmatic tendency that conflicts with the fundamentally adversarial and gladiatorial nature of classical Stoicism?

Holiday and Hanselman’s normative blindness becomes painfully evident when they argue that success is the result of individual, capitalist, and productivist achievements —implying that Stoicism can help us achieve a happiness that depends on the American social model (p. 185). This individualistic drift of neo-stoicism reappears in Vázquez’s *Invicto* (2021), which implicitly echoes the mantra “if you want it, you can do it.”



These authors overlook the critiques that Sandel (2020) and Horkheimer (2000) have leveled regarding the profound influence of structural factors on success, which extend far beyond individual will.

An additional problem is that neo-stoic happiness stands in direct opposition to a happiness dependent entirely on virtue, as advocated by Seneca (2001, pp. 56–57), among others.

Pigliucci and López (2019), like their colleagues, adopt a reductionist moral Stoicism. They state that “the great lesson of the ancient philosophy of Stoicism” is “to shape one’s character” (p. 8). Although they maintain that “to decide what the best way of life (ethics) is, one must understand how the world works (physics) and reason properly about it (logic)” (p. 10), exercises in logic —except for a simplistic view of *dieresis*— are conspicuous by their absence.

Continuing with this misrepresentation, the purpose of the Stoa of Madrid lies in cultivating “virtues, as the foundation for achieving a happy life.” Its educational programs ignore dianoetic virtues, which are the pillars for constructing sound discourse or argumentation, as well as the challenges of *synkatathesis* (assent) and the mechanisms for generating dialectical thought. This educational plan is consistent with the content of the British Stoic Week, from which it draws inspiration and whose daily pillars are structured as follows (Robertson, 2016):

- Monday: Life as a project and role models.
- Tuesday: Determining what is within one’s own control.
- Wednesday: Stoic mindfulness and examining one’s impressions.
- Thursday: Virtue.
- Friday: Relationships with others and society.
- Saturday: Resilience and preparedness for adversity.
- Sunday: Nature and a cosmic perspective.

Although one might concede that examining impressions could offer some insight into logic, the program provides neither the epistemological criteria for distinguishing between valid and invalid opinions nor the tools for a dialectical clarification of the truth contained in arguments.

Neo-Stoic Justifications for Moral Imperialism

Donald Robertson (2016) justified his interest in ethics over logic and physics with five arguments:



- More Stoic texts on ethics have been preserved than on logic and physics.
- Interest in ethics outweighs that in the other two fields due to its connection to psychotherapy and self-help, and the prevalence of these fields today.
- Some Stoics, such as Ariston, centered their entire philosophy on ethics.
- The Stoics placed greater emphasis on ethical character than on logic and physics.
- All Stoics argued that the primary field of philosophy is ethics.

These reasons are evidence of the fragile intellectual foundations of Neo-stoicism, as we demonstrate with the following objections:

314



- First, there are more texts whose central theme appears to be ethics only in the case of the Roman Stoics, since metaphysical and logical considerations are more abundant in the fragments and writings of Middle and Early Stoicism (Zeno et al., 2002). Furthermore, the works of Marcus Aurelius (2005), Epictetus (2004), and Seneca (2001) are permeated by logical insights—such as the epistemological theory of *katalepsis*—or by studies in physics, to the extent that there are even books dedicated to these topics, such as Seneca’s *Natural Questions* (2016). This is consistent with the triad formed by logic, physics, and ethics, which does not allow one to conceptualize one without the other two, as we will see later. Therefore, the alleged Stoic neglect of physics and logic stems from the author’s inability to detect the seeds of these two fields in ethical texts or from the weakness of his interpretations. These difficulties are consistent with Robertson’s (2020) social perspective, which is steeped in ethical questions, detached from (meta)physics and logic, and thus limited in its ability to distinguish the ontological and logical foundations of reality.
- Second, the Stoic with the most published works was Chrysippus. This thinker specialized in logic, as evidenced by the titles contained in the lists we have preserved and the fragments that address issues of rhetoric, oratory, and dialectic.
- Third, although philosophy can be understood as an ethical way of life (Tukiainen, 2012), the most widespread and original Stoic field in academic philosophy during the Middle Ages and the modern era was not Stoic ethics—which draws inspiration from

(and sometimes copies) much of the philosophical tradition of Plato and Aristotle—but rather logic. The Stoics created and developed a form of logic (propositional logic) that rivaled the other major school of logic of that era: Aristotle’s predicate logic.

- Fourth, focusing on ethics simply because it is the field most closely related to contemporary society is no reason to accept it as the sole Stoic truth and to ignore the rest. In fact, focusing exclusively on ethics and avoiding an analysis of Stoic logic and (meta)physics underscores an ideological and uncritical dependence on social norms. Moreover, it would be more useful to offer readers content that guides them into less-explored fields rather than the well-trodden paths of ethics.

- Fifth, citing Ariston as an example in Stoicism highlights the author’s ignorance or, even worse, his deliberate manipulation. Robertson is correct in pointing out Ariston’s disaffection with logic; in fact, this thinker compared dialectics to “a plate of crabs: lots of shell and little meat” (Elorduy, 1972b, p. 32), and Hadot (2013) paraphrased his views in the following terms:

The arguments of dialecticians are like spider webs: useless, yet ingenious. Those who delve into dialectics resemble those who eat shrimp: they work hard to obtain nothing more than a meager meal. Dialectics is like the mud on the roads: useless, it causes those who walk on it to fall (pp. 54–55). However, Robertson ignores (or conceals) the fact that Ariston was a heterodox figure within the Stoa who attempted to establish an independent school that eventually disappeared. Furthermore, he was supplanted by Chrysippus, who reestablished the school. Ariston’s work is marginal, and only a few authors seem to have drawn fleeting and sporadic inspiration from him—for example, when Seneca criticizes the excesses of the *cavillatores*’ logic.⁴ It would have been more fruitful for Robertson’s argument to have cited Seneca’s views against Chrysippus or to have argued that Marcus Aurelius ultimately rejected Fronto, his teacher of rhetoric, on the grounds that Fronto used philosophy to polish his arguments and win public applause rather than to seek the practical application of philosophy.

Sixth, emphasizing that the Stoics prioritized training in ethical dimensions again points to a misunderstanding of Stoicism, since, as we have described in a previous article (Barrientos, 2025), the philosophical life advocated by our thinkers results



from an ontological or (meta)physical transformation of a logical nature rather than from blind adherence to moral principles disconnected from the school's other two pillars. Thus, without the subsumption of the person into the *logos*, there is no Stoic, no matter how thoroughly one has memorized the philosophical creed and applied it to one's life. The metaphysical goal of Zeno or Marcus Aurelius (2005, p. 138) was the acquisition of a nature aligned with the *logos*, and one of the results would be ethical behavior.

Finally, not all Stoics focused on morality as the central axis of their philosophy. The logical commitments of Chrysippus have been noted, and one should add Zeno's metaphysical lineage, Posidonius's interest in physics—which encompassed scientific studies of the stars and natural phenomena—the search for metaphysical foundations in Seneca's *Natural Questions* (2016), the approaches to dialectics in Epictetus's *Enchiridion* (2004), and the reflections on *physis* and the cosmic vision in the final books of Marcus Aurelius's *Meditations* (2005, p. 138), among others.

316



The Rediscovery of Logos in Neo-Stoicism

This fourth section focuses on the gaps in Neo-stoicism. It lists and briefly explains a set of elements overlooked by Neo-stoicism. In doing so, it explains the distortion of the contemporary reception of classical Stoicism.

The Stoic Trinity

There exists a triumvirate—a bond of kinship—within the Stoa between *logos*, *physis*, and *ethos*. This is explained through various metaphors. According to Posidonius, Stoicism resembles an egg whose shell is identified with logic, the white with morality, and the yolk with physics (Barth, 1930, p. 36). Diogenes Laertius (cited in Elorduy, 1972b, p. 331) likens our philosophical school to an animal, equating its bones and nerves with logic, its flesh with morality, and its soul with physics. Finally, Zeno likens philosophy to a fertile field whose fence stands tall like logic, whose earth and trees rise like physics, and whose fruit bursts open, juicy, like morality.

The central element of these trinaries lies in the need to understand their three components as three instances that are simultaneously distinguishable yet blend their essences, as we will explain below. In fact, recent conceptions, such as Connelly's, propose linking logic with phys-

ics. Connelly (2024, pp. 180–210) points out that truth derives its existence from position and change in the world.

The first metaphor suggests that, without the protective function of logic (the shell), morality cannot survive. Activities of logic, such as *dieresis*—which reflects on what is within our power to change (Epictetus, 2004, pp. 3–11)—guide us toward action that accepts the unchangeable and strives to introduce rationality into the dilemmas we face, enabling us to make decisions that produce an appropriate ethic. On the other hand, morality (the white) is the nourishment of the physical (the yolk): without the former, material life lacks meaning and self-destructs.

The second metaphor introduces a logic (bones and tendons) that serves as the foundation of morality. However, these two elements turn into dead matter without the vitalizing force of *physis*, the breath of life from which existence is “recreated.”

The third analogy repeats the image of logic as the rational protector (fence) of morality. Physics appears as the life-giving principle or visible body of existence. Morality will bear fruit from these two principles.

These trinitarian explanations can be reversed and extended, for example, from logic (dialectic or science) to the moral dimensions, justifying that ethical goodness is the result of rational practice:

Dialectic is a virtue that, in its own right, encompasses various virtues such as: the virtue of not stumbling (*aproptosis*), serenity in the face of appearances, firmness in defense, imperturbability in the face of fantasy, confidence in understanding, and the ability to discern the true from the false. It is therefore necessary and constitutes a virtue that encompasses other virtues (Elorduy, 1972a, p. 303).

Elorduy explains here how the dianoetic virtue of dialectic nourishes and strengthens moral virtues such as serenity, firmness, and confidence. Brun (1977) agrees with this point in his analysis and emphasizes that dialectic contains other dianoetic virtues that help us make better decisions or see reality more deeply:

Dialectic [...] is a virtue that contains within itself the other virtues: circumspection, which tells us when it is appropriate to approve and when it is not; sagacity, which is the ability to counter what is merely plausible with arguments, so as not to yield to it; rigor, the strength of reasoning that prevents us from being overcome by opposing rigor; and gravity, the ability to relate representations through sound reasoning (p. 54).

On the other hand, physics becomes a principle of ethical wisdom in Posidonius; thus, the scientist serves as the model of the wise man in



his texts (Elorduy, 1972b, p. 158; Pohlenz, 2022, p. 268). Likewise, Seneca asserted that the sciences prepare the soul to receive virtue (Elorduy, 1972b, p. 257).

Ontological Nature of the “Logos”

Long and Sedley state that the fields of application of Stoic logic are “rhetoric, grammar (for some, linguistics), poetics, philosophical semantics, and formal logic, in addition to issues typically classified as ‘theory of knowledge’” (Long and Sedley cited in Crisipo, 2006a, p. 56). Moving forward, we will use this taxonomy to highlight the elements overlooked by Neo-stoicism.

First, it is necessary to analyze the ontological dimensions of the *logos*, the word. Zeno’s religious and Eastern influences mean that his conception of the *logos* is equated with the Semitic *dabar*. The *dabar* is not merely a means of transmitting information but an active, operative principle in reality (Elorduy, 1972a, p. 9). The Hebrew word of God (*dabar*) creates and transforms realities, possessing true ontological weight. For this reason, certain names must not be spoken (nor taken in vain): uttering them facilitates taking possession of them or transforms what already exists.

This idea dates back to a conception from the third millennium B.C., in which the voice of the god acts as a distinct entity with power of its own. Sumerian and Canaanite texts show that the divine voice or commands were concretely represented by the roar of thunder. Later, in Egyptian, cuneiform, and biblical literature, we find many passages in which the divine command—and the word from his mouth—were virtually hypostatized (Elorduy, 1972a, p. 40).

In this text, Elorduy offers an ontological dimension of the word with transformative implications. The word not only serves to convey information but, as in magical incantations or prayers, actively operates upon entities. The author goes on to provide examples drawn from the Old Testament. This is the part of the Bible of Semitic origin that provides the foundation for the ontologization of the word, a point that will be confirmed later:

We read in Deutero-Isaiah 40:8: “The word of God will endure forever.” In the Wisdom of Solomon, written at least four centuries later, we find the remarkable passage (18:15): “Your almighty word (*logos*) was hurled down from heaven, from your royal throne, like an invincible warrior in the midst of a land destined for ruin, carrying your irrevocable decree



as a sharp sword.” As Durr demonstrated with great erudition, this idea is Semitic, not Hellenic (Elorduy, 1972a, p. 40).

The word in Hebrew (and in Kabbalah) possesses ontological potential, as is the case in incantations or magical spells.⁵ It is no coincidence that Jesus was born in Bethlehem, for in Hebrew, *bet-lehem* means “house of bread,” Christ being the bread that will be offered in the Eucharist for salvation. Jerusalem, the city into which Christ would enter victoriously, derives from *ir-shalom*, i.e., “city of peace” (Mt 21:1–11; Mk 11:1–10; Lk 19:28–40; Jn 12:12–19). Thus, the Jewish reader understands (and hears) that Jesus is entering the city where peace with God would be restored thanks to his sacrifice on Golgotha. Finally, the Catholic Eucharist does not use the word merely to recall the past but to summon into the present the salvific act that transcends time. From this conception of the word, the Bible is not merely read but is proclaimed, bringing realities into being.

These ontological and (meta)physical pillars of the word are reiterated in the Stoic concept of the *logos*. Consequently, the study of logic is identified with that of *physis*, since the rational order of the *logos* corresponds to that of the world. In this sense, Zeno’s interest in the study of etymology was based on the fact that it allowed for a deeper exploration of the very core of reality (Elorduy, 1972a, p. 261; Pohlenz, 2022, p. 60). His interest in onomatopoeia is profound (Pohlenz, 2022, p. 59) because these were the words that most closely aligned signifier and meaning.

When Zeno assigns names to various entities (Zeno et al., 2002, p. 46), he functions as a creator, for without names, realities do not exist. Likewise, when Chrysippus studies the laws of logic, he feels immersed in a study of the physical laws of nature, which is consistent with the Stoic trinity that unites logic and physics. A single *logos* governs *logos*, *physis*, and *ethos*.

When Neo-Stoicism neglects logic, it not only loses one of the three aforementioned pillars but also distorts the other two: acting appropriately (*ethos*) requires a sound structure of thought (*logos*), since thought is the first act of creating realities (*physis*).

Beginning with the ruins of neo-Stoic logic: representation

Neo-stoicism is not entirely foreign to the logic of our thinkers. However, its analyses and the content of the concepts it presents are meager. Therefore, a return to its foundations is required.

We cannot overlook a concept that Neo-Stoicism frequently invokes: opinion or representation. Vázquez (2021) and Holiday and Han-



selman (2020) remind us that a good life requires that we not be led astray by erroneous interpretations (opinions) of reality, but rather by those mediated by reason. However, their texts neither define what an “opinion” is nor explain the basis for an erroneous one or how to correct it.

Beginning with the first topic, Plutarch defines representation as an “affection within the soul” (Brun, 1977, p. 45), and Brun summarizes that, for Stoicism, opinion coincides with “a modification of the soul’s inner tension by an external object that also possesses its own tension” (p. 49). Cleanthes, recalling the materialism of the Stoa, points out that representation has depressions and reliefs (Brun, 1977). The representation leaves its mark on the soul because it determines passion, as Epictetus’s maxim (1993) states: “Neither death, nor exile, nor suffering, nor any of these things are the reason we do or do not do something; rather, it is our assumptions and opinions” (p. 94). Along these lines, the text by Epictetus (2004) adds:

Remember that it is not the one who insults or strikes who offends, but the opinion that judges these actions as offensive. Therefore, when someone irritates you, be aware that it is your judgment that has irritated you (p. 41).

The Stoics distinguish between comprehensive (or kataleptic) fantasies and phantasmagorical or fantastical ones. The former stem from the proper use of reason or a detachment from the passions; the latter do not correspond to reality. An example of the latter occurs in the images that appear in dreams or when one loses one’s judgment (Chrysippus, 2006a, pp. 14–15, 472). The most prolific author of Stoicism adds important clarifications to this dichotomy between true opinions (*phantasia* and *phantaston*) and false ones (*phantastikon* and *phantasma*). Let us begin with *phantasia*:

Representation (*phantasia*) is a state that occurs in the soul, revealing within itself that which has produced it, just as when we see with our eyes that which is white: it is a state that takes place through vision in the soul, and in accordance with this state we can say that there is something white that moves us (the same applies to touch and smell). It is called representation (*phantasia*) because of light (*phos*), for just as light reveals itself and what it encompasses, so too does representation reveal itself and what has produced it (Chrysippus, 2006a, p. 14).

Opposite representation lies the represented, or *phantaston*:

The represented (*phantaston*) is that which produces representation—such as that which is white and that which is cold—and thus every-



thing capable of moving the soul. This is the represented. Imagination (*phantastikon*) is a vain attraction, an affect in the soul that does not stem from any represented thing, like one who wrestles with shadows or stretches out his hands into the void; for representation is underpinned by a represented thing, but imagination is not (p. 14).

Finally, we must distinguish the imagined (*phantasma*):

The imagined (*phantasma*) is that to which we are drawn by a vain, imaginary attraction. It happens to those who suffer a fit of melancholy or madness. For example, Orestes in the tragedy when he says: “Oh, mother, I beg you, do not drive me those serpentine joys with blood-stained feet! There, there they are, already leaping beside me!” He says this as if he were mad, yet he is not seeing anything; it merely seems that way to him (p. 15).

As mentioned earlier, the first criterion for distinguishing an appropriate or kataleptic representation is the preservation of rational sanity. Reflecting on Seneca’s concept of anger, he pondered how this passion led to erroneous judgments to the point of provoking irrational acts.

The maintenance of sanity is possible thanks to the rational *tonos*. This is the tension that holds the entire universe together and keeps it rationally ordered, just as physical toning keeps the body healthy, strong, and orderly. The *tonos* prevents the subject’s degradation into behaviors weakened by passion. The toning of the *logos* requires training on the part of the subject.

When the *logos*, out of weakness, assents to a representation that does not possess the characteristics necessary for the apprehension of the object, we are faced with a *doxa*—a weak, pathogenic *synkatathesis*—the source of all errors and incorrect actions. Assent to the kataleptic representation—*katalepsis*—is, on the contrary, the foundation of all knowledge (Pohlenz, 2022, p. 84).

Training consists of all the logical, dialectical, rhetorical, and grammatical exercises taught at the Stoa. This philosophical discipline makes it easier to live in accordance with kataleptic representations, which we summarize, following Zeno, in four characteristics (Pohlenz, 2022, p. 81):

- It must originate from a real object and not from a mirage or a dream.
- It must show the subject the object as it truly is.
- It must reproduce every element of the object or event.



- It must prevent the presence of confusing or erroneous representations, such as those arising from a dream or psychosis.

Stoic Logic

The skeletal logic, rhetoric, and dialectic of Neo-Stoicism are limited to a summary view of *dieresis*—which distinguishes what is within our power to change—and to a superficial explanation of correct representations. Below, we revisit other basic elements of the Stoa.

Stoic propositional logic contrasts with (and complements) Aristotelian predicate logic. The latter attributes essential and abstract predicates to a subject, as in “human beings are mortal.” Chrysippus’s logic, conversely, establishes inferential and temporal implications, as in “if it rains today, I will not go out. Since it is raining, I have not gone out” (Brun, 1977, pp. 39–40). Pohlenz uses the label “transcendental” for predicate logic (Pohlenz, 2022, p. 70) since it involves essences—i.e., it indicates the nature of beings. Stoic logic, by contrast, is linked to immanence and everyday events, connecting causes directly to their consequences.

The study of propositions is based on an in-depth examination of “syntactic relations” that give rise to “the theory of judgment, logical inference, and demonstration” (p. 65). These tools possess immense practical application potential in the contexts in which Vázquez, Robertson, and Holiday operate. Specifically, a good philosopher should practice the Stoic distinction between conclusive and non-conclusive reasoning. The former consists of conclusions that follow necessarily from the premises, whereas the latter do not, since “the opposite of the final proposition is not contrary to the premises” (Brun, 1977, p. 56); i.e., non-conclusive arguments may be necessary but are not sufficient. One cannot infer the conclusion “having COVID” from the premise “having a fever,” but one could safely draw that conclusion if the premise were a positive test for the disease.

A second key framework for Stoic reasoning is hypothetical reasoning (Barth, 1930, p. 112). This corresponds to a conditional inference based on external “signs”—for example, “it is light, therefore, it is daytime” (p. 112).

Third, Chrysippus argued that the purpose of syllogistics “consisted in establishing the figures (*tropoi*) that make a correct conclusion possible.” He described five *tropoi* that provide essential material for completing neo-Stoic training:



1. If A, then B. A. Therefore, B.
2. If A, then B. Not B. Therefore, not A.
3. Not both A and B. A. Therefore, not B.
4. Either A or B. A. Therefore, not B.
5. Either A or B. Not B. Therefore, A (Pohlenz, 2022, p. 70).

The above schemas are referred to by Chrysippus as the “undemonstrables.” There were five of them (Mates, 1985, pp. 117-128; Bobzien, 2003, pp. 104-105; López Astorga, 2022, pp. 28-29):

The first undemonstrable proposition is one in which an entire argument is constructed from a conditional proposition, the antecedent that begins the conditional, and the consequent; for example, “If the first, then the second; the first; therefore, the second.” The second undemonstrable argument is one that results from a conditional proposition and the contradictory of its consequent, and whose conclusion is the contradictory of the antecedent; for example, “If it is day, there is light; it is night, therefore it is not day” (Chrysippus, 2006b, p. 39).

323
Φ

Following this, the first undemonstrable proposition is the classic form of argumentation linked to the classical *modus ponens*: if *p*, then *q*; *p*, therefore *q*. An excellent translation of classical Stoic logic into modern logic along these lines is provided by Mario Piazza and Marcello D’Agostino (2022, pp. 83–99) and by Crivelli (2025, pp. 343–375).

The second presents an argument that is slightly more complex. It includes a conditional (if it is daytime, there is light) and the negation of the consequent (it is night), which leads to the conclusion that the opposite of the antecedent is true (it is not day).

The third undemonstrable argument is one that results from a negative conjunction and one of the propositions within the conjunction, concluding with the contradictory of the other; for example, “It is not true (at the same time) that Plato is dead and that Plato is alive; Plato is dead, therefore Plato is not alive.” The fourth undemonstrable syllogism is one that results from a disjunction and one of the component propositions, and whose conclusion is the contradictory of the remaining proposition, such as “Either the first or the second; the first; therefore, not the second” (Chrysippus, 2006b, pp. 39–40).

As can be seen, the third undemonstrable proposition involves combining two contradictory propositions: A and not A—that Plato is both alive and dead at the same time. Added to this is the premise affirming one of them (Plato is dead), which leads to the negation of the other

(Plato is not alive). This line of reasoning forms part of Marcin Tkaczyk's (2024, pp. 325–345) recent theory on the “principle of explosion” in Stoic logic, which states that if both *P* and *not-P* are accepted, any conclusion becomes formally valid.

The fourth undemonstrable statement is based on the analysis of exclusive disjunction and the impossibility of both parts being true simultaneously. Thus, if one part is affirmed, it follows that the other is false. The fifth undemonstrable statement functions conversely: if one part is denied, it follows that the other must be true.

The fifth undemonstrable proposition is one in which an argument is constructed from a disjunction and the contradictory of one of the members of that disjunction, concluding that the other must be true; for example, “Either it is day or it is night; it is not night, therefore it is day” (Chrysippus, 2006b, p. 40).

324



Stoic logic is not a transcendental study disconnected from facts and events. Hypothetical and inferential judgments are firmly grounded in empirical evidence (Pohlenz, 2022, pp. 68–69). These led to the defense of science by Posidonius and Herillus, who regarded it as the “supreme good” and as something “which must be sought for its own sake” (Zeno et al., 2002, p. 225).

Finally, Stoicism studied the fallacies of its predecessors, went on to identify new ones—such as the fallacy of the consequent—and questioned others, such as the lazy argument. In this regard, it is important to recall ancient Stoicism's intense interest in exposing the structural errors of sophisms (Barth, 1930, pp. 114, 116).

Here is a brief list of tools that can be actively applied in exercises on Neo-Stoicism. Keep in mind that these tools are not only useful for constructing and analyzing arguments and discourses; rather, the ontological character of logic and the logical nature of ethics help us understand the very essence of Stoic (meta)physics and morality. Their contemporary invisibility destroys the unity of the Stoic trinity, decontextualizes moral maxims, and reduces logic to academic games with no grounding in reality—an outcome that stands in direct opposition to the original intentions of the Stoa.

Oratory

Oratory is fundamental to the Stoa: Zeno, Cleanthes, and Chrysippus wrote manuals on it, and this interest is evident in the written and oral discourses of Seneca, Cicero, and Marcus Aurelius. Their texts follow

strict rhetorical rules consistent with the structure of the *logos*. This alone would be sufficient to criticize the lack of practice in rhetoric and oratory in Neo-stoic works.⁶ Listed below are some topics for training in this field.

Oratory involved correct expression in both everyday language and liturgical speech, in both its semantic and syntactic dimensions. Chrysippus (2006b) notes that the practice of oratory enhances the *logos* and fosters ethical virtues linked to speaking rightly; furthermore, good moral character is required to deliver an appropriate speech: “one who is not good cannot speak well” (p. 51). In fact, he identified five virtues in an excellent speech: Hellenism, clarity, brevity, decency, and fairness (Elorduy, 1972a, p. 305). Theophrastus identifies three such virtues, which are in line with Zeno’s ideas:

Clarity (*safeneia*), appropriate expression (*prepon*), and *kataskein*—i.e., artistic composition through carefully chosen speech that avoids anything vulgar. They went beyond Theophrastus only by including a fifth virtue: brevity (*sintonia*). Zeno detested superfluous words and empty chatter (Pohlenz, 2022, p. 72).

325


The fundamental vice is the solecism, which the ancient Stoics describe as “speaking incorrectly” (Zeno et al., 2002, p. 56). Today, a solecism consists of the incorrect placement of a preposition in a sentence, the improper conjugation of a verb, or an inaccurate agreement between terms.

Due to the connection between *logos* and *physis*, solecisms also occur in everyday contexts, according to Zeno et al. (2002):

A solecism is committed not only through ignorance of language and speech, but also in matters of dress—when one dresses in a coarse manner, eats without restraint, or walks awkwardly—as Zeno of Citium states (p. 69).

This idea is echoed by Chrysippus (2006a) in relation to modesty in speech and actions:

I believe that one must not only cultivate a liberal and simple style, [but also], in speech, appropriate conduct regarding the proper tone of voice and the gestures of the face and hands (pp. 218–219).

If we focus on the composition of speech, Chrysippus identifies four parts (Pohlenz, 2022, p. 72):

- Prologue or introduction to the speech.
- Diegesis, or the narration or description of the event in the most objective and kataleptic manner.

- Refutation of the opponent through arguments.
- Epilogue, which summarizes, synthesizes, or brings closure to what has been explained.

There are various types of propositions: exhortation, oath, petition (desire), hypothesis, and apostrophe, among others. Among these, the axiom or judicative proposition is of particular interest to philosophy, since it “formulates the mental fixation of a fact with a claim to objective validity” (Pohlenz, 2022, p. 66). Furthermore, there are six types of (judicative) propositions: the conditional, the consecutive, the coordinated, the disjunctive, the causal, and the comparative.

This theoretical material would serve to help Neo-Stoics not only deepen their skills in sharpening their discourse and arguments but also refine their modes of expression related to their manner of dress and, in general, their way of being.

326



Philosophy of Language and Grammar

Epictetus maintained that “the examination of words” should become the foundation of philosophical teachings (Epictetus, 1993, p. 108), since *logos* influences the other two fields of the Stoic triad. In fact, the Stoic Lucius Aelius Stilo, teacher of Cicero and Varro, is considered the founder of linguistics and the first philologist.

The Stoics’ discoveries in this field predate Stilo. The following are particularly noteworthy (Barth, 1930, pp. 139–141; Pohlenz, 2022, pp. 63–65):

- The article, which originally covered the pronoun and the adverb (coined by the Stoic Antipater of Tarsus).
- The inflection of nouns and verbs, and the cases of the nominative, genitive, and accusative.
- Verb tenses, including the present, the pluperfect, and indefinite tenses such as the future and the past.
- The active and passive voices, intransitive verbs, and reflexive verbs.
- The indicative and subjunctive moods.
- Types of sentences: pure and simple statements, questions, informative statements, commands, oaths, prayers, hypotheses, explanations, and imprecations (vocatives).

Blank and Atherton (2003) have added an account of how grammar was structured according to Stoic theories. Thus, in addition to the article

(*arthron*), the Stoics were pioneers in the study of the noun, the verb (*rhe-ma*), the conjunction (*syndesmos*), and the pronoun (*antonymia*), among others. It should be added that Stoic semantics established a rigorous classification of “sayables” (*lekta*) and axioms (Castagnoli, 2025, pp. 315–342).

These theories have been undermined by Neo-stoicism. This circumstance not only destroys one of the three fields of the triad but also distorts the other two. For example, ignorance of noun inflection limits awareness of actions directed against other subjects (accusative) or those performed by them (genitive); it also obscures the ways in which a person addresses another interlocutor (whether by cursing them, commanding them, or appealing to them in prayer) and the consequences of each of these linguistic impacts.

Exercises in Oratory and Language

The Stoa trained its students through exercises ignored by Neo-Stoicism. An example of this is the variations on a theme that Fronto required Marcus Aurelius to perform:

That he compose a maxim (*gnome*) every day and, above all, formulate it in various ways: “Whenever you conceive a paradoxical thought,” writes Fronto, “turn it toward yourself, vary it with different figures of speech and nuances, experiment with it, and clothe it in splendid words” (Hadot, 2013, p. 410).

Note how this activity could find its counterpart in ethics if Holiday or Vázquez were to encourage the daily variation of a virtue over the course of one or more weeks of training.

Pierre Hadot (2006) reminds us that a large portion of Stoic writings are composed as exercises in rhetorical dialectic. These included activities such as the following:

Discussing, either dialectically—i.e., through questions and answers—or rhetorically—i.e., through uninterrupted discourse—what were called “theses,” theoretical positions presented in the form of questions: Is death a misfortune? Can the wise man fly into a rage? (p. 223).

Theory of Knowledge

“Apprehension” has been the most frequently cited metaphor in the history of philosophy as an epistemological model: knowledge consists of seizing something external. This explanation appears in the 4th century



B.C. in the writings of the founder of the Stoa. For him, knowledge has four levels (representation, assent, kataleptic understanding, and science), each represented by a tighter grasp of the hands:

Holding out his hand with the fingers spread, [Zeno] would say, “This is representation.” Then, curling the fingers slightly: “This is assent.” Then, closing it completely and clenching his fist, he said that this was comprehension (...). Finally, bringing his left hand close and clenching his fist with skill and strength, he said that this is knowledge, which no one enjoys except the wise (Zeno et al., 2002, pp. 60–61).

The metaphor stems from the connection between the Aramaic term for knowledge or understanding (*yadah*) and the hand (*yad*) (Elorduy, 1972a, p. 20). According to this view, knowledge arises from a representation. This representation may be false (phantasmagorical) or true. If the assent of judgment, the *synkatathesis*, is applied to real images, kataleptic understanding will be formed (Hankinson, 2003, pp. 60–65). Otherwise, reality would not be correctly apprehended, producing images that confuse the subject and cause them to see, hear, smell, or taste representations that do not correspond to what is actually before them. Finally, science is founded on a dual apprehension (one hand clasping the other); i.e., it manifests the profound certainty that the captured truth is reliable.

This explanation is expanded upon when dialectic is compared to rhetoric:

Zeno of Citium, having asked himself how dialectic differs from rhetoric, closed his hand and then opened it, saying, “In this,” intending to convey, through the closing [of the hand], the ordering, precise, and concise nature of dialectic, and through the opening and spreading of the fingers, the broad [scope] of wise rhetorical power (Zeno et al., 2002, p. 65).

Cleanthes describes knowledge as an impression that impacts and transforms. He compares it to the imprint left by a ring on wax, thus following a philosophical tradition that would continue long after his time (Elorduy, 1972b, p. 34).

If we consider the manner in which apprehension occurs, the Stoics depict the soul as an octopus that extends its tentacles over the five senses, obtaining external information from them (Brun, 1977, p. 53). This theory underscores the materialism and sensualism of the Stoa: knowledge is presented as a material or “tangible” transfer from the exterior to the interior of the subject. In fact, a cone extends from the eyes, with the pupils as its apex and the object of cognition as its base. Auditory



apprehension is similar, though it uses the analogy of waves: the object emits waves that ultimately reach the person's ear—the apex—in a material sense (Brun, 1977, p. 92).

Knowledge is objective if the object's own light combines with that of the subject's soul, and subjective if the light proceeds solely from the person (Elorduy, 1972a, pp. 170–171).

The moderate Stoicism of Panaetius and Posidonius qualifies this epistemological materialism. Understanding does not arise in the senses but in right reason (Barth, 1930, p. 121): one does not know through the former but through the latter. In this way, the groundwork is laid for debates that would flourish centuries later when the question arose as to whether cognitive activity depends on the senses or on the *nous*.

Stoic epistemology reveals a certain naivety, since the immediate connection between the senses and reality prevents them from doubting the information that comes from them, as Elorduy explains:

To doubt that one knows what one knows from evident experience; to doubt that one wills when one concentrates all one's energies on one's will; to doubt that one lives when one feels full of life—is as absurd and abnormal as for me to doubt that I am myself (Elorduy, 1972b, p. 20).

The time had not yet come to distinguish between the Kantian noumenon and phenomenon.

Not only does thought correspond to reality, but so do words, since we are what they say. This idea had not only emerged in the Eastern tradition of Zeno, but Aristotle had also argued that language manifested the essence of thought and, therefore, of the *logos* (Pohlenz, 2022, p. 53). In this sense, it should be recalled that the *tonos* constituted the force that held the entire universe together from the dimension of the *logos*. Now, the *logos* constitutes the rational force that facilitates assent and enables the person to remain steadfast in virtue and detached from the passions. For this reason, epistemology possesses practical dimensions linked to all dimensions of the subject, as Amir (2011) has demonstrated.

Conclusions

Building on the preceding sections, these conclusions will focus on two points. On the one hand, they explain how Neo-stoicism distorts the three pillars of classical theory from Zeno to Epictetus. Although ethics was one of the bastions of Stoicism, it must be balanced with *physis* and logic. On the other hand, these conclusions offer some basic recommendations



for Neo-stoicism to realign itself with classical theory. This will help avoid a pathological inclination toward a perspective that strays from the teachings of Chrysippus and other Stoic logicians.

A Distorted Triumvirate

Epictetus warns his disciples that an excess of dialectic hinders the progress of “goodness and honesty”—i.e., of morality (Epictetus, 1993): unchecked reason can generate “presumption and vanity” and cause students to “become conceited and filled with pride” (p. 82). However, when asked whether the teaching of the *logos* should therefore be eliminated, he is unequivocal: “Do I suppress these abilities? Of course not! Nor do I suppress the sense of sight” (p. 82).

330



It is essential to learn the tools of rhetoric, oratory, and logic because they are the pillars of the Stoic triad. The ontological implications of the *logos* emphasize that attention to language (the philosophy of language), to sound reasoning (logic and dialectic), to the sequence of the act of understanding (epistemology), and to effective speech (rhetoric and oratory) facilitates the proper unfolding of morality and (meta) physics. When logical inferences are trained, when the five virtues of oratory are improved, when the skills to construct or refute an argument are strengthened, and when words are crafted, one is not merely addressing logical dimensions; rather, one is forging a more rational subject who is conscious of the very essence of reality.

Without Stoic logic and dialectic, morality is reduced to a burdensome Decalogue devoid of existential meaning, observed, at best, merely to achieve happiness. Without logic, the individual will not understand that adherence to morality is more than a heteronomous obligation separate from the ontology of reality. Without it, adherence to the moral law may be understood as the result of a divine command, but not as something rooted in the rational nature of reality.

From this perspective, one can understand the error involved both in reducing logic to the training of discursive (kataleptic) judgments and, even more seriously, in degrading logic (or reducing it) to morality and causing it to disappear through explicit appeals to Seneca’s *cavillationes* or Ariston’s criticisms.

What should be learned?

However, theory cannot remain a pipe dream; rather, it requires setting two objectives: to revive the study of (and practice in) the elements of

logic discussed above, and to connect every logical activity with its ethical and physical dimensions.

Contemporary Neo-Stoicism is shaped by systematized ideological frameworks such as therapy, entrepreneurship, narcissistic individualism, and productivism. These constraints obscure the critical dimensions of philosophy that warn that it is no one's servant, but serves only itself. Philosophy can yield practical results; however, if its objectives are alien to its critical nature, it becomes an instrument that loses its true essence.

For all these reasons, it is urgent to recover the Stoic practices obscured by the tyranny of the ideology that drives Neo-stoicism—or, at the very least, to clarify that these currents are not philosophical but rather psychological, business-oriented, or productivist (Barrientos, 2023).

Regarding logic, the problem does not lie in a lack of practice in this field but rather in the inability (or ideology-driven laziness) of Neo-stoics to fully engage with this dimension. Salvation lies on the periphery. The oasis can only be found if one has walked through the desert. Denying the existence of the periphery or the oasis reveals the weakness of the Neo-Stoic scholar or their adherence to comfort and to normativist and standardized superficiality.

It is not enough to create logical exercises; rather, as we noted in the second objective, an exposition of ethics divorced from its connection to logic (and physics) is a mistake. For pedagogical reasons, one may accept the distinction between the three disciplines. However, it is unacceptable for the connections and interplay among the three to be squandered, or for the demise of one or two to be justified by a writer's ideological biases. Every Stoic exercise should embody the depth of the Stoic trinity. The texts of Epictetus, Seneca, and Marcus Aurelius contain this three-dimensionality even in those examples that lean toward more moral concerns: the rhetoric of the maxims, the logic of the reflections, and the ontological and physical nature of the moral teachings—which refuse to be a mere pragmatic and stripped-down Decalogue—all demonstrate the continuity of the database trinity. Within this framework, the Stoics acted, thought, and lived.

Exercises in logic, rhetoric, dialectic, and oratory—as well as those arising from self-awareness or the cultivation of a new way of perceiving based on the theory of knowledge—should pave the way for Neo-Stoicism to replace its business-oriented, therapeutic, and productivity-driven bias with the authenticity of its origins: *logos* and rationality.



Notes

1. A less instrumentalized view of philosophical *mindfulness* can be found in the work of Michael Weiss (2017).
2. This does not preclude forming alliances with psychology while respecting philosophical foundations (Barrientos *et al.*, 2024), or speaking of a philosophy with therapeutic outcomes (Barrientos, 2026).
3. The capitalist trend has had serious consequences for education, as evidenced by the study of its influences on Brazilian and Chilean education (Rodríguez Mancilla *et al.*, 2018, pp. 259–286).
4. “W. Trillitzsch examines the main passages in which Seneca ridicules the dialectical subtleties of the Stoics. These include Epistles 59, 5; 64, 3; 82, 8; 83, 8; 87, 40 ff.; 102, 20 ff.; 106, 11, 12; 109, 17 ff.; 111, 2 ff.; 13, 1, 15, 26J. We cannot dwell on Seneca’s criticism of those he calls cavillatores” (Elorduy, 1972a, p. 203). In this sense, Seneca criticizes Chrysippus on the basis of the “subtleties of formal logic that he employs” (Elorduy, 1972a, p. 327), although his basic orientation is not opposed to *the logos* as the foundation of his philosophy and way of life.
5. This function appears in certain Greek contexts, as Pedro Laín Entralgo notes in his classic work *‘La curación para la palabra en la antigüedad clásica’* (1958).
6. In fact, it is striking that Robertson (2013) outlines the five characteristics of a good rhetorical speech yet does not propose any exercises based on his texts: “1. Correct grammar and a rich vocabulary; 2. Clarity of expression, ensuring that ideas are easily understood; 3. Conciseness, using no more words than necessary; 4. Appropriate style, suited to both the subject and the audience; 5. Distinction, or artistic excellence, and avoiding vulgarity” (p. 49).

332



Bibliography

AMIR, Lydia

2011 La epistemología como actividad práctica. *HASER, Revista Internacional de Filosofía Aplicada*, (2), 41–65. <https://bit.ly/4uAEHqS>

BARRIENTOS, José

2023 *Filosofía para privados de libertad*. Sevilla: BOECIO.

BARRIENTOS, José

2025 Las dimensiones metafísicas ignoradas por el neoestoicismo. *Anales del Seminario de Historia de la Filosofía*, 42(3), 487–498. <https://dx.doi.org/10.5209/ashf.96399>

BARTH, Paul

1930 *Los estoicos*. Madrid: Revista de Occidente.

BLANK, David & ATHERTON, Catherine

2003 The Stoic Contribution to Traditional Grammar. En: Brad Inwood (ed.). *The Cambridge Companion to the Stoics* (pp. 310–327). Cambridge: Cambridge University Press.

BOBZIEN, Suzanne

2003 Logic. En: Brad Inwood (ed.). *The Cambridge Companion to the Stoics* (pp. 85–123). Cambridge: Cambridge University Press.

- BROWN, Megan, MACLELLAN, Alexander, LAUGHEY, William, OMER, Usmaan, HIMMI, Ghita, LEBON, Tim & FINN, Gabrielle
 2022 Can stoic training develop medical student empathy and resilience? A mixed-methods study. *BMC Medical Education*, 22, 340. <https://doi.org/10.1186/s12909-022-03391-x>
- BRUN, Jean
 1977 *El estoicismo*. Buenos Aires: Editorial Universitaria de Buenos Aires.
- CASTAGNOLI, Luca
 2025 The Stoics on Language. En: Jacob Klein & Nathan Powers (eds.), *The Oxford Handbook of Hellenistic Philosophy* (pp. 315-342). Oxford: Oxford Academic Press.
- CICERÓN
 1988 *De la adivinación*. México DF: UNAM.
- CONNELLY, Stephen
 2024 Chrysippus, the Dynamically True and Modality. *Méthexis*, 36(2), 180-210. <https://doi.org/10.1163/24680974-36020003>
- CRISIPO DE SOLOS
 2006a *Testimonios y fragmentos I*. Madrid: Gredos.
 2006b *Testimonios y fragmentos II*. Madrid: Gredos.
- CRIVELLY, Paolo
 2025 Stoic Logic. En: Jacob Klein & Nathan Powers (eds.), *The Oxford Handbook of Hellenistic Philosophy* (pp. 343-375). Oxford: Oxford Academic Press.
- ELORDUY, Eleuterio
 1972a *El estoicismo I*. Madrid: Gredos.
- ELORDUY, Eleuterio
 1972b *El estoicismo II*. Madrid: Gredos.
- EPICTETO
 1993 *Disertaciones por Arriano*. Madrid: Gredos.
- EPICTETO
 2004 *Enquiridion*. Barcelona: Anthropos.
- GILL, Christopher
 2016 *Building Resilience Today: How Can Ancient Stoicism Help*. Cambridge: Cambridge University Press.
- HADOT, Pierre
 2006 *Ejercicios espirituales y filosofía antigua*. Madrid: Siruela.
- HADOT, Pierre
 2013 *La ciudadela interior*. Barcelona: Alpha Decay.
- HANKINSON, Robert
 2003 Stoic Epistemology. En: Brad Inwood (ed.). *The Cambridge Companion to the Stoics* (pp. 59-84). Cambridge: Cambridge University Press.
- HOLIDAY, Ryan
 2013 *Confía en mí, estoy mintiendo: confesiones de un manipulador de los medios*. Barcelona: Empresa activa.
 2014 *The obstacle is the way*. Nueva York: Penguin.
 2016 *Ego is the enemy*. Nueva York: Penguin.
 2021 *Courage is calling*. Nueva York: Penguin.
 2023 *Discipline is destiny*. Nueva York: Penguin.



- HOLIDAY, Ryan & HANSELMAN, Stephen
 2014 *The daily stoic: 365 meditations on wisdom, perseverance and the art of living*. Nueva York: Penguin.
 2020 *Diario para estoicos: 365 reflexiones sobre la sabiduría, la perseverancia y el arte de vivir*. Barcelona: Reverté.
- HORKHEIMER, Max
 2000 *Teoría crítica y teoría tradicional*. Barcelona: Paidós.
- LÓPEZ ASTORGA, Miguel
 2022 Stoic Logic from the Theory of Mental Models. *Wisdom*, 21(1), 27-37. <https://doi.org/10.24234/wisdom.v21i1.741>
- MACLELLAN, Andrew & DERASKSHAN, Nazanin
 2021 The Effects of Stoic Training and Adaptive Working Memory Training on Emotional Vulnerability in High Worriers. *Cognitive Therapy and Research*, 45, 730-744. <https://doi.org/10.1007/s10608-020-10183-4>
- MARCO AURELIO
 2005 *Meditaciones*. Madrid: Gredos.
- MATES, Benson
 1985 *Lógica de los estoicos*. Madrid: Tecnos.
- MODERN STOICISM TEAM
 2020 *Introduction to Stoicism*. <https://bit.ly/4wWKGye>
- OHAYON, Charlie & FLANAGAN, Tara
 2019 A Stoic View of Stress and Coping Among College and University Students. *International Journal of Applied Philosophy*, 33(1), 105-123. <https://doi.org/10.5840/ijap201988121>
- PIAZZA, Mario & D'AGOSTINO, Marcello
 2022 Chrysippus' Logic in a Natural Deduction Setting. En: Francesco Ademollo, Fabrizio Amerini & Vincenzo de Risi (eds.), *Thinking and Calculating: Essays in Logic, Its History and Its Philosophical Applications in Honour of Massimo Mugnai* (pp. 83-99). Cham: Springer. https://doi.org/10.1007/978-3-030-97303-2_4
- PIGLIUCCI, Massimo
 2018 *Cómo ser un estoico*. Madrid: Ariel.
- PIGLIUCCI, Massimo
 2023 *La forja del carácter*. Madrid: Ariel.
- PIGLIUCCI, Massimo & LÓPEZ, Gregory
 2019 *Mi cuaderno estoico*. Barcelona: Planeta.
- POHLENZ, Max
 2022 *La Stoa: historia de un movimiento espiritual*. Barcelona: Penguin.
- RAABE, Peter
 2010 Mental illness: Ontology, Etiology and Philosophy as 'Cure'. *HASER, Revista Internacional de Filosofía Aplicada*, (1), 13-41. <https://doi.org/10.12795/HASER/2010.i1.01>
- ROBERTSON, Donald
 2000 REBT, Philosophy and Philosophical Counselling. *Practical Philosophy*, 3(3), 28-37.
- ROBERTSON, Donald
 2013 *Stoicism and the Art of Happiness: Practical Wisdom for Everyday Life*. Londres: Teach Yourself.



- ROBERTSON, Donald
 2016 The Stoic Influence on Modern Psychotherapy. En: John Sellars (ed.), *The Routledge Handbook of the Stoic Tradition* (pp. 374-388). Londres: Routledge. <https://doi.org/10.4324/9781315771588-39>
- ROBERTSON, Donald
 2019 *Build your Resilience*. Londres: Teach Yourself.
- ROBERTSON, Donald
 2020 *Piensa como un emperador romano*. México DF: Planeta.
- ROBERTSON, Donald & CODD, Trent III
 2019 Stoic Philosophy as a Cognitive-Behavioral Therapy. *The Behavior Therapist*, 42(2), 42-50. <https://bit.ly/4dVNPiO>
- RODRÍGUEZ MANCILLA, Héctor Marcelo, BETANCOURT SÁEZ, Marcela Eliana & VARAS GONZÁLEZ, René Antonio
 2018 La episteme neoliberal y la repolitización estudiantil emancipatoria en Brasil y Chile. *Sophia, Colección de Filosofía de la Educación*, (25), 259-286. <https://doi.org/10.17163/soph.n25.2018.09>
- SANDEL, Michael
 2020 *La tiranía del mérito*. Madrid: Debate.
- SÉNECA, Lucio Anneo
 1986 *De la cólera*. Madrid: Alianza.
- SÉNECA, Lucio Anneo
 2001 *Sobre la felicidad*. Madrid: Alianza.
- SÉNECA, Lucio Anneo
 2016 *Cuestiones naturales*. Madrid: Gredos.
- SILVA CARREÑO, Wilmer Hernando, ZAMORA JIMÉNEZ, Carlos Hernando & GUERRERO APONTE, Manuel Alejandro
 2023 Elementos de la obra de Byun-Chul Han para la formación ética frente a la sociedad del rendimiento. *Sophia, Colección de Filosofía de la Educación*, (34), 183-205. <https://doi.org/10.17163/soph.n34.2023.06>
- TKACZYK, Marcin
 2024 The Principle of Explosion in the Stoic Logic. *Logic and Logical Philosophy*, 33(2), 325-345. <https://doi.org/10.12775/LLP.2024.012>
- TUKIAINEN, Antti
 2012 La filosofía como práctica de la virtud. *HASER, Revista Internacional de Filosofía Aplicada*, (3), 109-129. <https://bit.ly/3RwyqOv>
- WEISS, Michael
 2017 Mindfulness filosófico, un ensayo sobre el arte de filosofar. *HASER, Revista Internacional de Filosofía Aplicada*, (8), 91-123. <https://bit.ly/3PLd4wd>
- VÁZQUEZ, Marcos
 2021 *Invicto: logra más, sufre menos*. Madrid: Círculo Rojo.
- ZENÓN DE CITIO, Aristón de Quíos, Apolónides, Hérilo de Calcedonia, Dionisio de Heraclea, Perseo de Citio, Cleantes & Esfero
 2002 *Los estoicos antiguos*. Madrid: Gredos.



Author Declaration—CRediT Taxonomy	
Author	Contributions
José Barrientos Rastrojo	This article was written entirely by the author; therefore, the content presented in this document is the sole responsibility of the author.

Statement on the Use of Artificial Intelligence
The author, José Barrientos Rastrojo, declares that the article titled “Logical Gaps in Contemporary Neo-Stoicism” was not produced with the assistance of artificial intelligence (AI).

336



Date of receipt: July 15, 2025
Review date: September 20, 2025
Date of approval: November 22, 2025
Publication date: July 15, 2026

THE ROLE OF INDUCTION AND PROBABILITY IN THE DEVELOPMENT OF SCIENCE AND PHILOSOPHY

Función de la inducción y la probabilidad en el desarrollo de ciencia y filosofía

WILLIAM ORLANDO CÁRDENAS MARÍN*

Universidad Politécnica Salesiana, Quito, Ecuador
<https://ror.org/00f11af73>
wcardenas@ups.edu.ec
<https://orcid.org/0000-0003-4696-457X>

RÓMULO IGNACIO SAN MARTÍN**

Universidad Politécnica Salesiana, Quito, Ecuador
<https://ror.org/00f11af73>
rsanmartin@ups.edu.ec
<https://orcid.org/0000-0002-7414-4598>

Suggested citation: Cárdenas Marín, William Orlando & San Martín, Rómulo Ignacio. (2026). The Role of Induction and Probability in the Development of Science and Philosophy. *Sophia, Colección de Filosofía de la Educación*, (41), pp. 337-368.

* Ph.D. in Philosophy; director of the Philosophy and Education programs at the Salesian Polytechnic University of Quito; member of the Philosophies of Language and Science Research Group, where he leads the research project “Humanities and Artificial Intelligence: Potential and Limitations from an Interdisciplinary Perspective.” His areas of research include logic, epistemology, the philosophy of mind and artificial intelligence, practical philosophy, management, and organizational leadership. Google Scholar: <https://scholar.google.com/citations?user=yt3Hlk4AAAAAJ&hl=es>

h-index: 4.

** Ph.D. and professor at the Salesian Polytechnic University of Quito. His research focuses on the origin, processing, and characterization of knowledge within philosophy, neuroscience, and education. Google Scholar: <https://scholar.google.com/citations?user=yt3Hlk4AAAAAJ&hl=es>

h-index: 5.

Abstract

This paper addresses the process of consolidating the inductive method and the support provided by the development of probability to satisfy formal validation requirements. The discussion on the limitations of induction considering the prevailing deductive method in philosophy and science has a long tradition, attention is paid to key concepts of inductive methodology and its probabilistic support with ranges of occurrence that contrast with the criteria of deduction based on certainties, such as the criteria of truth or falsehood. It is argued that probabilistic induction is the mechanism that enables the increase of philosophical and scientific knowledge and prevents us from falling into absolute and often dogmatic principles. Among the main findings is that induction does not adhere to the canons of knowledge from the deductive point of view, but introduces the concept of uncertainty, thereby breaking the Aristotelian tradition prevailing until Modernity. Additionally, it is observed that probabilistic induction expands the understanding of knowledge by shifting the discussion from absolute certainty to the realm of possibilities, thus presenting a diversity of possible worlds without deviating from real data collected by the researcher.

Keywords

Induction, Probability, Epistemology, Philosophy of science, Statistics, Mathematics.

Resumen

El presente trabajo aborda el proceso de consolidación del método inductivo y el soporte que brinda el desarrollo de la probabilidad para que aquel satisfaga los requisitos formales de validación. La discusión por las limitaciones de la inducción a la luz del método deductivo imperante en filosofía y ciencia tiene larga tradición, así se presta atención a los conceptos clave de la metodología inductiva y de su soporte probabilístico con rangos de ocurrencia que se anteponen a los criterios de la deducción basada en certezas, como el criterio de verdad o falsedad. Se argumenta que la inducción probabilística es el mecanismo que posibilita el aumento del conocimiento filosófico y científico, y nos cuida de caer en principios absolutos y, en muchas ocasiones, dogmáticos. Entre los principales hallazgos se tiene que la inducción no responde a los cánones del conocimiento visto desde la deducción, sino que inserta el concepto de incertidumbre, rompiendo así la tradición aristotélica vigente hasta la Modernidad. Además, se aprecia que la inducción probabilística abre la comprensión del conocimiento al desplazar la discusión desde la certeza absoluta para ubicarla en el plano de las posibilidades, presentando así diversidad de mundos posibles sin que estos se aparten de los datos reales recopilados por el investigador.

Palabras clave

Inducción, probabilidad, epistemología, filosofía de la ciencia, estadística, matemáticas.

Introduction

Throughout the history of philosophy and the subsequent emergence of science, there has been an ongoing debate over which method provides the best approach to knowledge, a discussion centered primarily on two methodologies: deduction and induction. The criteria underwriting these two methods are fundamentally different, if not contradictory; deduction is grounded in the criterion of certainty, whereas induction operates within the realm of probability. This paper focuses on the consolidation of the inductive method and the vital support that probability provides to this



process. It argues that probabilistic induction is the mechanism that enables the expansion of philosophical and scientific knowledge, preventing us from falling into absolute—and, in many cases, dogmatic—principles.

When discussing the inductive method, it is common to hear that it proceeds from the particular to the general, or from the simple to the complex; however, these definitions are rudimentary and provide only a vague outline of the inductive process. To define induction simply, one could state that it proceeds from particular instances of knowledge to universal structures of knowledge. Another, less debated definition would characterize it as a form of reasoning in which the truth of the premises—or facts—does not strictly entail the truth of the conclusion,¹ but rather provides compelling reasons for the conclusion to be accepted as true (Black, 1979). It is worth clarifying that induction lacks absolute certainty in its argumentation and inherently incorporates uncertainty into knowledge. This does not imply that induction should be dismissed for failing to postulate certain or true criteria (Lamarre and Shoham, 1994; Peat, 2002; Pérez Ilzarbe, 2004; Rosmini, 1991); rather, it invites us to understand that certainty is not the ultimate goal of this method. Instead, its objective is to provide the rational grounds that allow us to accept the likelihood of postulated theoretical assumptions.

The objective of this paper is to defend probabilistic induction as a valid mechanism for generating knowledge in both science and philosophy, highlighting its relevance in overcoming the limitations of deduction. Furthermore, we will analyze how the probabilistic approach broadens the horizon of epistemological understanding through the evaluation of potential scenarios grounded in empirical data.

The central problem lies in the persistent lack of consensus regarding the validity of induction versus deduction. Historically, deduction has enjoyed greater prestige due to its association with logical certainty, while induction has often been viewed as an inferior method because of its reliance on probability and uncertainty. This perspective has limited the appreciation of induction as a valuable tool in the production of knowledge. This study argues that probabilistic induction, rather than being a deficient method, is fundamental to scientific and philosophical progress. Through an analysis of probability as a methodological foundation, this paper posits that the inductive approach offers a more flexible and realistic framework for validating theories, particularly in contexts where absolute certainty remains unattainable.

The significance of this study lies in the fact that probabilistic induction expands the frontiers of scientific knowledge and provides a



robust methodological alternative to more rigid, deduction-based approaches. By treating probability as an integral part of the inductive process, it becomes possible to address complex issues from a perspective that acknowledges the uncertainty inherent in reality. The discussion of induction and probability remains highly relevant today, especially in a context where scientific advances in areas such as quantum mechanics and artificial intelligence rely heavily on probabilistic models to make predictions and validate theories. Indeed, the understanding and acceptance of uncertainty as a constituent part of knowledge is an increasingly mainstream trend across various disciplines.

To develop this analysis, a comprehensive review of the philosophical and scientific literature related to induction and probability will be conducted. A comparative approach will be adopted to examine deductive and inductive theories, analyzing how the incorporation of probability into the inductive method can resolve traditional problems associated with the lack of certainty in this approach. Likewise, the contributions of pivotal thinkers such as Bacon, Hume, and Bayes—who laid the foundations of probabilistic induction—will be explored.

The paper is structured as follows: first, the historical and philosophical context of the debate between induction and deduction is presented, highlighting the evolution of the inductive method. The second section examines the consolidation of this approach from Aristotle through the Modern Era, considering Hume's critiques and Bacon's contributions. Next, the third section analyzes the role of probability in supporting the inductive method and how this perspective allows for the expansion of scientific understanding. The fourth section delves into the Bayesian model and its impact on the validation of hypotheses in science and philosophy. Subsequently, the epistemological and metaphysical implications of probabilistic induction are explored. Finally, the main findings are summarized, and the relevance of this approach to the contemporary development of knowledge is defended.

Consolidation of the Inductive Method

Induction can be traced back to classical thinkers such as Aristotle, who, while advocating the use of deduction as a systematic framework, did not rule out the existence of cognitive processes based on induction rather than deduction (Aristotle, 1995; Franklin, 2009; Llano, 1991; Mosterín, 2006). This approach explicitly accounts for the information received



through the senses. For induction, the senses represent the initial step in signaling the existence of objects; this is why, when we speak of experimentation, it is understood fundamentally in terms of observational data—data obtained through sensory perception that nourish knowledge and allow us to corroborate reality. The senses thus serve as the bridge connecting the real world with rational structures.

Although Aristotle recognized induction, he did not devote a detailed study to it comparable to his treatment of deduction in his syllogistic logic (Aristotle, 1995; Cárdenas Marín et al., 2017; Copi and Cohen, 2014; Gamut, 2002). Consequently, his classical and medieval followers showed little concern for any method other than the deductive one. This neglect stemmed from the belief that the senses and reason are designed to perceive macro-level magnitudes that exhibit continuity and progression, whereas probability serves to challenge or refute the data provided by these large-scale magnitudes. Interest in induction reemerged centuries later, during the Scholastic period, with the studies of Grosseteste (1942), as noted by Rivadulla (1995a), who revived interest in a method that takes experience into account and allows for the corroboration of theory in light of sensory data. Although his thinking remained rooted in Scholasticism, it is vital to recognize that by considering the value of numerous cases, Grosseteste employed a process akin to statistics, which allowed for approximations toward a reliable explanation.

Ockham (1986 and 1988) also offered an alternative perspective on the nature of science, since alongside *episteme* one must also consider *doxa*, which—while not constituting deductive logic—serves as a precursor to being guided by empirical data. In this sense, opinion introduces a psychological doubt into deduction. In this way, Ockham introduced the idea that alternative, non-deductive pathways can be considered in the construction of knowledge; while these do not invalidate deduction, they raise crucial questions about it based on an understanding of reality that provides data that must be accounted for.

In the Modern era, more compelling contributions regarding induction emerged. As Rivadulla (1995a) notes, Bacon (2011) asserts that science derives directly from experience through induction, thereby establishing the inductive method as a necessary path to knowledge. Drawing on empiricism, he shifted the understanding of truth to the realm of objects through his conception of truth as correspondence rather than mere coherence (Rogers, 1985)—i.e., beyond the simple logical consistency of postulates.



According to San Martín (2005), the understanding of knowledge as correspondence conceives of truth as the product of two dimensions—one objective and one subjective—since truth originates from a subject who makes a statement about something outside that subject, which is the object. Conversely, coherence implies that the truth of statements depends on their internal connections within a totality from which there can be no separation from the true, a view that constitutes ontological monism.

In Bacon's view, the true is that which maintains a verifiable connection to what exists in reality and from which something is predicated that captures that reality as objectively as possible. Deduction, by contrast, is akin to entering a whirlpool that spins around itself without taking diverse data into account. Deductive logic does not operate with existing things, but with mental representations of existence; induction, on the other hand, works directly with existing entities rather than their mental surrogates. What Bacon lacked—and what remains relevant today—is a methodological correspondence: the formal link between existence and logic, which is captured in a single word: probability.

Exactness is an inherent component inferred by deduction with or without existing entities, and if hypotheses and facts lack a rigid logical framework, they run the risk of collapsing into psychologism. One must be careful not to fall into a conception of probability along purely psychologistic lines. How can this be resolved? Through frequency calculation—i.e., by considering the totality of a domain where the existent varies in its properties. The presence of higher occurrence rates denotes the probability of the majority at the expense of the minority, so that the probable does not constitute a haphazard form of psychologism, but rather a rigorous calculation based on existents.

Baconian empiricism proposed new tools for formulating theories, utilizing the procedure of induction through the experimental elimination of mutually competing hypotheses by means of the so-called “tables of being or presence” (Rivadulla, 1995a). This aspect entails a logical understanding of *modus tollens* (Copi and Cohen, 2014; Gamut, 2002; Suppes and Hill, 1988), given that the negation of an expected effect logically leads to the negation of its possible cause.

The elimination method constituted a significant advance in how the inductive process is conceptualized. Induction had previously been understood merely as the collection of data and the passive acceptance of hypotheses based on those findings; however, this approach fell prey to the problem of hasty generalization—understood as the fallacy of insufficient sample size—making it impossible to maintain a fully rigorous

framework. When Bacon introduced the criterion of elimination, the approach to hypothesis acceptance shifted fundamentally.

In the Baconian method, when there was insufficient data to support a hypothetical approach, one would proceed to consider a competing hypothesis for which fewer data points had been eliminated.² This might superficially resemble a form of falsificationism (Popper, 1980 and 2007; Pérez, 2004) —since it could be misconstrued as a kind of psychologism lacking a formal logical foundation— but it does not include the specific theoretical elements required to be considered as such. For Bacon, it was necessary to actively manipulate the world to scrutinize its secrets (Hacking, 1996).

This points to the process that Bacon had to clarify for a better understanding of reality: in experimentation, the researcher can move beyond passive sensory data and manipulate reality to yield data that either support or contradict hypotheses. However, this thinker's inductive process is insufficient to claim that probability emerged as a guiding principle, since Bacon still placed his trust in the ultimate attainment of certainty (Black, 1979). Thus, his advances should not be understood as paving the way for probability, because at that time exact classical physics was developing, dominated by contributions to gravity and electromagnetism. It was not until the twentieth century that probability as we understand it today fully emerged, preceded by the Bayesian postulates of the eighteenth century. For Bacon, certainty remained a criterion that had to be met. In this light, we understand that although there was a close connection to experimental data, these data remained anchored in rational necessity—in the certainty derived from deduction (Stadler, 2004; Wilson, 1985). This implies that probability, even in modern induction up to the seventeenth century, was not viable because the overarching approach relied on the criteria of exactness and relationships involving large quantities.

In other, simpler forms, induction appeared as a guiding principle, but it concealed a highly pronounced deductive framework, indicating that the foundation of inductive methodology—at least in the theorizing of that era—always rested on a deductive scaffolding. This was evident in various forms of experimentation. Even today, it can be observed when, for example, a professor in a laboratory sets the conditions for conducting an experiment, but before the experiment is carried out, students perform mathematical calculations. Thus, once the results are available, the values the experiment will yield can be determined with highly accurate approximations; it is even possible to set aside the real or material component, since events can be analyzed rationally, and if the causal premises or conditions are appropriate, the effect must occur. This example does



not imply that deduction is abandoned entirely, but it highlights that the traditional understanding of induction that has persisted to the present day maintains a deeply deductive foundation.

At this point, the problem of probability must be properly contextualized. It so happens that this problem does not arise from the deduction of large quantities, although it is related to it, since standard induction is grounded in deduction and in the criterion of exactness. It is crucial to understand probability in terms of the fact that matter and energy are not comprehensible as independent and progressive realities, but rather as correlated entities that advance in irregular steps.

Induction emerged as an empirical foundation, and the method gradually took shape through the contributions of various thinkers; however, there was not always a consensus on how the method should be applied to support the scientific theories outlined (San Martín, 2005). The alternative facet of induction is to focus strictly on phenomena, such that deduction is set aside to make way for observation as the primary source of data. Although observation has long been part of the natural sciences, it was not always at the center of the scientific method (Nagel, 1991). However, one should not generalize that everyone who conducts experiments tests theories exclusively in light of observed data, or that such observations always substantially contribute to knowledge (Hacking, 1996). In other words, there are postulates that, while appearing to consider data obtained inductively, remain tethered to a deductive component.

In this regard, one can consider Galileo (Galilei, 2010; Camilleri, 2015; Drake, 1975; Fehér, 1982; Fischer, 1986; Jardine, 1976), who, through his thought experiments, brought observational data and the deductive criteria of mathematics into play —i.e., he generated an inductive innovation that made it possible to understand the vitality of data and incorporate it into theoretical quantification (Rogers, 1985).

To understand the consolidation of induction, one must bear in mind that it is not a process derived from a single thinker; rather, it followed an evolutionary path marked by fluctuations, requiring constant refinement to withstand various attacks against its logical structure.

The ongoing tension or return to deduction that occurred in the search for the method best underpinning scientific knowledge is evident, but it cannot be denied that the rise of induction set a vital precedent in the acquisition of knowledge, despite the objections raised by various thinkers. One of these detractors was David Hume, who, although he framed his thought within the tradition of empiricism, also highlighted the profound difficulties of validating knowledge through induction.



Hume mentioned the origin of the term “induction” as used by Aristotle, which relates to the generalization of particular cases that fall under specific considerations (Hume, 1984; Black, 1979)—i.e., induction consists of elevating observed and experienced events to a general theory, provided that similar conditions are accounted for in the collection of that data. It must be clarified that this always applies to macro-scale phenomena, since the comparison between macro- and micro-atomic calculations is fundamentally different, as they operate with entirely distinct concepts.

While deduction consists of starting from principles of reason—principles provided by the human intellect, which are known *a priori*—induction involves an unknown aspect of knowledge. It leads the mind into a realm of non-knowledge, of non-certainty, and of profound uncertainty regarding what might be encountered. It is this criterion of uncertainty that lacks logical foundation from a deductive standpoint, yet it highlights the importance of observational data in the structuring of scientific and philosophical theories.

Later, Mill focused on the study of induction and posited that this method consists of seeking causes, in a manner closely aligned with Hume’s idea. As a methodological tool, he employed a system adapted from the induction by elimination proposed by Bacon, formalizing the methods of agreement, difference, joint agreement and difference, concomitant variations, and residues (Mill, 1973 and 1974; Black, 1979). As can be seen, the methods for verifying inductive postulates became increasingly rigorous, allowing for greater control over the experimental process. The methods proposed by Mill made it possible to categorize observational data and filter them to retain those offering the greatest explanatory certainty. Although it could be argued that Mill’s method restricted or reduced explanations, it must be borne in mind that all these methods dealt with data that added novelty to knowledge and were applied directly to observation; thus, they did not constitute a restriction but rather an expansion characteristic of what has come to be established as the inductive method (Mill, 1973 and 1974).

The inductive method, which is expected to serve as the stepping stone to understanding probability, was eventually grounded in the use of mathematics. It should be recalled that Euclidean geometry previously dominated mathematics; thus, the common denominator was the syllogistic logical method, and deductive logic does not give way to probability but only to the demonstration of validity. If syllogistic logic were probabilistic, then the task would consist solely of drawing conclusions from premises. Since there was no connection to the empirical, the need



arose to employ mathematics, which enabled the process through abstraction: by considering singular cases and, based on those cases, moving toward the probable, thereby introducing the concepts of uncertainty and indeterminacy.

For his part, Black (1979) made a clear distinction from what is generally known as induction, and his postulates include terms such as “eduction” (arguments that proceed from particulars to particulars, such as stating that a specific *a* is *b* without having previously observed that all *a* are *b*) and “adduction” (the most general case of non-demonstrative argumentation, corresponding to the classical notion of induction). By using these terms, he indicated that induction is not a subsidiary part of deduction. In addition to his postulates separating induction from deduction, he outlined the most common types of inductive arguments, along with one type of deductive argument:

- Elaborate induction: variants of induction by simple enumeration (the selection of individuals named in the premises).
- Proportional induction: inference from the frequency of occurrence of a certain characteristic in a sample to the frequency of occurrence of the same characteristic in the original population.
- Proportional abduction: reasoning from one sample to another based on premises of the same type.
- Proportional deduction: a statistical syllogism that proceeds from “*m/n* of *C* are *B*” (where *m/n* is greater than 1/2) and “*A* is a *C*” an “*A* is a *B*.” Some authors consider simple enumeration to be, in a certain sense, the most fundamental form (Black, 1979).

As seen, the arguments presented highlight the inductive methods used in the formation of theories structured under this methodology—methods fundamentally based on enumerating observational data.

It should be noted that the inductive method evolved from simple enumeration processes to more advanced models that required the use of alternative tools for validating information; one such tool was statistics, which paved the way for a probabilistic understanding of the inductive method.

According to Bird (2011), when referring to induction, it is commonly understood as a path that starts from the observed to reach the unobserved; however, this is a misconception, since the premises of inductive inferences may themselves result from previous inductions. The author made this clarification to help readers understand that just because a procedure is assumed to be inductive does not mean that purely inductive processes are always being applied. Rather, it must be clear that there



are certain structural nuances in the methodological considerations that must be considered when formulating theories. Furthermore, it should be noted that there are no purely isolated methodological programs—i.e., those that adhere strictly to a single methodology, whether deductive or inductive. Instead, there are instances in which a theory has empirical support and others in which it has rational support, reflecting a cooperative framework within the methodology of science.

It must be understood that when the term “premise” is used in inductive logic, it does not refer to postulates identical to those used in deduction, but is simply used as a synonym for an assertion, without this assertion being grounded in absolute truths of reason. When one has data that are more or less established, the path of science—which is formal knowledge—begins, and this involves nothing more than conceptualizing the data and, at that precise moment, arriving at a deduction. The mind typically draws deductions from data that have already been accepted, whereas dynamic science constructs new knowledge precisely from the uncertainty of the data.

In addition to the enumeration of data obtained through experimentation, induction must possess an inferential structure. Induction provides data that nourish mental states in the observer, such that it would not be possible to understand it through reference alone (Kuipers, 2004). Mental states are nourished by induction and allow theories to be developed from observation, provided that methodological guidelines are respected. Furthermore, it should be emphasized that theories derived from observational induction can, without restriction, serve as a foundation for new inductive theories. This introduces a novel aspect to the understanding of induction, since inductive theories can be sustained in a chain-like manner—something that is rarely possible in other frameworks, given that the historical foundation of induction typically included some underlying deductive component.

One author who structured his postulates around a methodological system alternative to deduction was Peirce, who maintained that inductive inference has the capacity to generate hypotheses that move from effects to causes (Peirce, 1957; Niiniluoto, 2004). This provides an understanding of induction as a system that allows one to infer an explanation whose hypothetical postulates possess sufficient inferential soundness to support the explanation based on the observed data.

This must be understood in terms of probability, which constitutes the condition of instability in data that are not immediately assimilated into a rigid mental program; there is a state of asymmetry, an asynchrony of data that do not fit. In the physics of large-scale phenomena, such data



fit immediately, but at the micro-level, they do not align. The solution is probability, which gives meaning to the mutability of data and the flexibility of the mind. Thus, it is understood that induction is not a minor methodological framework derived from deduction—one rooted in it and whose scope is validated solely by the limitations of necessity or sufficiency established by rational principles. Instead, it is structured as an alternative methodology that transcends deductive criteria and takes data from reality as a starting point to infer theories that expand the scope of knowledge, in such a way that they expand mental states rather than being restricted to the researcher's *a priori* rational conditions.

Although induction has a structure that can be independently sustained, one of the problems that often arises is that it is routinely analyzed through deductive categories; one such category is the truth inherent in a deductive criterion of certainty. But even when doubt is raised about the truth of inductive inferences, scientific realists defend the position that even the best theories must approximate the truth (Niiniluoto, 2004).

Prediction is a combination of propositional data capable of being deduced; in effect, predicting is nothing more than the application of deduction based on the reliable stability of data. In probability, on the other hand, one cannot predict in an absolute sense, but rather calculate the likelihood of occurrence, which leaves a margin of error and room for managing the data itself. Mathematics provides a significant aid in lending some structural certainty to probability.

The understanding of approximately true theories calls for a principle upon which induction is based and which provides the rational foundation that for centuries was required to sustain a rational, mathematical counterpart—and that principle is probability.

So far, induction has been approached as the methodology that gives rise to probability. It is true that probabilities cannot be calculated from pure deduction, as that would be conceptually absurd; however, such probabilities can be obtained from induction without contradiction—but only when one moves into the infinitesimal realm, which, ultimately, is what underlies reality. Induction is the gateway to probability, but not the induction of large quantities; rather, it is that which is deeply rooted in infinitesimal calculus.

Inductive Probability as a Methodological Principle

The inductive method has undergone extensive revision over the centuries and has been subjected to tests and critiques that have made it possi-



ble to revise and refine its criteria. Understanding the inductive approach did not necessarily involve conceiving of knowledge in terms of probability; this suggests that induction and probability did not emerge together as a single method, but rather that the process of theoretical revision allowed researchers to incorporate probabilistic criteria into the inductive method, thereby enabling it to gain ground and achieve validation.

Dealing with probability involves working with statistics, and working with statistics entails understanding the principles of mathematical calculus. For this reason, the following analysis will take these concepts into account to understand how the principle of probability aids the inductive method in advancing philosophical and scientific knowledge.

The concept of probability is not a recent one; rather, attempts to establish statistical indices can be traced throughout human history—even as far back as ancient Egypt—in connection with the creation of numerical censuses designed to enable the definition of various courses of action (Maistrov, 1974). In other words, the core concept of probability has been part of human understanding for a very long time.

The concept of probability emerged in the distant past of humanity, and the term was not initially coined as we know it today; rather, it was linked to randomness along with mathematical categories that made it possible to understand the greater or lesser likelihood of certain events occurring, based on observed repetitions (Rivadulla, 1995b). Probabilistic calculation emerged with the application of mathematics to observed cases, in which repetitions made it possible to establish a trend. The application of mathematics to observed data enabled humans to predict events, measure greater and lesser probabilities, and, based on those measurements, make informed decisions across various fields.

According to Maistrov (1974), in the fourteenth century, several merchant ship insurance companies were established in Italy and the Netherlands, which were responsible for insuring cargo transported between continents. These companies performed probability calculations regarding the risks associated with it. This approach to the use of probability calculations helps us understand that, as in many aspects of human life, certain tools emerged from practical needs rather than from the requirements of scientific knowledge; however, their applications opened up a field that made it possible to establish principles applicable to the acquisition of knowledge in general. Probability theory, as noted, developed out of practical human needs, but in the seventeenth century it became established as a scientific process—though it should not be forgotten that



several of its tools emerged from the fields of chance and gambling, providing valuable data for the development of science.

Maistrov (1974) posited the enriching role of games of chance in the early development of probability theory, and even today, using games of chance as a starting point for understanding probabilistic theories remains a valuable teaching resource. It is important to understand that these games spurred the development of a more detailed theory of probability, which made it possible to describe a greater number of phenomena and solve various problems, although the theory of probability applicable to science is not limited solely to games but has advanced to a different level of understanding.

Pinpointing the exact starting point of probability theory within the scientific method is somewhat complex due to its close connection to the practical aspects of human life, but it can be argued that Descartes (2006) paved the way for skepticism, while Pascal (2014) positioned God not as a certainty in the Cartesian style, but rather within a framework of probability: God is the best bet, the best possible probability (Hájek and Hartmann, 2010). These constitute two distinct ways of thinking that broke with the idea of absolute certainty and introduced doubt, possibility, and the constant refinement of human knowledge—a system of probabilities.

The model based on certainties, while providing rational security and finding validation in criteria of necessity, began to show limitations when it came to obtaining data from reality; the filters were different, and new mechanisms were required to record that data. Consequently, there was a gradual shift away from the pursuit of absolute certainty (Rogers, 1985).

It is worth noting that although the Copernican revolution in science took place in the sixteenth century (Copernicus, 1987) and the end of Aristotelianism—which was the dominant mindset throughout the West—was declared, albeit with only partial justification, the new science remained Aristotelian in its consideration of large-scale phenomena. Thus, gravity and electromagnetism are scientific consequences of Aristotelianism due to their high degree of certainty and determinism. The definitive end of Aristotelianism and the entire classical paradigm came with the birth of quantum theory, which paved the way for uncertainty and indeterminacy: science, in its definitive form, became probabilistic in the twentieth century with Schrödinger's wave mechanics (Restrepo Echavarría, 2024) and Heisenberg's matrix mechanics (1975). When these scientists shook the foundations of certainty, they established that scientific knowledge requires empirical and rational pillars to be better sustained (Hacking, 1996).



The criteria of reason and experience are not inherent in traditional science; reason applies to independent and progressive elements related to experiments that possess that quality. Reason became a matter of probability when it could not grasp hidden reality and had to hypothesize; indeed, the hidden is conjectured because it cannot be experimentally verified, and thus remains indeterminate —Schrödinger's cat serves as a prime example.

By subjecting certainty to doubt, the way was paved for uncertainty; however, this does not mean that all knowledge fell into the category of the uncertain, but rather that researchers began to seek mechanisms to understand it in a more or less plausible, probable way. In this regard, Hacking (1991) and Black (1979) note that probability is not just any mathematical discipline, but rather embodies one of the most notable achievements of modernity by enabling the study of metaphysics and epistemology through a unified methodology.

The process of consolidating probability in science occurred gradually, and it is evident that thinkers, step by step, directed their studies toward strengthening this theory beyond the context of games of chance. It is worth noting that the term “probability” had not yet been formally coined by these authors, appearing only a few times in the writings of the period (Rivadulla, 1995a).

As can be seen, recurring terms remained rooted in the tradition of using statistical calculations and had not yet managed to establish themselves as a cohesive theory of probability. The definitive origin of the term “probability” is attributed to Bernoulli in his work *Ars Conjectandi* (1713; Rivadulla, 1995b); with this author, it is possible to mark the emergence of probability theory as a scientific discipline. Bernoulli's advances in the field of probability laid the foundations upon which modern and contemporary thinkers structured their theories. Bernoulli's proof demonstrates the relationship between the number n of observations tending to infinity and the constancy of the probability p (Bernoulli, 1713; Rivadulla, 1995b), as follows:

$$\lim P(p - \varepsilon \leq f^0 \leq p + \varepsilon) = 1$$

$$\lim n \rightarrow \infty$$

This probability formula establishes the mathematical and epistemological foundations necessary to initiate various forms of validation within probability calculus, helping to emphasize that the nature of probability stems from both mathematical and empirical perspectives.



Although terms characteristic of induction—such as observation, data, and empirical basis—are evident, probability did not emerge alongside induction but rather within the practical world of human experience, later finding its specific path as a mathematical discipline. In this development, the value of statistics in consolidating probability theory must be recognized (Maistrov, 1974). In addition to proposing a statistical framework for knowledge, Bernoulli sought to provide an epistemological foundation for the principle of probability by arguing that it must be measurable in terms of proportion (Rivadulla, 1995b, p. 56)—a concept that remains central to all probabilistic formulas.

Later on, probability theory found new ways to define itself as a mathematical discipline. Alongside the consolidation of probability theory, an inductive methodology emerged that, while facing difficulties in its formal foundation, called deductive certainties into question. At that point, thinkers realized that probability could provide the necessary logical framework for induction, allowing for the expansion of the horizons of understanding regarding both the inductive method and the principle of probability. It is through this process of reconciling induction and probability that criteria began to be established to understand knowledge from a new perspective (Black, 1979).

As long as probability is viewed merely as a mathematical concept, it remains irrelevant to philosophy; but when it becomes part of an epistemological debate—i.e., in the construction and validation of scientific theories—probability enters fully into the realm of philosophy. In this sense, the issue is not only epistemological but also metaphysical, since it allows for an understanding of the modalities of being, moving far beyond the realm of exactness and certainty proposed by Aristotelianism. If one were to divide the horizon of science, only two overarching possibilities would emerge: the Aristotelian and the probabilistic.

Probabilistic induction established a new way of understanding scientific theories and allowed for the exploration of new ways of formulating hypotheses, while setting aside the need for absolute certainty in theories to make way for the possibilities of occurrence.

Later, Peirce (1957) sought to provide a foundation for probability in its support of the inductive method, locating this in a mediation between statistical deduction and abduction (Black, 1979). Probability lies between reason and the empirical—between mathematics, which has an undeniable deductive component, and the empirical, which is based on the collection of observational data. This is why, for Peirce, it is vital to understand that inductive hypotheses and theories, while possessing



specific tools, must rely on statistical support of a rational nature. When one lacks knowledge of the structure of a phenomenon—both its functionality and its consequences—probability comes into play. Something remains probable as long as the behavior of the data and their combinations is unknown; indeed, probability is a theory in which common combinations are insufficient and further combinatorial possibilities are explored. Thus, the field of probability represents the extension of logic into its potential variations.

For Peirce, probability found a firmer foundation in statistics than in individual cases. This was because, according to him, deterministic views lacked validity, and it was preferable to ground knowledge in constant values (Hacking, 1991)—values rooted in the numerical constants established by statistics—from which his understanding of induction arose. His deterministic understanding of probabilistic induction was based on the mathematical formulations he reviewed (Black, 1979), which seemed to impose a deterministic framework on the way scientific explanations are understood.

The consolidation of probabilistic induction occurred later with authors interested in providing greater structure to a relatively young and evolving method. Carnap (1969) sought alternatives to logically ground induction, and among them found in probability a viable path by understanding it as rational credibility and as the limiting relative frequency of occurrences (Black, 1979). However, this was an incomplete or exclusive attempt, since there are insufficient grounds to recognize completely distinct senses of probability: one *a priori* and the other empirical. Yet, the inconsistency in Carnap's attempt to differentiate between *a priori* and empirical probability does not preclude the recognition we must grant the author for his advances in probability theory.

The system of probability calculus introduced the idea that observed data can expand knowledge to the extent that observation frequencies increase. Although the observer lacks the capacity to capture all events of a given class, as observational records grow, the likelihood of a hypothesis being true increases. The versatility of probability lies in the fact that it is not anchored in the researcher's mind as *a priori* principles of reason but rather expands the perspective to record facts; and these facts are not abstracted *a priori* but rather provide the benefit of recording objective information.

Logical elements are inherent to the mind, synchronized with facts. Events cannot be deemed “probable” in themselves; they simply occur. Yet the mind seeks not only answers but also meanings. Sometimes



we have the answers, but they immediately become part of a network of meanings—and this is a product of the mind. Meanings do not exist in isolation but only in relation to one another. Probability is not merely a response to indeterminate phenomena but the attribution of meanings. Mathematics, together with statistics, opens the door to probabilistic answers, but philosophy is called upon to open itself—through logic—to the meaning of probability, which is what leads to the construction of theory, i.e., of epistemology. Herein lies one of the contributions that inductive probability makes to the construction of philosophical theories.

With the incorporation of the principle of probability into the inductive method, a new field of research into reality was opened up—a way of understanding knowledge and explaining the world not only from the researcher's perspective, but also by recognizing that data provide valuable information that can be categorized, allowing for the expansion of scientific explanation (Rivadulla, 194). This constitutes the basis of probabilistic induction, which, although it does not allow for the immediate determination of whether something is true or false—as is the case with deductive principles—provides a progressive approach to better explanations.

In probability, the same criterion applies as in the science of large quantities: it is not the experiment that decides, but the argument. This indicates that probability does not derive its persuasive power solely from data, since data only provide the variation and possibility within that specific experiment, leaving other possibilities aside. Thus, scientists and philosophers are not mere verifiers of experiments but rather defenders of theory, and this opens up a wide range of meanings.

One traditional criticism of induction concerns its lack of logical structure; however, probability emerged precisely to provide the logical support that was required of it. Given the consolidation of the link between induction and probability, it is a mistake to think of the inductive method as separate from this mathematical discipline. Keep in mind that the inductive method is not always followed when calculating probabilities; deduction can also make use of them (Hacking, 2009). Probability has a statistical—and therefore mathematical—structure, and it is understood from the outset that mathematics is the quintessential example of deduction. This does not imply that probabilistic induction borrows a methodological approach from deduction, but rather that the framework for calculating probabilities has a logical foundation that allows for the validation of the inductive approach.

The essential difference between induction and deduction does not lie in the logical system they follow to validate themselves, but rather in



the primary source of knowledge: data or reason. In probabilistic induction, observations serve to inform a hypothesis that will be more or less accepted in accordance with the empirical data collected. The recording of data for probability allows observations to be formalized as propositions—statements open to evaluation—that serve as the basis for argumentation and arise from controlled experiments (Bunge, 1980).

It is evident that scientific theories arise to explain reality only partially, and when it comes to probabilistic induction, one must recognize that the process is inherently progressive. It would be a mistake to assume that the observations and hypotheses that emerge immediately rise to the level of universal laws. Rather, they remain at a specific level—singular statements that can form general systems of explanation as more data are systematically incorporated.

The arguments in favor of probability's contributions to inductive methodology are varied. The development of probabilistic reasoning involved several thinkers who gradually shaped the tools used, with the aim of modeling a more reliable system that would allow for better approximations to acceptable theories. Among the various probabilistic approaches developed in defense of inductive methodology, one in particular was more widely accepted and subject to ongoing refinement: the Bayesian approach, which made it possible to explore different ways of validating empirical data in relation to their statistical compilation.

355



Contributions of Bayesian Probability

In the previous section, we noted that probability has both an informal history—during which the term was not employed as it is today—and a formal history, when the term began to be used in its current sense. Amid this back-and-forth of theoretical adjustments, several contributions helped shape its formal structure.

Among the authors who proposed foundational probabilistic theories is Bayes (1763), who draws researchers' attention because his formal proposal incorporates categories that provide rigorous criteria for defending induction and for supporting hypotheses within probability calculus. It is necessary to analyze Bayesian approaches because his perspective underpins what is known as his inductive logic—a conception that suggests a robust way to confer validity on a system that was previously criticized for lacking such a structural foundation (Pinto, 2002).

The Bayesian system is important to the study of probabilistic induction, since the author was not only concerned with theoretically sup-

porting the inductive method but also sought a probabilistic formulation that would allow for the definition of validation criteria for that methodology. Bayes' logical system posits various theses regarding probability. Notably, this system explicitly involves individuals' belief systems, and probability calculus serves to measure the degrees of these systems.

At this point, a common range emerges in probability calculus that involves measuring degrees of confidence between 1 and 0. This framework is notable for its proximity to mathematical logic; however, despite sharing a certain relationship with it, Bayes incorporated the space between states of absolute certainty to indicate the greater or lesser degree of confidence that a belief system can provide. It should be noted that probability does not allow for degrees of belief greater than 1 or negative values, because there are two absolute extremes that cannot be exceeded: either a belief approaches the maximum value of a true state, or it moves to approach the maximum at the opposite extreme—toward a state of falsity regarding the assertion made.

In this method of grading beliefs, Bayes found a mechanism for establishing verifiable criteria that made it possible, procedurally, to set values that could be tested against data obtained through induction (Bird, 2011). Viewed in this way, Bayesian probability does not postulate fixed or static states of affirmation but rather possesses an inherently incremental nature; it increases the likelihood of a belief in accordance with new data as they are obtained. In this manner, Bayes accounted for the fact that the inductive process is structured around the researcher's mental states when observing facts, and that each new piece of data collected directly influences the observer's belief.

When discussing the observer's degrees of belief, there is a risk of interpreting probabilistic induction as something merely subjective. However, it must be borne in mind that it is not subjective insofar as the assertions do not arise purely from the individual's intellect, but rather stem from the collection of data and, from that point, are elevated to the researcher's understanding; thus, they serve as an objective argument for defining the gradation of beliefs established in the hypotheses. Bayesian postulates leave the field of understanding reality open; i.e., theories are not restricted solely to nourishing a static body of beliefs and marking it as definitive, but rather allow for the systematic reconsideration of theories as data collection expands (Chalmers, 1999).

It must be borne in mind that Bayesian epistemology is not merely passive data collection, as this would lead to an Aristotelian-style referentialism—unconsciously implying that data alone construct probability,



and thus that the experiment, rather than the theory, is the deciding factor. This interpretation contradicts the principle already stated; therefore, it will be maintained that it is not the experiment that decides, but the argument. If it is not merely the data, but rather the interpretation and meaning of the data resulting from logical analysis, then interpreting is not reproducing the data, but rather seeking structural meanings that involve the use of logical connectives. From a logical perspective, data can be combined in as many ways as possible until a contradiction is reached, which constitutes the boundary of all science and philosophy. The limit of probability is contradiction—not the data themselves, but the combinations that have been made of them. This opens up a new perspective on the understanding of induction, supported by Bayesian probability. Induction does not consist of immediately elevating a particular collection of data to a general postulate, but rather comprises a series of processes that gradually refine assertions and even allow for the correction of previous statements based on the data obtained from experimentation.

Probabilistic induction establishes a relationship of inquiry that proceeds from effect to cause, unlike deduction, which is concerned with defining the necessary causes to explain effects. Bayes' theorem clearly articulates this inductive premise as follows:

We have an event (the data) and want to know whether it was caused by one of the causes $A_1, A_2, \dots$ (a series of competing scientific hypotheses; these are the possible causes of B). The probabilities $P(A_1), P(A_2), \dots, P(A_n)$ —i.e., the prior probabilities of each of the rival hypotheses—are known, as are the probabilities $P(B/A_1), P(B/A_2), P(B/A_n)$ or the likelihood of obtaining the data B depending on which of the hypotheses is true. Therefore, the probability $P(A_i/B)$ (the final probability that hypothesis A_i is true, once we have obtained the data B) is given by the following expression (Díaz, 2007, pp. 12-13).

The calculation of probabilities within the Bayesian approach does not merely detail the likelihood of a single hypothesis arising from the data; rather, it involves a much more detailed analysis. Based on the observed data, several hypotheses will emerge that could explain the cause of that effect, each of which is supported by the collected data—i.e., they are never hypotheses disconnected from the events.

The practice of moving from the conditioned to the conditions was present in Hume (1984) and Kant (2004); however, this does not indicate that it is an inherently probabilistic endeavor, but rather an element of critique. At the level of mathematical probability, there will be many possibilities precisely because of the proliferation of hypotheses; but it



is at the philosophical level that probability assumes the role of critique. Deduction and referentialism are not critical ways of presenting science, given their frequent absence of empirical data and reliance on reason alone, which can lead to dogmatism in science; indeed, such an approach could scarcely be called science—at best, it is dogmatic philosophy. Criticism is probabilistic because it brings logical elements into dialogue with facts, presenting alternatives that are not limited to a single point of view or a unique criterion of truth but open themselves to possibilities. From this perspective, one could say that critique is the philosophical version of what is probable.

The probability of hypothetical explanations is reinforced as reality provides data that offer greater or lesser evidence, and one can distinguish between these hypotheses in accordance with the values presented in the mathematical formulation. Thus, Bayes' theorem serves as a criterion for distinguishing between competing hypotheses—a system that employs statistical values but is thoroughly informed by experimental data. Bayes' formula (1763) is formulated as follows:

$$P[A_n/B] = \frac{P[B/A_n] \cdot P[A_n]}{\sum P[B/A_i] \cdot P[A_i]}$$

This formula helps us understand that whether the probability of a cause or hypothesis n , is higher or lower depends on the ratio of the relationship between the effect and hypothesis n , to the sum of the probabilities of the effect across the initial causes. We understand that in the process of validating new theories, each hypothesis n will, in the subsequent step, replace hypothesis i .

What Bayes' theorem introduced into inductive probability involves a statistical approach that moves from the particular to the general—i.e., from the sample to the population—but not directly by bypassing rules of reasoning; rather, it is progressively consolidated through the repeated refinement of competing hypotheses, in which a hypothesis n may be accepted as more or less probable, or even rejected, as the data provide supporting or contradictory evidence.

There have been several followers of the Bayesian approach to inductive probability; among them is de Finetti (1972), for whom reasoning inductively is nothing more than calculating $p(h, e)$, the probability of h given the observation of e , according to Bayes' theorem (Rivadulla, 1995a), where e , is given by empirical evidence or experimental data—the effects. Understanding the probability range of a hypothesis between the values 1 and 0 leads to the realization that no possible explanation can be



ruled out *a priori*; rather, observational evidence *e*, is required to support or rule out that explanation as a possible cause of the effect.

Empirical evidence or data constitutes a compelling argument in probabilistic induction; unlike the irrelevance of data in deduction, in this methodology its value is high, since it has the capacity to increase the degree of acceptance of a hypothesis based on observations. These observations must follow patterns that allow for the establishment of statistical boundaries; otherwise, there would be hundreds of data points without rational categorization (Labastida, 158). Researchers who employ Bayesian approaches must clearly understand that cases must be collected objectively and that their occurrence will not always be constant; this is why the frequency criterion was introduced (Díaz, 2007). This clarification highlights the essential distinction between induction and deduction.

The concept of hypotheses exists in deductive methodology, but their justification depends on rational arguments—such as laws or corollaries—that allow a truth value to be attributed to the hypothetical statement. In probabilistic induction, on the other hand, there is no primary foundation based on laws, because there is no establishment of initial laws, only data collection; thus, inductive hypotheses lack a stable criterion of truth, and their acceptance is directly proportional to the frequencies derived from experimentation.

This is due to the category of precision within which macro-level phenomena operate. Indeed, probability, even today, does not enter into macro-scale phenomena because it is not needed there, as the laws of classical physics govern that realm. One must not succumb to the need to resort to probability when human beings are sensory beings who require stability. The problem will be even greater when a similar effect to that seen in Modernity occurs: when the influence of mathematical physics shaped the theory of knowledge, shifting toward a more subject-centered approach, yet one that includes explicit references to objects.

This results in a duality in the probabilistic conceptualization of a hypothesis: a probability derived from the hypothesis itself and one derived from the data (Díaz, 2007). This dual concept helps us understand that, in the application of induction, although we seek a starting point from the object, the subject possesses mental states that help them orient themselves toward what they wish to investigate; it is not a blank mind. This does not imply that probability is a matter more of the subject than of the object; one must be careful not to make that confusion because, for example, the physics of microparticles can be studied only through probability—this is neither subjectivity nor a psychological burden. This



might seem like a critique of the structure of probabilistic induction, but all it does is situate the criteria by which probability is employed within inductive methodology. As noted earlier, Bayes' theorem never establishes certainty regarding a hypothesis; its purpose is not to provide deductive support but rather to calibrate beliefs. Its focus is on providing empirical support for hypotheses based on the collected data.

One of the issues that might cause unease for the researcher is the use of the concepts of subjectivity and objectivity, since it appears that the reviewed literature tends to frame induction in terms of the individual's subjective, almost psychological states. However, a careful review of the mechanisms used in both methodologies—deductive and inductive—will show that the purpose of probabilistic induction is to consolidate the mental state of a subject—in this case, the researcher—in light of objective data, statistical measurement, and the comparison of statements about reality. Based on this, Bayes' theorem at no point deals with rules for accepting the truth or falsity of a hypothesis based on the data—no matter how high the probability obtained—but rather seeks to continue increasing probabilities through the updating of data (Psillos, 2004), thereby elucidating the inferential chain structured by the information gathered.

Probabilistic induction provides a process-oriented understanding of knowledge construction. The support for a hypothesis within a probabilistic system does not lead to establishing its truth or falsity, but rather to connecting it to the probability of a subsequent hypothesis. This constant updating is possible thanks to the continuous collection of data from experience, which further shapes scientific explanations.

When considering chains of data—an endless stream of information gathered from reality—one might envision an infinite path of probabilistic calculations; and, in fact, it opens the door to understanding an unfinished science, one that can always renew its explanations. But this should not be understood as a regression to infinity or an absurdity; rather, with each advance in the probable acceptance of hypotheses, scientific knowledge and explanation expand.

The path of expansion of scientific knowledge based on Bayesian postulates can be understood when one considers the need for constant updating of theories, and this is made possible by recent data obtained by the researcher, while also making room for data collected by other researchers (Hájek and Hartmann, 2010).

Viewed in this light, the Bayesian probabilistic inductive model combines elements that have allowed it to establish itself as a comprehensive vision of knowledge. Meaning, memory, and testimony are key to the



construction of knowledge and constitute mutually supportive building blocks; the goal of this integrative vision is the constant improvement of our explanation of the world. This understanding of theories as a quest for an ever-improving explanation is relevant to the researcher's work, since knowledge does not arise solely from the reasons established by the subject but is open to new empirical findings. It is evident that for this progressive construction of knowledge to be possible, inductive inferences take on a generalizing character (Kuipers, 2004); however, there is a limit to these generalizations, namely that their scope is restricted to the level of the hypothesis undergoing probabilistic evaluation, and they will suffice to establish the degree of belief in that hypothesis. In other words, the generalization obtained is not immediately elevated to the status of a law; there is no such broad rational leap due to the risk of committing argumentative fallacies.

Probabilistic induction in the Bayesian model does not provide states of truth or falsity for statements; what is obtained is a progressive approximation to the truth, although within these criteria it will not be possible to establish an absolute truth based on observational evidence (Kuipers, 2004). Although the notion of truth is not ruled out in this system, its function is not the same as that attributed to it in the deductive model of certainty; rather, it becomes a point of reference—a kind of nominal truth (Kuipers, 2004)—from which statements are formulated based on the data.

It should be clarified that truth in probability cannot be attained through reference, since that would constitute Aristotelianism, and probability is not Aristotelian. The data show how the world is presented, but it is through probability that ontology is reframed. So, is the world the one that truly appears to be? For Aristotelians, yes, but for probabilists, the answer is different. Therefore, if truth-falsehood is related to exactness, then the false will be the probable, precisely because it is indeterminate; but if truth-falsehood is relative, the exact is nothing more than the assessment of a categorical state of large magnitudes—that is, the brain was canonizing things according to categories based on the laws of larger magnitudes; for example, where matter ends, energy begins. On the other hand, at the relative, uncertain, and probabilistic level, it is discovered that categories must also change when one enters the world of fundamental and constitutive elements: what appeared separate at the macroscopic level, as categories, was, at the elementary constitutive level, a tangle of relationships, for which there was no capacity to unravel that inner world. Thus, truth value lies in flexibility rather than in exactness.



The novelty of the methodological advance represented by Bayes' theorem lies in the ability to approximate the truth provided by probabilistic calculus (Kuipers, 2004)—something that is irrelevant in deduction and, consequently, limits assertions to the researcher's rational process, setting aside—or relegating to the background—observational accounts of reality.

Conclusions

The inductive method has been subject to centuries of analysis, defense, and refutation. It has been shown that many thinkers have valued its scope, but at the same time, it has had to overcome various methodological limitations to meet the theoretical requirements that establish it as a valid method for justifying knowledge.

The key methodological element for the emergence of induction was probability, since it fulfills the formal mathematical requirements that cannot be overlooked in science—namely, the mathematical foundation of theories. In this regard, it has become evident that induction will never satisfy the concept of certainty; this is because certainty belongs to a different methodological field—deduction. In fact, much confusion and many refutations have arisen because philosophers of science analyzed probabilistic induction through the lens of deduction based on certainty, leading to a profound methodological incommensurability.

Induction and probability did not share similar origins; it would be a mistake to assume that probability belongs inherently to induction and vice versa. As we have seen in the course of this argument, probabilistic calculations had rather informal beginnings in recreational fields such as games of chance, whereas induction has been connected from its very outset to philosophy and, more specifically, to the branch known as epistemology. Furthermore, probabilities are not restricted to exclusive use within the inductive method, since probabilistic calculations can also be successfully employed in deductive theories; this is due to the mathematical and statistical framework involved in measuring the likelihood of occurrence.

What makes probability unique to induction is that its starting point is not contingent on concepts preestablished by the researcher, but rather is grounded in the systematic collection of factual data—of occurrences—and this is precisely what begins to inform knowledge. It is acknowledged that this approach could lead to a fallacy of hasty gener-



alization, but if probability calculations are used properly, they actively prevent this error. Furthermore, this fallacy is ruled out by understanding that the ultimate purpose of the calculation is not to arrive at absolute certainty regarding what is true or false, but rather to determine what is more or less probable; thus, a probability value will never be exactly 1 or 0 (true or false in its deductive logical counterpart), but rather ranges fluidly between these two values.

Bayes's application of the principle of probability to inductive methodology helped clarify the path this method should follow to identify better validation criteria, and paved the way for its development and acceptance thanks to the statistical support that guides data collection. However, despite the warm reception given to Bayesian postulates and the advances made by his followers in revising formulas to ensure improved validation criteria, induction and its probabilistic foundation remained the focus of methodological observations and criticisms. Nevertheless, the current consensus in epistemology is not that science possesses true or absolute theories, but rather that probable theories are embraced, and it is probability that has enabled the development of groundbreaking theories over the past century. This does not imply that deduction is sidelined or no longer considered a valid method today, as it remains highly relevant, but it does not overlook the rich possibilities offered by probabilistic induction. Understanding philosophy and science through these criteria allows us to extend our reasoning to possible worlds. The enduring contribution of this method to knowledge has been that it allows us to break away from absolute or dogmatic understandings in order to move toward flexible, argumentative possibilities without ever abandoning the bedrock foundation of reality.



Notes

1. It is important to note that when it comes to induction, the starting point is not premises but facts; however, in logical theory, the term “premise” is used to refer to the relationship within the structure of the inductive argument.
2. “Competing hypotheses” are assumptions that seek to explain a reality from two conceptual perspectives that are not necessarily similar.

Bibliography

ARISTÓTELES

1995 *Tratados de lógica (Organon) II*. Madrid: Biblioteca Clásica Gredos.

BACON, Francis

2011 *La gran restauración (Novum organum)*. Madrid: Tecnos.

BAYES, Thomas

1763 An Essay towards Solving a Problem in the Doctrine of Chances. *Philosophical Transactions of the Royal Society of London*, 53, 370-418. <https://doi.org/doi:10.1098/rstl.1763.0053>

BERNOULLI, Jacobi

1713 *Ars Conjectandi*.

BIRD, Alexander

2011 Inductive Knowledge. En: Sven Bernecker & Duncan Pritchard (eds.), *The Routledge Companion to Epistemology* (pp. 271-282). Londres: Routledge.

BLACK, Max

1979 *Inducción y probabilidad*. Madrid: Cátedra.

BUNGE, Mario

1980 *Epistemología*. México DF: Siglo XXI.

CAMILLERI, Kristina

2015 Knowing what would Happen: The Epistemic Strategies in Galileo's Thought Experiments. *Studies in History and Philosophy of Science*, 54, 102-112. <https://doi.org/http://dx.doi.org/10.1016/j.shpsa.2015.08.009>

CÁRDENAS MARÍN, William, REYES, Darwin, & VITERI, Frank

2017 La formalización lógica del lenguaje como punto de partida para el análisis objetivo del discurso y la argumentación científica. *Sophia, Colección de Filosofía de la Educación*, (22), 101-123. <https://doi.org/doi.org/10.17163/soph.n22.2017.04>

CARNAP, Rudolf

1969 *Fundamentación lógica de la física*. Buenos Aires: Sudamericana.

CHALMERS, Alan

1999 *What is this Thing Called Science?* Cambridge: Hackett Publishing Company.

COPÉRNICO, Nicolás

1987 *Sobre las revoluciones*. Madrid: Tecnos.

COPI, Irving & Cohen, Carl

2014 *Introducción a la lógica*. México DF: Limusa.

DE FINETTI, Bruno

1972 *Probability, Induction and Statistics*. Londres: Wiley.

DESCARTES, René

2006 *Discurso del método*. Madrid: Tecnos.

DÍAZ, Carmen

2007 *Viabilidad de la enseñanza de la inferencia bayesiana en el análisis de datos en psicología*. Universidad de Granada.

DRAKE, Stillman

1975 Kepler and Galileo. *Vistas in Astronomy*, 18, 237-247. [https://doi.org/10.1016/0083-6656\(75\)90102-6](https://doi.org/10.1016/0083-6656(75)90102-6)

FEHÉR, Martha



- 1982 Galileo and the Demonstrative Ideal of Science. *Studies in History and Philosophy of Science*, 13(2), 87-110. [https://doi.org/10.1016/0039-3681\(82\)90021-8](https://doi.org/10.1016/0039-3681(82)90021-8)
- FISCHER, Klaus
1986 *Galileo Galilei*. Barcelona: Herder.
- FRANKLIN, James
2009 Aristotelian Realism. En: Andrew Irvine (ed.), *Handbook of The Philosophy of Science, Philosophy of Mathematics* (pp. 103-155). Elsevier.
- GALILEI, Galileo
2010 *Noticiero Sideral*. MUNCYT.
- GAMUT, L. T. F.
2002 *Introducción a la lógica*. Editorial Universitaria de Buenos Aires.
- GROSSETESTE, Robert
1942 *On Light (De Luce)*. Milwaukee: Marquette University Press.
- HACKING, Ian
1991 *La domesticación del azar*. Barcelona: Gedisa.
- HACKING, Ian
1996 *Representar e intervenir*. Barcelona: Paidós.
- HACKING, Ian
2009 *An Introduction to Probability and Inductive Logic*. Cambridge University Press.
- HÁJEK, Alan & HARTMANN, Stephan
2010 Bayesian Epistemology. En: Jonathan Dancy, Ernest Sosa & Matthias Steup (eds.), *A Companion to Epistemology* (pp. 93-105). Chichester: Wiley-Blackwell.
- HEISENBERG, Werner
1975 *Diálogos sobre la física atómica*. Madrid: Biblioteca de Autores Cristianos.
- HUME, David
1984 *Tratado de la naturaleza humana*. Madrid: Orbis.
- JARDINE, Nicholas
1976 Galileo's Road to Truth and the Demonstrative Regress. *Studies in History and Philosophy of Science*, 7(4), 277-318. [https://doi.org/10.1016/0039-3681\(76\)90009-1](https://doi.org/10.1016/0039-3681(76)90009-1)
- KANT, Immanuel
2004 *Crítica de la razón pura*. Madrid: Tecnos.
- KUIPERS, Theo
2004 Inference to the Best Theory, rather than Inference to the Best Explanation - Kinds of Abduction and Induction. En: Friedrich Stadler (ed.), *Induction and Deduction in the Sciences* (pp. 25-52). Springer Science; Business Media Dordrecht.
- LABASTIDA, Horacio
1958 Probabilidad y ciencia. *La Palabra y El Hombre*, 6, 123-126.
- LAMARRE, Phillipe & SHOHAM, Yoav
1994 Knowledge, Certainty, Belief, and Conditionalisation (abbreviated version). En: Jon Doyle, Erik Sandewall & Pietro Torasso (eds.), *Principles of Knowledge Representation and Reasoning: Proceedings of the Fourth International Conference (KR '94)* (pp. 415-424). Morgan Kaufmann Publishers.
- LLANO, Alejandro 1991. *Gnoseología*. Universidad de Navarra.



MAISTROV, Leonid

1974 *Probability Theory: A Historical Sketch*. Academic Press.

MILL, John Stuart

1973 *Collected Works of John Stuart Mill. A System of Logic. Ratiocinative and Inductive* (vol. VIII, parte I). Routledge & Kegan Paul.

MILL, John Stuart

1974 *Collected Works of John Stuart Mill. A System of Logic. Ratiocinative and Inductive*. (vol. VIII, parte II). Routledge & Kegan Paul.

MOSTERÍN, Jesús

2006 *Aristóteles: historia del pensamiento*. Madrid: Alianza.

NAGEL, Ernest

1991 *La estructura de la ciencia*. Barcelona: Paidós.

NIINILUOTO, Ilkka

2004 Truth-seeking by Abduction. En: Friedrich Stadler (ed.), *Induction and Deduction in the Sciences* (pp. 57-82). Springer Science; Business Media Dordrecht.

OCKHAM, Guillermo

1986 *Exposición de los ocho libros sobre la física*. Madrid: Orbis.

OCKHAM, Guillermo

1988 *Ockham's theory of propositions. Part II of the Summa Logicae*. St. Augustine's Press.

PASCAL, Blaise

2014 *La máquina de buscar a Dios: una antología*. Madrid: Tecnos.

PEAT, David

2002 *From Certainty to Uncertainty. The Story of Science and Ideas in the Twentieth Century*. Joseph Henry Press.

PEIRCE, Charles Sanders

1957 *Essays in the Philosophy of Science*. The Liberal Arts Press.

PÉREZ, Ana

2004 El empirismo crítico de Karl Popper. *Signos Filosóficos*, 6, 15-33. <https://bit.ly/4u4Sx3O>

PÉREZ ILZARBE, Paloma

2004 Saber y evidencia en la Edad Media: transformaciones de la idea aristotélica de ciencia en la visión medieval del conocimiento. En: Paloma Pérez Ilzarbe Serrano & Raquel Lázaro Cantero (coords.), *Verdad y certeza: los motivos del escepticismo* (pp. 39-56). Universidad de Navarra.

PINTO, Silvio

2002 El bayesianismo y la justificación de la inducción. *Principia*, 6(2), 231-247 <https://doi.org/10.5007/%25x>

POPPER, Karl

1980 *La lógica de la investigación científica*. Madrid: Tecnos.

POPPER, Karl

2007 *Los dos problemas fundamentales de la epistemología: basado en manuscritos de los años 1930-1933*. Madrid: Tecnos.

PSILLOS, Stathis

2004 Inference to the Best Explanation and Bayesianism. En: Friedrich Stadler (ed.), *Induction and Deduction in the Sciences* (pp. 83-92). Springer Science; Business Media Dordrecht.



RESTREPO ECHAVARRÍA, Ricardo

- 2024 Realismo, relatividad general y el gato de Schrödinger. *Sophia, Colección de Filosofía de la Educación*, (37), 79-101. <https://doi.org/10.17163/soph.n37.2024.02>

RIVADULLA, Andrés

- 1994 Probabilistic Support, Probabilistic Induction and Bayesian Confirmation Theory. *The British Journal for the Philosophy of Science*, 45(2), 477-483. <https://doi.org/10.1093/bjps/45.2.477>

RIVADULLA, Andrés

- 1995a La revolución en metodología de la ciencia: Karl Popper (1902-1994) in memoriam. *Endoxa, Series Filosóficas*, (5), 7-33. <https://doi.org/10.5944/endoxa.5.1995.4832>

RIVADULLA, Andrés

- 1995b Historia y epistemología de los campos de significado de probabilidad. *Agora*, 14(1), 53-75. <https://bit.ly/4fnUbtL>

ROGERS, Graham

- 1985 The Basis of Belief, Philosophy, Science and Religion in Seventeenth-Century England. *History of European Ideas*, 6(1), 19-39. [https://doi.org/10.1016/0191-6599\(85\)90061-0](https://doi.org/10.1016/0191-6599(85)90061-0)

ROSMINI, Antonio

- 1991 *Certainty*. Rosmini House.

SAN MARTÍN, Rómulo

- 2005 *Apuntes preliminares en epistemología general y especial*. Universidad Politécnica Salesiana.

STADLER, Friedrich

- 2004 Induction and Deduction in the Philosophy of Science: a Critical Account since the Methodenstreit. En: Friedrich Stadler (ed.), *Induction and Deduction in the Sciences* (pp. 1-16). Springer Science; Business Media Dordrecht.

SUPPES, Patrick & Hill, Shirley

- 1988 *Primer curso de lógica matemática*. Reverté Colombiana.

WILSON, Fred

- 1985 *Explanation, causation and deduction. The University of Western Ontario series in philosophy of science* (vol. 26). D. Reidel Publishing Company.

Authorship Statement—CrediT Taxonomy	
Authors	Contributions
William Orlando Cárdenas Marín	Conceptualization, formal analysis, research, visualization, writing, original draft.
Rómulo Ignacio San Martín	Research, methodology, formal analysis, writing, review, and editing.

Statement on the Use of Artificial Intelligence

The authors, William Orlando Cárdenas Marín and Rómulo Ignacio San Martín, of the article titled “The Role of Induction and Probability in the Development of Science and Philosophy,” declare that the preparation of this document did not involve the use of artificial intelligence (AI).

Date received: July 15, 2024

Review date: September 20, 2024

Date of approval: November 20, 2024

Publication date: July 15, 2026



Publication guidelines in «Sophia»



ISSN: 1390-3861 / e-ISSN: 1390-8626

1. General Information

«Sophia» is a scientific publication of the *Salesian Polytechnic University of Ecuador*, published since January 2006 in an uninterrupted manner, with a fixed biannual periodicity, specialized in Philosophy of Education and its interdisciplinary lines such as Epistemology, Deontology, Aesthetics, Critical Studies, Hermeneutics, Axiology, Ontology, Philosophical Anthropology, Sociology, Philosophical Analytics, among others, all linked to the field of Education.

It is scientific journal, which uses the peer-review system, under double-blind review methodology, according to the publication standards of the American Psychological Association (APA). Compliance with this system allows authors to guarantee an objective, impartial and transparent review process, which facilitates the publication of their inclusion in reference databases, repositories and international indexing.

«Sophia» is indexed in (**SCOPUS**) Emerging Sources Citation Index (**ESCI**) from Web of Science; in Scientific Electronic Library Online (**SciELO**); in the Scientific Information System (**REDALYC**); in the directory and selective catalog of the Regional Online Information System for Scientific Journals of Latin America, the Caribbean, Spain and Portugal (**LATINDEX**), in the Matrix of Information for the Analysis of Journals (**MIAR**), in Integrated Classification of Scientific Journals (**C.I.R.C**), in the Academic Resource Index (**Research Bible**), in the Ibero-American Network of Innovation and Scientific Knowledge (**REDIB**), in the Portal for the dissemination of scientific production (**Dialnet**); in Latin American Bibliography in Journals of Scientific and Social Research (**BIBLAT**); in the Directory of Open Access Journals **DOAJ** and in repositories, libraries and specialized catalogs of Latin America.

The journal is published in a double version: printed (ISSN: 1390-3861) and digital (e-ISSN: 1390-8626), Spanish and English, each work being identified with a DOI (Digital Object Identifier System).

371



2. *Scope and policy*

2.1. *Theme*

Original contributions in Philosophy of Education, as well as related areas: Epistemology, Deontology, Aesthetics, Critical Studies, Hermeneutics, Axiology, Ontology, Philosophical Anthropology, Sociology, Philosophical Analytics,... and all interdisciplinary related disciplines with a philosophical reflection on education

2.2. *Contributions*

«Sophia» publishes critical studies, reports and proposals, as well as selected state-of-the-art literature reviews related to Philosophy of education. Accepting also results of empirical research on Education, written in Spanish and/or English.

The contributions can be:

- **Reviews:** 10,000 to 11,000 words of text, without including charts and references. Justified references would be specially valued. (around a minimum of 60 works)
- **Research:** 8,000 to 9,500 words of text, without including title, abstracts, descriptors, charts and references.
- **Reports, studies and proposals:** 8,000 to 9,500 words of text, without including title, abstracts, charts and references.

2.3. *Characteristics of the content*

All works presented for publication in «Sophia» must comply with the characteristics of scientific research:

- Be original, unpublished and relevant
- Address issues that respond to current problems and needs
- Contribute to the development of scientific knowledge in the field of Philosophy of Education and its related areas
- Use adequate, clear, precise and comprehensible language
- Not have been published in any medium or in the process of arbitration or publication.
- Not to be the result of thesis work, monographs, and/or degree projects
- Do not exceed 2% similarity with other documents.
- If applicable, explicitly and responsibly disclose the use of artificial intelligence tools, ensuring that their application was limited to technical support or writing assistance, without compromising the originality or intellectual authorship of the manuscript.

Depending on the relevance of the article, it will be considered as special contributions and will occasionally be published:

- Works that exceed the stated extent.
- Articles with more than three authors will be accepted when they address a topic of significant relevance to the scientific community, involve complex categorical analysis within a specific field of knowledge, are produced by researchers from different countries and continents, and receive an outstanding evaluation from international peer reviewers.
- Works that do not correspond to the subject of the reflection foreseen for the respective issue.

2.4. Periodicity

«Sophia» has a biannual periodicity (20 articles per year), published in January and July and counts by number with two sections of five articles each, the first referring to a **Monographic** topic prepared in advance and with thematic editors and the second, a section of **Miscellaneous**, composed of varied contributions within the theme of the publication.



2.5 Transparency, equity, and recognition of researchers' contributions. To promote transparency, equity, and the proper acknowledgment of each contributor's role in scientific production, *Sophia* journal adopts the Contributor Roles Taxonomy (CRediT).

2.6 Research integrity. To ensure the integrity of the research process and intellectual honesty, *Sophia* requires the disclosure of any use of Artificial Intelligence (AI) with the purpose of identifying the extent of automated intervention in the creation, writing, analysis, or review of content. This disclosure is an imperative for clearly delineating human responsibility in the generation of content to be published by *Sophia*, and for fostering a culture of openness toward the appropriate use of technological tools in scientific production. The declared use of AI is a prerequisite for the ethical and rigorous advancement of knowledge.

2.7 Retraction. In the event that the author of a manuscript submitted to the *Sophia: Collection of Philosophy of Education* journal, in the required **Declaration of AI Use**, has explicitly stated that no Artificial Intelligence (AI) tools were used, and despite the editorial checks carried out throughout the various stages of the review process up to publication, aspects related to simi-

larity, overlap, false or inappropriate information regarding the use of AI were not detected in time—if, after publication, improper use of AI is confirmed—the journal reserves the right to sanction the author(s) through formal **retraction** of the article. This implies the removal of the document from the journal, the withdrawal of the author(s)' claim as stated in the Declaration of AI Use, and the public acknowledgment of the error. The author(s) must formally admit the mistake and revoke their previous declaration.

2.8 Fees. *Sophia* does not charge for publication. There are no fees or payments required from authors or readers. Access to all content is completely free of charge. The processing of manuscripts and/or publication materials is fully sponsored by the Salesian Polytechnic University of Ecuador. Authors are entirely exempt from any payment.

374



3. Presentation, Structure and Submission of the Manuscripts

Texts will be presented in Arial 12 font, single line spacing, complete justification and no tabs or blank spaces between paragraphs. Only large blocks (title, authors, summaries, keywords, credits and headings) will be separated with a blank space. The page should be 2 centimeters in all its margins.

Papers must be submitted in a Microsoft Word document (.doc or .docx), requiring that the file be anonymized in File Properties, so that the author/s identification does not appear.

Manuscripts must be submitted only and exclusively through the OJS (Open Journal System), in which all authors must previously register. Originals sent via email or other interfaces are not accepted.

3.1. Structure of the manuscript

For those works that are empirical investigations, the manuscripts will follow the IMRDC structure, being optional the Notes and Supports. Those papers that, on the contrary, deal with reports, studies, proposals and reviews may be more flexible in their epigraphs, particularly in material and methods, analysis, results, discussion and conclusions. In all typologies of works, references are mandatory.

A. EMPIRICAL RESEARCH

Its purpose is to contribute to the progress of knowledge through original information, following the IMRDC structure: Introduction (objectives, previous literature). Materials and methods, Analysis and Results, Discussion,

integration and conclusions. Following the criteria set by UNESCO, it is these types of scientific texts are also called as: “original memories”

The recommended structure, especially in works that include empirical research, is the following:

1) Title (Spanish) /Title (English): Concise but informative, in Spanish on the first line and in English on the second. A maximum of 85 characters with spaces are accepted. The title is not only the responsibility of the authors, changes being able to be proposed by the Editorial Board.

2) Identification data: Of each of the authors, organized by priority. A maximum of 3 authors will be accepted per original, although there may be exceptions justified by the topic, its complexity and extent. When the subject matter is of significant relevance to the scientific community, involves complex categorical analysis within a specific field of knowledge, is developed by researchers from different countries and continents, and receives an outstanding evaluation from international peer reviewers. Next to the names must follow the professional category, work center, email of each author and complete ORCID number. Aspects that must be included in the Cover Letter, must also be uploaded to the OJS system of the journal, in the Metadata section and /or in a word document attached to the file containing the work proposed for the evaluation.

3) Abstract (Spanish) / Abstract (English): It will have a minimum length of 210 and a maximum of 220 words in Spanish; and 200 and maximum 210 words in English. The abstract will describe concisely and in this order: 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written “This paper analyzes...”. In the case of the abstract, the use of automatic translators will not be accepted due to their poor quality.

4) Keywords (Spanish) / Keywords (English): A maximum of 6 keywords must be presented for each language version directly related to the subject of the work. The use of the key words set out in UNESCO's Thesaurus and of the journal itself, located in the following link: https://sophia.ups.edu.ec/tesauro_sophia.php, will be positively valued.

5) Introduction and state of the issue: It should include the problem statement, context of the problem, justification, rationale and purpose of the study, using bibliographical citations, as well as the most significant and current literature on the topic at national and international level..

6) Material and methods: It must be written so that the reader can easily understand the development of the research. If applicable, it will describe the methodology, the sample and the form of sampling, as well as the type of statistical analysis used. If it is an original methodology, it is necessary to explain the reasons that led to its use and to describe its possible limitations.

7) Analysis and results: It will try to highlight the most important observations, describing them, without making value judgments, the material and methods used. They will appear in a logical sequence in the text and the essential charts and figures avoiding the duplication of data.



8) Discussion and conclusions: Summarize the most important findings, relating the observations themselves with relevant studies, indicating contributions and limitations, without adding data already mentioned in other sections. Also, the discussion and conclusions section should include the deductions and lines for future research.

9) Supports and acknowledgments (optional): The Council Science Editors recommends the author (s) to specify the source of funding for the research. Priority will be given to projects supported by national and international competitive projects. In any case, for the scientific evaluation of the manuscript, it should be only anonymized with XXXX for its initial evaluation, in order not to identify authors and research teams, which should be explained in the Cover Letter and later in the final manuscript.

10) The notes (optional) will go, only if necessary, at the end of the article (before the references). They must be manually annotated, since the system of footnotes or the end of Word is not recognized by the layout systems. The numbers of notes are placed in superscript, both in the text and in the final note. The numbers of notes are placed in superscript, both in the text and in the final note. No notes are allowed that collect simple bibliographic citations (without comments), as these should go in the references.

11) References: Bibliographical citations should be reviewed in the form of references to the text. Under no circumstances should references not mentioned in the text be included. Their number should be sufficient to contextualize the theoretical framework with current and important criteria. They will be presented alphabetically by the first last name of the author.

B. REVIEWS

Literature reviews are based on the analysis of major publications on a given topic; Its objective is to define the current state of the problem and to evaluate the investigations carried out. Its structure responds to the phases of the theme/ problem, contributions of researchers or teams, changes in theory or main theoretical currents; unsolved problems; current and future trends (Giordanino, 2011). According to UNESCO, this type of work is also known as "recapitulative studies"

1) Title (Spanish) /Title (English): Concise but informative, in Spanish on the first line and in English on the second. A maximum of 85 characters with spaces are accepted. The title is not only the responsibility of the authors, changes being able to be proposed by the Editorial Board.

2) Identification data: Of each of the authors, organized by priority. A maximum of 3 authors will be accepted per original, although there may be exceptions justified by the topic, its complexity and extent. When the subject matter is of significant relevance to the scientific community, involves complex categorical analysis within a specific field of knowledge, is developed by research-



chers from different countries and continents, and receives an outstanding evaluation from international peer reviewers. Each name must next to the names must follow the professional category, work center, email of each author and complete ORCID number. Aspects that must be included in the Cover Letter, must also be uploaded to the OJS system of the journal, in the Metadata section and /or in a word document attached to the file containing the work proposed for the evaluation.

3) Abstract (Spanish) / Abstract (English): It will have a minimum length of 210 and a maximum of 220 words in Spanish; and 200 and maximum 210 words in English. The abstract will describe concisely and in this order: 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written "This paper analyzes..." In the case of the abstract, the use of automatic translators will not be accepted due to their poor quality.

4) Keywords (Spanish) / Keywords (English): A maximum of 6 keywords must be presented for each language version directly related to the subject of the work. The use of the key words set out in UNESCO's Thesaurus and of the Journal itself will be positively valued.

5) Introduction: It should include a brief presentation of the topic, the formulation of the purpose or objective of the study, the context of the problem and the formulation of the problem that is proposed, the presentation of the idea to be defended, the justification explaining the importance, the relevance of the study; the methodological framework used, and finally, a brief description of the structure of the document. In the justification it is necessary to use bibliographical citations as well as the most significant and current literature on the subject at national and international level.

6) Body or development of the document: It implies putting into practice throughout the text, a critical attitude that should tend towards the interpellation, in order to attract the attention of the topic and the problem treated. The writer must generate in the reader the capacity to identify the dialogical intention of the proposal and to promote an open discussion.

7) Conclusions: Objectively state the results and findings. Offer a vision of the implications of the work, the limitations, the tentative response to the problem, the relations with the objective of the research and the possible lines of continuity (to fulfill this objective it is suggested not to include all the results obtained in the research). The conclusions should be duly justified according to the research carried out. The conclusions may be associated with the recommendations, evaluations, applications, suggestions, new relations and accepted or rejected hypotheses.

8) Bibliography: It is the set of works used in the structuring of the scientific text. It should include only the reference of the works used in the research. Bibliographical references should be ordered alphabetically and conform to the international APA standards, in their sixth edition.



3.2. Guidelines for references

PERIODIC PUBLICATIONS

Journal article (author): Valdés-Pérez, D. (2016). Valdés-Pérez, D. (2016). Incidencia de las técnicas de gestión en la mejora de decisiones administrativas [Impact of Management Techniques on the Improvement of Administrative Decisions]. *Retos*, 12(6), 199-2013. <https://doi.org/10.17163/ret.n12.2016.05>

Journal Article (Up to six authors): Ospina, M.C., Alvarado, S.V., Fefferman, M., & Llanos, D. (2016). Introducción del dossier temático “Infancias y juventudes: violencias, conflictos, memorias y procesos de construcción de paz” [Introduction of the thematic dossier “Infancy and Youth: Violence, Conflicts, Memories and Peace Construction Processes”]. *Universitas*, 25(14), 91-95. <https://doi.org/10.17163/uni.n25.%25x>

Journal article (more than six authors): Smith, S.W., Smith, S.L. Pieper, K.M., Yoo, J.H., Ferrys, A.L., Downs, E.,... Bowden, B. (2006). Altruism on American Television: Examining the Amount of, and Context Surrounding. *Acts of Helping and Sharing. Journal of Communication*, 56(4), 707-727. <https://doi.org/10.1111/j.1460-2466.2006.00316.x>

Journal article (without DOI): Rodríguez, A. (2007). Desde la promoción de salud mental hacia la promoción de salud: La concepción de lo comunitario en la implementación de proyectos sociales. *Alteridad*, 2(1), 28-40. (<https://goo.gl/zDb3Me>) (2017-01-29).

BOOKS AND BOOK CHAPTERS

Full books: Cuéllar, J.C., & Moncada-Paredes, M.C. (2014). *El peso de la deuda externa ecuatoriana*. Quito: Abya-Yala.

Chapter of book: Zambrano-Quiñones, D. (2015). El ecoturismo comunitario en Manglaralto y Colonche. En V.H. Torres (Ed.), *Alternativas de Vida: Trece experiencias de desarrollo endógeno en Ecuador* (pp. 175-198). Quito: Abya-Yala.

DIGITAL MEDIA

Pérez-Rodríguez, M.A., Ramírez, A., & García-Ruiz, R. (2015). La competencia mediática en educación infantil. *Análisis del nivel de desarrollo en España. Universitas Psychologica*, 14(2), 619-630. <http://dx.doi.org/10.11144/Javeriana.upsy14-2.cmei>

It is prescriptive that all quotations that have DOI (Digital Object Identifier System) are reflected in the References (can be obtained at <http://goo.gl/gfruh1>). All journals and books that do not have DOI should appear with their respective link (in their online version, if they have it, shortened by Bitly: <https://bitly.com/>) and date of consultation in the indicated format.

Journal articles should be presented in English, except for those in Spanish and English, in which case it will be displayed in both languages using



brackets. All web addresses submitted must be shortened in the manuscript, except for the DOI that must be in the indicated format (<https://doi.org/XXX>).

3.3. *Epigraphs, Figures and Charts*

The epigraphs of the body of the article will be numbered in Arabic. They should go without a full box of capital letters, neither underlined nor bold. The numbering must be a maximum of three levels: 1. / 1.1. / 1.1.1. A carriage return will be established at the end of each numbered epigraph.

The charts must be included in the text in Word format according to order of appearance, numbered in Arabic and subtitled with the description of the content.

The graphics or figures will be adjusted to the minimum number required and will be presented incorporated in the text, according to their order of appearance, numbered in Arabic and subtitled with the abbreviated description. Their quality should not be less than 300 dpi, and it may be necessary to have the graph in TIFF, PNG or JPEG format.

4. *Submission Process*

The receipt of articles is permanent, however, considering that the publication of the Sophia Journal is bi-annual, the manuscripts must be sent at least one period before the date stipulated in the corresponding Call.

The manuscripts must be sent through the OJS (Open Journal System) system of the journal, for which it is necessary that the author previously registers in the respective space (enter in the following link: <http://sophia.ups.edu.ec/index.php/sophia/user/register>, complete the form and follow each of the suggested steps).

The five documents that must be submitted are:

1. **Letter of introduction.** This document includes a declaration stating that the submitted manuscript is an original contribution, has not been submitted to or is under review by any other journal. It also includes the acceptance of the signing authors, allowing, if applicable, the editorial team of Sophia to make changes to the content, formal aspects, and style of the document following the journal's requirements after the manuscript review process. Additionally, the Letter of introduction or Presentation contains a Rights Transfer section (partial transfer of rights to the publisher) and a Conflict of Interest Declaration, in accordance with editorial guidelines. This document must be signed and submitted through the OJS system in the "Supplementary Files" section.
2. **Cover Letter.** This letter should include the following information



Title. In Spanish in the first line, in letter Arial 14, with bold and centered, with a maximum of 85 characters with space. In English in the second line, in letter Arial 14, in italics and bold.

Full names and surnames of the authors. Organized in order of priority, a maximum of 3 authors are accepted per original, although there may be exceptions justified by the topic, its complexity and extent. When the subject matter is of significant relevance to the scientific community, involves complex categorical analysis within a specific field of knowledge, is developed by researchers from different countries and continents, and receives an outstanding evaluation from international peer reviewers. Each name must include the name of the institution in which he/she works as well as the city, country, email and ORCID number.

Abstract (Spanish) It will have a minimum length of 210 and a maximum of 220 words. It must include 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written "The present paper analyzes..."

Abstract. Summary with all its components, translated into English and in cursive. Do not use automatic translation systems.

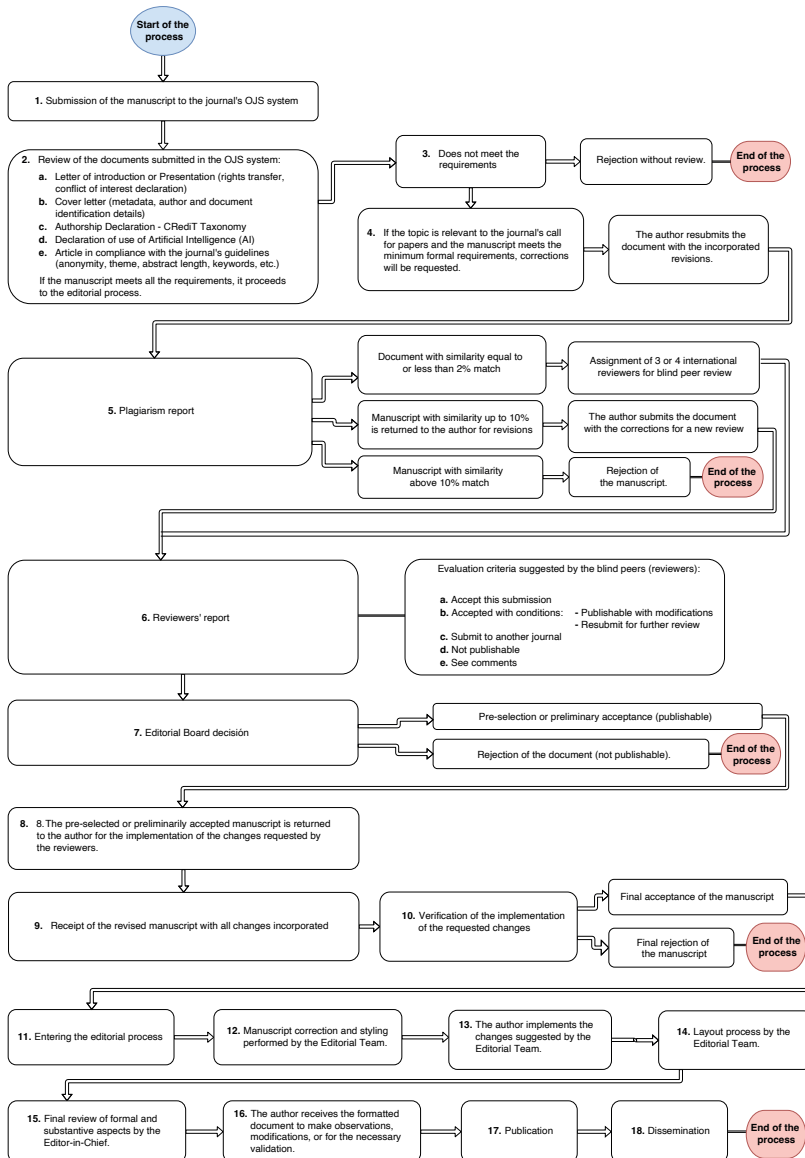
Keywords (Spanish): 6 standardized terms preferably of a single word and of the UNESCO and the Journal's Thesaurus separated by commas (,).

Keywords. The 6 terms above translated into English and separated by comma (,). Do not use automatic translation systems.

3. **Authorship Declaration (CRediT Taxonomy).** Applicable for articles written by multiple authors; this document details the contribution of each author to the manuscript submitted to Sophia, in accordance with the 14 aspects outlined by the CRediT Taxonomy. This document must be signed and submitted through the OJS system in the "Supplementary Files" section. It is necessary to use the format required by the journal.
4. **Artificial Intelligence (AI) Use Declaration.** This is the formal declaration made by the author(s) regarding the level of artificial intelligence (AI) used in the preparation of the manuscript, whether in parts or components of the document. It explains in detail, clearly, and precisely how this tool was utilized in the process and/or in the presentation of the research results. The document must be signed by the responsible author(s) and submitted through the OJS system of the journal.
5. **Manuscript** totally anonymized, according to the guidelines referred in precedence.

All authors must register with their credits on the OJS platform, although only one of them will be responsible for correspondence. No author can submit or have in review two manuscripts simultaneously, estimating an absence of four consecutive numbers (2 years).

5. Article evaluation process



6. Publication interval

The font size and style as stated in section 4 (Submission Process). The interval between receipt and publication of an article is 7 months (210 days).

Normas de Publicación en «Sophia»



ISSN: 1390-3861 / e-ISSN: 1390-8626

1. Información general

«Sophia» es una publicación científica de la Universidad Politécnica Salesiana de Ecuador, editada desde junio de 2006 de forma ininterrumpida, con periodicidad fija semestral, especializada en Filosofía de la Educación y sus líneas interdisciplinarias como Epistemología, Deontología, Estética, Estudios Críticos, Hermenéutica, Axiología, Ontología, Antropología Filosófica, Sociología, Analítica Filosófica... vinculadas al ámbito de la educación.

Es una revista científica arbitrada, que utiliza el sistema de evaluación externa por expertos (*peer-review*), bajo metodología de pares ciegos (*double-blind review*), conforme a las normas de publicación de la American Psychological Association (APA). El cumplimiento de este sistema permite garantizar a los autores un proceso de revisión objetivo, imparcial y transparente, lo que facilita a la publicación su inclusión en bases de datos, repositorios e indexaciones internacionales de referencia.

«Sophia» se encuentra indexada en (SCOPUS) Emerging Sources Citation Index (ESCI) de Web of Science; en Scientific Electronic Library Online (SciELO); en el Sistema de Información Científica (REDALYC); en el directorio y catálogo selectivo del Sistema Regional de Información en Línea para Revistas Científicas de América Latina, el Caribe, España y Portugal (LATINDEX), en la Matriz de Información para el Análisis de Revistas (MIAR), en Clasificación Integrada de Revistas Científicas (C.I.R.C), en Academic Resource Index (Research Bible), en la Red Iberoamericana de Innovación y Conocimiento Científico (REDIB), en el Portal de difusión de la producción científica (Dialnet); en Bibliografía Latinoamericana en Revistas de Investigación Científica y Social (BIBLAT); en el Directorio de Revistas de Acceso Abierto DOAJ y en repositorios, bibliotecas y catálogos especializados de Iberoamérica.

La revista se edita en doble versión: impresa (ISSN: 1390-3861) y electrónica (e-ISSN: 1390-8626), en español y en inglés, siendo identificado además cada trabajo con un DOI (Digital Object Identifier System).

383



2. Alcance y política

2.1. Temática

Contribuciones originales en materia de Filosofía de la Educación, así como áreas afines: Epistemología, Deontología, Estética, Estudios Críticos, Hermenéutica, Axiología, Ontología, Antropología Filosófica, Sociología, Analítica Filosófica,... y todas aquellas disciplinas conexas interdisciplinarmente con una reflexión filosófica sobre la educación.

2.2. Aportaciones

«Sophia» edita estudios críticos, informes, propuestas, así como selectas revisiones de la literatura (*state-of-the-art*) en relación con la Filosofía de la Educación, aceptando asimismo trabajos de investigación empírica, redactados en español y en inglés.

Las aportaciones en la revista pueden ser:

- **Revisiones:** 10.000 a 11.000 palabras de texto, sin incluir tablas y referencias. Se valorará especialmente las referencias justificadas, actuales y selectivas de alrededor de un mínimo de 60 obras.
- **Investigaciones:** 8.000 a 9.500 palabras de texto, sin incluir título, resúmenes, descriptores, tablas y referencias.
- **Informes, estudios y propuestas:** 8.000 a 9.500 palabras de texto, sin incluir título, resúmenes, tablas y referencias.

2.3. Características del contenido

Todos los trabajos presentados para la publicación en «Sophia» deberán cumplir con las características propias de una investigación científica:

- Ser originales, inéditos y relevantes.
- Abordar temáticas que respondan a problemáticas y necesidades actuales.
- Aportar para el desarrollo del conocimiento científico en el campo de la Filosofía de la Educación y sus áreas afines.
- Utilizar un lenguaje adecuado, claro, preciso y comprensible.
- No haber sido publicados en ningún medio ni estar en proceso de arbitraje o publicación.
- No ser resultado de trabajos de tesis, monografías y/o trabajos de titulación.
- No exceder el 2% de similitud con otros documentos.
- En caso de que corresponda, declarar de forma explícita y responsable el uso de herramientas de inteligencia artificial, asegurando que su aplicación se haya limitado a funciones de apoyo técnico

o redacción, sin afectar la originalidad ni la autoría intelectual del manuscrito.

Dependiendo de la relevancia y pertinencia del artículo, se considerarán como contribuciones especiales y ocasionalmente se publicarán:

- Trabajos que superen la extensión manifestada.
- Artículos con más de tres autores cuando se trate de un tema relevante para la comunidad científica, complejo categorialmente dentro de un determinado campo del saber, elaborado por investigadores provenientes de distintos países y continentes, y con evaluación sobresaliente por parte de los revisores internacionales.
- Trabajos que no se correspondan con el tema objeto de la reflexión prevista para el número respectivo.

2.4 Periodicidad

«Sophia» tiene periodicidad semestral (20 artículos por año), publicada en los meses de enero y julio; y por número cuenta con dos secciones de cinco artículos cada una, la primera referida al tema central de carácter **Monográfico** debidamente preparado y, la segunda, una sección **Miscelánea**, compuesta por aportaciones variadas dentro de la temática de la publicación.

385



2.5 Transparencia, equidad y reconocimiento del aporte de los investigadores. Para promover la transparencia, la equidad y el reconocimiento adecuado de las contribuciones realizadas por cada uno de los colaboradores en la producción científica, la revista Sophia utiliza la **Taxonomía de roles de los colaboradores (CRediT)**.

2.6 Integridad de la investigación. Para garantizar la integridad del proceso de investigación y la honestidad intelectual, Sophia declara el uso de Inteligencia Artificial (IA) con la finalidad de identificar el grado de intervención automatizada en la creación, en la redacción, en el análisis o en la revisión de contenidos. Esta declaratoria se convierte en un imperativo para delimitar la responsabilidad humana en la generación del contenido que será publicado por Sophia y para propiciar una cultura de apertura al uso de herramientas tecnológicas que medien adecuadamente la producción científica. El uso declarado de la Inteligencia Artificial constituye un requisito para el avance ético y riguroso del conocimiento.

2.7 Retracción: En caso de que el autor de algún manuscrito ingresado en el **Proceso de Evaluación** en la *Revista Sophia: Colec-*



ción de Filosofía de la Educación, en el documento ***Declaración de uso de Inteligencia Artificial*** exigido como requisito por la revista, haya manifestado expresamente el no uso de Inteligencia Artificial y que a pesar de las revisiones ejecutadas en las distintas fases del proceso editorial hasta su publicación, por cualquier motivo involuntario no se haya detectado oportunamente aspectos de similitud, coincidencia, falsa o inapropiada información relacionados con la aplicación de inteligencia artificial en el documento y que posteriormente a la publicación del mismo se verifique el uso indebido de Inteligencia Artificial, la revista se reserva el derecho de sancionar al autor o autores del artículo con la **retractación** respectiva, esto implica el retiro del documento por parte de la revista, la renuncia a la afirmación expuesta por el autor o autores en el documento ***Declaración de uso de Inteligencia Artificial***. El autor o los autores deberán **admitir públicamente el error y revocar lo declarado previamente**.

- 2.8 Pagos:** Sophia no cobra por publicar. No hay ninguna cuota o pago por parte de los autores o lectores. El acceso a su contenido es totalmente gratuito. El procesamiento de los manuscritos y/o los materiales de publicación son patrocinados por la Universidad Politécnica Salesiana del Ecuador. Los autores están exentos de todo pago.

3. Presentación, estructura y envío de los manuscritos

Los trabajos se presentarán en tipo de letra Arial 12, interlineado simple, justificado completo y sin tabuladores ni espacios en blanco entre párrafos. Se separarán con un espacio en blanco los grandes bloques (título, autores, resúmenes, descriptores, créditos y epígrafes). La página debe tener 2 centímetros en todos sus márgenes.

Los trabajos deben presentarse en documento de Microsoft Word (.doc o .docx), siendo necesario que el archivo esté anonimizado en Propiedades de Archivo, de forma que no aparezca la identificación de autor/es.

Los manuscritos deben ser enviados única y exclusivamente a través del OJS (Open Journal System), en el cual todos los autores deben darse de alta previamente. No se aceptan originales enviados a través de correo electrónico u otra interfaz.

3.1. Estructura del manuscrito

Para aquellos trabajos que se traten de investigaciones de carácter empírico, los manuscritos seguirán la estructura IMRDC, siendo opcionales los epígrafes de Notas y Apoyos. Aquellos trabajos que por el contrario se traten de informes, estudios, propuestas y revisiones sistemáticas podrán ser más flexibles en sus epígrafes, especialmente en Material y métodos; Análisis y resultados; Discusión y conclusiones. En todas las tipologías de trabajos son obligatorias las Referencias.

A. INVESTIGACIONES EMPÍRICAS

Su objetivo es contribuir al progreso del conocimiento mediante información original, sigue la estructura IMRDC: Introducción (objetivos, literatura previa), Materiales y métodos; Análisis y Resultados; Discusión, integración y conclusiones. Siguiendo los criterios planteados por la Unesco, este tipo de textos científicos se llaman también como: “memorias originales”

La estructura recomendada, especialmente en trabajos que incluyen investigaciones empíricas, es la siguiente:

1) Título (español) / Title (inglés): Conciso pero informativo, en castellano en primera línea y en inglés en segunda. Se aceptan como máximo 85 caracteres con espacio. El título no solo es responsabilidad de los autores, pudiéndose proponer cambios por parte del Consejo Editorial.

2) Datos de Identificación: Nombres y apellidos completos de cada uno de los autores, organizados por orden de prelación. Se aceptarán como máximo 3 autores por original, aunque pudieren existir excepciones justificadas por el tema, su complejidad y extensión. Cuando se trate de un tema relevante para la comunidad científica, complejo categorialmente dentro de un determinado campo del saber, elaborado por investigadores provenientes de distintos países y continentes, y con evaluación sobresaliente por parte de los revisores internacionales. Junto a los nombres deberá incluirse, el nombre de la institución en la que trabaja así como la ciudad, el país, el correo electrónico y número completo de ORCID de cada autor aspectos que deberán constar de modo obligatorio en la Carta de Presentación, además deberán ser cargados en el sistema OJS de la revista, en la sección Metadatos y/o en un documento word adjunto al archivo que contiene el trabajo que se propone para la evaluación.

3) Resumen (español) / Abstract (inglés): Tendrá como extensión mínima de 210 y máxima de 220 palabras en español; y de 200 y máximo de 210 palabras en inglés. El resumen describirá de forma concisa y en este orden: 1) Justificación del tema; 2) Objetivos; 3) Metodología y muestra; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...”. En el caso del abstract no se admitirá el empleo de traductores automáticos por su pésima calidad.

4) Descriptores (español) / Keywords (inglés): Se deben exponer máximo 6 términos por cada versión idiomática relacionados directamente con



el tema del trabajo. Será valorado positivamente el uso de las palabras claves expuestas en el Thesaurus de la UNESCO y en el de la propia revista localizado en el siguiente enlace: https://sophia.ups.edu.ec/tesauro_sophia.php

5) Introducción y estado de la cuestión: Debe incluir el planteamiento del problema, el contexto de la problemática, la justificación, fundamentos y propósito del estudio, utilizando citas bibliográficas, así como la literatura más significativa y actual del tema a escala nacional e internacional.

6) Material y métodos: Debe ser redactado de forma que el lector pueda comprender con facilidad el desarrollo de la investigación. En su caso, describirá la metodología, la muestra y la forma de muestreo, así como se hará referencia al tipo de análisis estadístico empleado. Si se trata de una metodología original, es necesario exponer las razones que han conducido a su empleo y describir sus posibles limitaciones.

7) Análisis y resultados: Se procurará resaltar las observaciones más importantes, describiéndose, sin hacer juicios de valor, el material y métodos empleados. Aparecerán en una secuencia lógica en el texto y las tablas y figuras imprescindibles evitando la duplicidad de datos.

8) Discusión y conclusiones: Resumirá los hallazgos más importantes, relacionando las propias observaciones con estudios de interés, señalando aportaciones y limitaciones, sin redundar datos ya comentados en otros apartados. Asimismo, el apartado de discusión y conclusiones debe incluir las deducciones y líneas para futuras investigaciones.

9) Apoyos y agradecimientos (opcionales): El Council Science Editors recomienda a los autor/es especificar la fuente de financiación de la investigación. Se considerarán prioritarios los trabajos con aval de proyectos competitivos nacionales e internacionales. En todo caso, para la valoración científica del manuscrito, este debe ir anonimizado con XXXX solo para su evaluación inicial, a fin de no identificar autores y equipos de investigación, que deben ser explicitados en la Carta de Presentación y posteriormente en el manuscrito final.

10) Las notas (opcionales) irán, solo en caso necesario, al final del artículo (antes de las referencias). Deben anotarse manualmente, ya que el sistema de notas al pie o al final de Word no es reconocido por los sistemas de maquetación. Los números de notas se colocan en superíndice, tanto en el texto como en la nota final. No se permiten notas que recojan citas bibliográficas simples (sin comentarios), pues éstas deben ir en las referencias.

11) Referencias: Las citas bibliográficas deben reseñarse en forma de referencias al texto. Bajo ningún caso deben incluirse referencias no citadas en el texto. Su número debe ser suficiente para contextualizar el marco teórico con criterios de actualidad e importancia. Se presentarán alfabéticamente por el primer apellido del autor.

B. REVISIONES

Las revisiones de literatura se basan en el análisis de las principales publicaciones sobre un tema determinado; su objetivo es definir el estado actual



del problema y evaluar las investigaciones realizadas. Su estructura responde a las fases del tema/problema, aportes de investigadores o equipos, cambios en la teoría o las corrientes teóricas principales; problemas sin resolver; tendencias actuales y futuras (Giordanino, 2011). De acuerdo con la UNESCO, este tipo de trabajos se conocen también como: “estudios recapitulativos”

1) Título (español) / Title (inglés): El título del artículo deberá ser breve, interesante, claro, preciso y atractivo para despertar el interés del lector. Conciso pero informativo, en castellano en la primera línea y en inglés en la segunda línea. Se aceptan como máximo 85 caracteres con espacio. El título no solo es responsabilidad de los autores, también los Miembros del Consejo Editorial puede proponer cambios al título del documento.

2) Datos de Identificación: Nombres y apellidos completos de cada uno de los autores, organizados por orden de prelación. Se aceptarán como máximo 3 autores por original, aunque pudieren existir excepciones justificadas por el tema, su complejidad y extensión. Cuando se trate de un tema relevante para la comunidad científica, complejo categorialmente dentro de un determinado campo del saber, elaborado por investigadores provenientes de distintos países y continentes, y con evaluación sobresaliente por parte de los revisores internacionales. Junto a cada nombre deberá incluirse, el nombre de la institución en la que trabaja así como la ciudad, el país, el correo electrónico y número completo de ORCID de cada autor aspectos que deberán constar de modo obligatorio en la Carta de Presentación, además deberán ser cargados en el sistema OJS de la revista, en la sección Metadatos y/o en un documento word adjunto al archivo que contiene el trabajo que se propone para la evaluación.

3) Resumen (español) / Abstract (inglés): Tendrá como extensión mínima de 210 y máxima de 220 palabras en español; y de 200 y máximo de 210 palabras en inglés. El resumen describirá de forma concisa y en este orden: 1) Justificación del tema; 2) Objetivos; 3) Metodología; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...”. En el caso del abstract no se admitirá el empleo de traductores automáticos por su pésima calidad.

4) Descriptores (español) / Keywords (inglés): Se deben exponer máximo 6 términos por cada versión idiomática relacionados directamente con el tema del trabajo. Será valorado positivamente el uso de las palabras claves expuestas en el Thesaurus de la UNESCO y en el de la propia revista.

5) Introducción: Deberá incluir una presentación breve del tema, la formulación del propósito u objetivo del estudio, el contexto de la problemática y la formulación del problema que se propone enfrentar, la presentación de la idea a defender, la justificación que explica la importancia, la actualidad y la pertinencia del estudio; el marco metodológico utilizado, y finalmente, una breve descripción de la estructura del documento. En la justificación es necesario utilizar citas bibliográficas así como la literatura más significativa y actual del tema a escala nacional e internacional.



6) Cuerpo o desarrollo del documento: Implica poner en práctica a lo largo de toda la exposición, una actitud crítica que deberá tender hacia la interpelación, a efectos de concitar la atención del tema y el problema tratados. El escritor deberá generar en el lector la capacidad de identificar la intención dialógica de la propuesta y potenciar en el una discusión abierta.

7) Conclusiones: Expone de manera objetiva los resultados y hallazgos; ofrece una visión de las implicaciones del trabajo, las limitaciones, la respuesta tentativa al problema, las relaciones con el objetivo de la investigación y las posibles líneas de continuidad (para cumplir con este objetivo se sugiere no incluir todos los resultados obtenidos en la investigación). Las conclusiones deberán ser debidamente justificadas de acuerdo con la investigación realizada. Las conclusiones podrán estar asociadas con las recomendaciones, evaluaciones, aplicaciones, sugerencias, nuevas relaciones e hipótesis aceptadas o rechazadas.

8) Bibliografía: Es el conjunto de obras utilizadas en la estructuración del texto científico. Deberá incluir únicamente la referencia de los trabajos utilizados en la investigación. Las referencias bibliográficas deberán ordenarse alfabéticamente y ajustarse a las normas internacionales APA, en su sexta edición.

390



3.2. Normas para las referencias

PUBLICACIONES PERIÓDICAS

Artículo de revista (un autor): Valdés-Pérez, D. (2016). Incidencia de las técnicas de gestión en la mejora de decisiones administrativas [Impact of Management Techniques on the Improvement of Administrative Decisions]. *Retos*, 12(6), 199-2013. <https://doi.org/10.17163/ret.n12.2016.05>

Artículo de revista (hasta seis autores): Ospina, M.C., Alvarado, S.V., Fefferman, M., & Llanos, D. (2016). Introducción del dossier temático “Infancias y juventudes: violencias, conflictos, memorias y procesos de construcción de paz” [Introduction of the thematic dossier “Infancy and Youth: Violence, Conflicts, Memories and Peace Construction Processes”]. *Universitas*, 25(14), 91-95. <https://doi.org/10.17163/uni.n25.%25x>

Artículo de revista (más de seis autores): Smith, S.W., Smith, S.L. Pieper, K.M., Yoo, J.H., Ferrys, A.L., Downs, E.,... Bowden, B. (2006). Altruism on American Television: Examining the Amount of, and Context Surrounding. Acts of Helping and Sharing. *Journal of Communication*, 56(4), 707-727. <https://doi.org/10.1111/j.1460-2466.2006.00316.x>

Artículo de revista (sin DOI): Rodríguez, A. (2007). Desde la promoción de salud mental hacia la promoción de salud: La concepción de lo comunitario en la implementación de proyectos sociales. *Alteridad*, 2(1), 28-40. (<https://goo.gl/zDb3Me>) (2017-01-29).

LIBROS Y CAPÍTULOS DE LIBRO

Libros completos: Cuéllar, J.C., & Moncada-Paredes, M.C. (2014). *El peso de la deuda externa ecuatoriana*. Quito: Abya-Yala.

Capítulos de libro: Zambrano-Quiñones, D. (2015). *El ecoturismo comunitario en Manglaralto y Colonche*. En V.H. Torres (Ed.), *Alternativas de Vida: Trece experiencias de desarrollo endógeno en Ecuador* (pp. 175-198). Quito: Abya-Yala.

MEDIOS ELECTRÓNICOS

Pérez-Rodríguez, M.A., Ramírez, A., & García-Ruiz, R. (2015). La competencia mediática en educación infantil. Análisis del nivel de desarrollo en España. *Universitas Psychologica*, 14(2), 619-630. <https://doi.org/10.11144/Javeriana.upsy14-2.cmei>

Es prescriptivo que todas las citas que cuenten con DOI (Digital Object Identifier System) estén reflejadas en las Referencias (pueden obtenerse en <http://goo.gl/gfruh1>). Todas las revistas y libros que no tengan DOI deben aparecer con su link (en su versión on-line, en caso de que la tengan, acortada, mediante Bitly: <https://bitly.com/> y fecha de consulta en el formato indicado.

Los artículos de revistas deben ser expuestos en idioma inglés, a excepción de aquellos que se encuentren en español e inglés, caso en el que se expondrá en ambos idiomas utilizando corchetes. Todas las direcciones web que se presenten tienen que ser acortadas en el manuscrito, a excepción de los DOI que deben ir en el formato indicado (<https://doi.org/XXX>).

3.3. Epígrafes, tablas y gráficos

Los epígrafes del cuerpo del artículo se numerarán en arábigo. Irán sin caja completa de mayúsculas, ni subrayados, ni negritas. La numeración ha de ser como máximo de tres niveles: 1. / 1.1. / 1.1.1. Al final de cada epígrafe numerado se establecerá un retorno de carro.

Las tablas deben presentarse incluidas en el texto en formato Word según orden de aparición, numeradas en arábigo y subtituladas con la descripción del contenido.

Los gráficos o figuras se ajustarán al número mínimo necesario y se presentarán incorporadas al texto, según su orden de aparición, numeradas en arábigo y subtituladas con la descripción abreviada. Su calidad no debe ser inferior a 300 ppp, pudiendo ser necesario contar con el gráfico en formato TIFE, PNG o JPEG.

4. Proceso de envío

La recepción de artículos es permanente, sin embargo, considerando que la publicación de la Revista Sophia es semestral, el envío de los manus-



critos deberá efectuarse al menos un período antes de la fecha estipulada en la Convocatoria correspondiente.

Los manuscritos deberán remitirse a través del sistema OJS (Open Journal System) de la revista, para lo cual es necesario que el autor se registre previamente en el espacio respectivo (ingrese en el siguiente link: <http://sophia.ups.edu.ec/index.php/sophia/user/register>, complemente el formulario y siga cada uno de los pasos que se sugieren).

Los cinco documentos que deben ser enviados son:

1. **Carta de Presentación.** Contiene la Declaración en la que se explica que el manuscrito enviado es una aportación original, que no ha sido enviado ni se encuentra en proceso de evaluación en otra revista. Consta la aceptación de las autorías firmantes, para que, en caso de ser procedente, luego del proceso de revisión del manuscrito, el equipo de redacción de Sophia, realice la introducción de cambios en el contenido, en aspectos formales y en el estilo del documento conforme a las exigencias de la Revista. Adicionalmente, la Carta de Presentación contiene el apartado de Cesión de Derechos (cesión parcial de derechos a la editorial) y la Declaración de conflicto de intereses, de acuerdo con las normas editoriales. Este documento deberá ser firmado y consignado a través del sistema OJS, en la sección: **“Ficheros complementarios”**.
2. **Cover Letter.** En la que se consigna la siguiente información:
Título. En castellano en la primera línea, en letra Arial 14, con negrita y centrado, con un máximo de 85 caracteres con espacio. En inglés en la segunda línea, en letra Arial 14, en cursiva y con negrita.
Nombres y apellidos completos de los autores. Organizados por orden de prelación, se aceptan como máximo 3 autores por original, aunque pudieren existir excepciones justificadas por el tema, su complejidad y extensión. Cuando se trate de un tema relevante para la comunidad científica, complejo categorialmente dentro de un determinado campo del saber, elaborado por investigadores provenientes de distintos países y continentes, y con evaluación sobresaliente por parte de los revisores internacionales. Junto a cada uno de los nombres deberá incluirse, el nombre de la institución en la que trabaja así como la ciudad, el país, el correo electrónico y número de ORCID.
Resumen. Tendrá como extensión mínima 210 y máxima 220 palabras. El resumen describirá de forma concisa y en este orden: 1) Justificación del tema; 2) Objetivos; 3) Metodología; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...”
Abstract. Resumen con todos sus componentes, traducido al inglés y en letra cursiva. No utilizar sistemas de traducción automáticos.

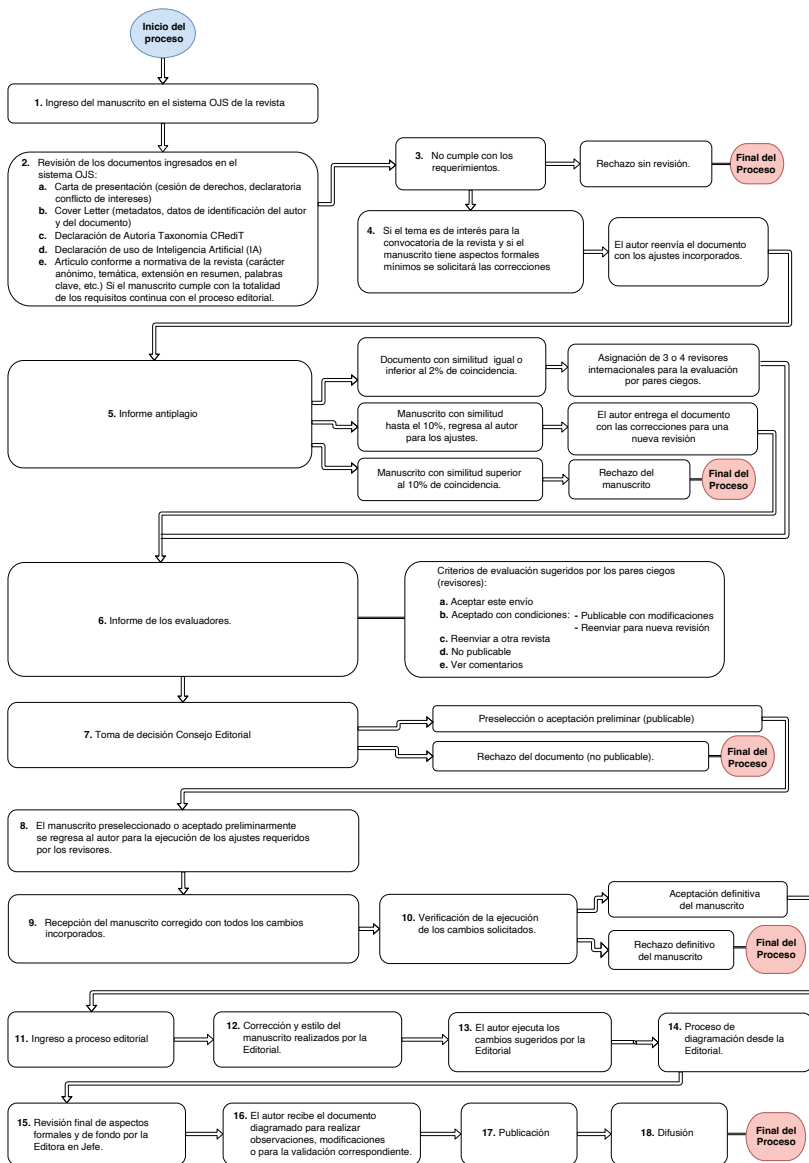
Descriptores. Máximo 6 términos estandarizados preferiblemente de una sola palabra y del Thesaurus de la UNESCO y de la propia revista, separados por coma (,).

Keywords. Los 6 términos antes referidos traducidos al inglés y separados por coma (,). No utilizar sistemas de traducción automáticos.

3. **Declaración de Autoría (Taxonomía CRediT).** Aplicable para los casos de artículos elaborados por varios autores; detalla la contribución realizada por cada uno de los autores del documento presentado a Sophia, en concordancia con los 14 aspectos descritos según la Taxonomía CRediT. Este documento deberá ser firmado y consignado a través del sistema OJS, en la sección: **“Ficheros complementarios”**. Es necesario utilizar el formato exigido por la Revista.
4. **Declaración de Uso de Inteligencia Artificial (IA).** Consiste en la Declaración formal que el/los autor/es realiza/n acerca del nivel de uso de inteligencia artificial (IA) en la elaboración, en partes o en componentes del documento presentado; explica de manera detallada, clara y precisa la forma en que dicha herramienta fue utilizada en el proceso y/o en la presentación de los resultados de la investigación. El documento debe estar respaldado con la/s firma/s de responsabilidad correspondientes y deberá ser consignado a través del sistema OJS de la Revista.
5. **Manuscrito** totalmente anonimizado, conforme a las normas referidas en precedencia.
Todos los autores han de darse de alta, con sus créditos, en la plataforma OJS, si bien uno solo de ellos será el responsable de correspondencia. Ningún autor podrá enviar o tener en revisión dos manuscritos de forma simultánea, estimándose una carencia de cuatro números consecutivos (2 años).



5. Proceso de evaluación del artículo



6. Intervalo de publicación

El intervalo comprendido entre la recepción y la publicación de un artículo es de 7 meses (210 días).

Indications for External Reviewers of «Sophia»

The **Board of External Reviewers of «Sophia»** is an independent collegiate body whose purpose is to guarantee the excellence of this scientific publication, because the blind evaluation - based exclusively on the quality of the contents of the manuscripts and carried out by experts of recognized International prestige in the field - is, without a doubt, the best guarantee for the advancement of science and to preserve in this header an original and valuable scientific production.

To this end, the **Board of External Reviewers** is made up of several scholars and international scientists specialized in **Education**, essential to select the articles of the greatest impact and interest for the international scientific community. This in turn allows that all the articles selected to publish in «**Sophia**» have an academic endorsement and objectifiable reports on the originals.

Of course, all reviews in «**Sophia**» use the internationally standardized system of double-blind peer evaluation that guarantees the anonymity of manuscripts and reviewers. As a measure of transparency, the complete lists of reviewers are published on the official website of the journal (<http://Sophia.ups.edu.ec/>)

395



1. Criteria for acceptance/rejection of manuscript evaluation

The editorial team of «**Sophia**» selects those that are considered more qualified in the subject of the manuscript from the list of reviewers of the Board of Reviewers. While the publication requires the maximum collaboration of reviewers to expedite the evaluations and reports on each original, acceptance of the review must be linked to:

- a. **Expertise.** Acceptance necessarily entails the possession of competences in the specific theme of the article to be evaluated.
- b. **Availability.** Reviewing an original takes time and involves careful reflection on many aspects.
- c. **Conflict of interests.** In case of identification of the authorship of the manuscript (despite their anonymity), excessive academic or family closeness to their authors, membership in the same University, Department, Research Group, Thematic Network, Research Projects, joint publications with authors... or any other type of connection or conflict / professional proximity; The reviewer must reject the publisher's invitation for review.
- d. **Commitment of confidentiality.** Reception of a manuscript for evaluation requires the Reviewer to express a commitment of confidentiality, so that it cannot be divulged to a third party throughout the process.

In the event that the reviewer cannot carry out the activity for some of these reasons or other justifiable reasons, he/she must notify the publisher by the same route that he/she has received the invitation, specifying the reasons for rejection.

2. General criteria for the evaluation of manuscripts

a) Topic

In addition to being valuable and relevant to the scientific community, the topic that is presented in the original must be limited and specialized in time and space, without excessive localism.

b) Redaction

The critical assessment in the review report must be objectively written, providing content, quotes or references of interest to support its judgment.

c) Originality

As a fundamental criterion of quality, an article must be original, unpublished and suitable. In this sense, reviewers should answer these three questions in the evaluation:

- Is the article sufficiently novel and interesting to justify publication?
- Does it contribute anything to the knowledge canon?
- Is the research question relevant?

A quick literature search using repositories such as Web of Knowledge, Scopus and Google Scholar to see if the research has been previously covered, may be helpful.

d) Structure

Manuscripts that refer to «Sophia» must follow the IMRDC structure, except those that are literature reviews or specific studies. In this sense, the originals must contain summary, introduction, methodology, results, discussion and conclusion.

- The **title, abstract, and keywords** should accurately describe the content of the article.
- The **review of the literature** should summarize the state of the question of the most recent and adequate research for the presented work. It will be especially evaluated with criteria of suitability and that the references are to works of high impact - especially in WoS,

Scopus, Scielo, etc. It should also include the general explanation of the study, its central objective and the followed methodological design.

- In case of research, in the **materials and methods**, the author must specify how the data, the process and the instruments used to respond to the hypothesis, the validation system, and all the information necessary to replicate the study are collected.
- **Results** must be clearly specified in logical sequence. It is important to check if the figures or charts presented are necessary or, if not, redundant with the content of the text.
- In the **discussion**, the data obtained should be interpreted in the light of the literature review. Authors should include here if their article supports or contradicts previous theories. The conclusions will summarize the advances that the research presents in the area of scientific knowledge, the future lines of research and the main difficulties or limitations for carrying out the research.
- **Language:** It will be positively assessed if the language used facilitates reading and is in favor of the clarity, simplicity, precision and transparency of the scientific language. The Reviewer should not proceed to correction, either in Spanish or English, but will inform the Editors of these grammatical or orthographical and typographical errors.
- Finally, a thorough **review of the references** is required in case any relevant work has been omitted. The references must be precise, citing within the logic of the subject at study, its main works as well as the documents that most resemble the work itself, as well as the latest research in the area.

397



3. Relevant valuation dimensions

For the case of empirical research articles, «**Sophia**» uses an evaluation matrix of each original that responds to the editorial criteria and to compliance with the publication guidelines. In this sense, the reviewers must attend to the qualitative-quantitative assessment of each of the aspects proposed in this matrix with criteria of objectivity, reasoning, logic and expertise.

If the original is a review of the literature (status of the matter) or other type of study (reports, proposals, experiences, among others), the Editorial Board will send to the reviewers a different matrix, including the characteristics of Structure of this type of originals:



STUDIES, REPORTS, PROPOSALS AND REVIEW	
Valuable items	Score
01. Relevancy of the title (clarity, precision and with a maximum of 85 characters).	0/5
02. They summarize (In an alone paragraph and without epigraphs, minimum / minimal: 210-220 words).	0/5
03. Introduction (brief presentation of the topic; formulation of the problem; it designs to defending or hypothesis to demonstrating; I target; importance of the topic; current importance; methodology; structure of the document).	0/5
04. Review of the bibliographical foundation (Beside using current bibliography to consider the incorporation of Sophia's documents).	0/10
05. Structure and organization of the article (argumentative capabilities, coherence and scientific redaction).	0/10
06. Original contributions and contextualized analyses.	0/5
07. Conclusions that answer to the topic, to the problem and to the raised aim.	0/5
08. Citations and references of agreement to the regulation and to the format requested by the magazine (Any document and author who consists in the section of bibliography must consist in the body of story and viceversa).	0/5
Maximun total	50 points

RESEARCHES	
Valuable items	Score
01. Relevancy of the title (clarity, precision and with a maximum of 85 characters).	0/5
02. They summarize (In an alone paragraph and without epigraphs, minimum / minimal: 210-220 words).	0/5
03. Introduction (brief presentation of the topic; formulation of the problem; it designs to defending or hypothesis to demonstrating; I target; importance of the topic; current importance; methodology; structure of the document).	0/5
04. Review of the bibliographical foundation (Beside using current bibliography to consider the incorporation of Sophia's documents). Methodological rigorous and presentation of instruments of investigation.	0/10

RESEARCHES	
Valuable items	Score
05. Structure and organization of the article (argumentative capabilities, coherence and scientific redaction). Analysis and results of investigation with logical sequence in the text. Presentation of tables and figures without duplicity of information.	0/10
06. Original contributions and contextualized analyses of the information.	0/5
07. Discussion, conclusions and advances that answer to the topic, to the problem and to the raised aim.	0/5
08. Citations and references of agreement to the regulation and to the format requested by the magazine (Any document and author who consists in the section of bibliography must consist in the body of story and vice versa).	0/5
Total	50 points

4. Ethical issues

- a. **Plagiarism:** Although the journal uses plagiarism detection systems, if the reviewer suspects that an original is a substantial copy of another work, he must immediately inform the Editors citing the previous work in as much detail as possible.
- b. **Fraud:** If there is real or remote suspicion that the results in an article are false or fraudulent, it is necessary to inform them to the Editors.
- c. **Omitting the author declaration:** In the article, it is necessary to acknowledge the contributions made by each author according to their level of involvement.
- d. **Conflicts of interest:** In order to ensure transparency and objectivity in the work, any potential conflict of interest that may influence the results or interpretation of the research must be declared.
- e. **Ethical consent and respect for participants:** When the article involves human or animal subjects, the authors must have obtained the relevant ethical permissions and ensure that the research has been conducted in accordance with established ethical principles, respecting the privacy and well-being of the participants.
- f. **Transparency in the use of artificial intelligence (AI):** In cases where AI has been used in the research, the authors must declare its use, clearly and precisely specifying how it has been employed, describing the algorithms, tools, and techniques used, as well as the

data, parts, or sections developed with the support of the tool, following the applicable ethical guidelines.

- g. **Data access and replicability:** The authors must ensure that the data used in the research is accessible for verification and replication, promoting transparency and reproducibility of the results.

5. *Evaluation of the originals*

After completing the quantitative and qualitative evaluation of the manuscript under review, the reviewer may propose recommendations aimed at improving the quality of the original text. The manuscript will be graded according to the following four options

1. **Accept this submission.** The topic, content, and structure align with the themes outlined in the call for papers and are related to the journal's research areas.
2. **Accepted with conditions.** The article is interesting; however, it does not meet some formal requirements set by the journal to proceed with the editorial process. It is necessary to clearly identify the components that need improvement, list the comments, and specify the paragraphs and pages where modifications are suggested. This criterion involves two aspects: a. Publishable with modifications; and b. Resubmit for further review.
3. **Submit to another journal.** This criterion applies when the topic is interesting, the document is well-structured, but it does not align with the nature and research areas of the journal.
4. **Not publishable.** The article is rejected due to the identified deficiencies, which are justified and reasoned with both qualitative and quantitative evaluation. If the quantitative evaluation scores less than 35 out of 50 points, the report must be detailed and explain the reasons for rejection.

All the above criteria include a comments section, represented by the phrase: See comments.

6. *Article Retraction*

An article may be retracted from *Sophia: Collection of Philosophy of Education* if, after its publication, the improper use of Artificial Intelligence (AI) tools is verified and was not disclosed by the author(s) in the required AI Usage Declaration submitted during the editorial process.

Even if the manuscript successfully passed all editorial review stages without the timely detection of similarities, overlaps, or inappropriate content related to automated assistance, if it is later confirmed that there was undeclared AI intervention in the creation, writing, analysis, or review of the text, the journal reserves the right to officially retract the article.

Such retraction entails the removal of the published document, the nullification of the original statement made by the authors, and the requirement that the authors publicly acknowledge the error and formally revoke their prior declaration.

This measure reflects *Sophia's* firm commitment to academic integrity, objectivity and rigor in manuscript evaluation, publication quality, scientific transparency, and the ethical advancement of knowledge.



Indicaciones para revisores externos de «Sophia»

El **Consejo de Revisores Externos de «Sophia»** es un órgano colegiado independiente cuyo fin es garantizar la excelencia de esta publicación científica, debido a que la evaluación ciega —basada exclusivamente en la calidad de los contenidos de los manuscritos y realizada por expertos de reconocido prestigio internacional en la materia— es la mejor garantía y, sin duda, el mejor aval para el avance de la ciencia y para preservar en esta cabecera una producción científica original y valiosa.

Para ello, el **Consejo de Revisores Externos** está conformado por diversos académicos y científicos internacionales especialistas en **Filosofía de la Educación**, esenciales para seleccionar los artículos de mayor impacto e interés para la comunidad científica internacional. Esto permite a su vez que todos los artículos seleccionados para publicar en «Sophia» cuenten con un aval académico e informes objetivables sobre los originales.

Por supuesto, todas las revisiones en «Sophia» emplean el sistema estandarizado internacionalmente de evaluación por pares con «doble ciego» (*double-blind*) que garantiza el anonimato de los manuscritos y de los revisores de los mismos. Como medida de transparencia, anualmente se hacen públicos en la web oficial de la revista (<http://Sophia.ups.edu.ec/>) los listados completos de los revisores.

403



1. Criterios de aceptación/rechazo de evaluación manuscritos

El equipo editorial de «Sophia» selecciona del listado de evaluadores del Consejo de Revisores a aquellos que se estiman más cualificado en la temática del manuscrito. Si bien por parte de la publicación se pide la máxima colaboración de los revisores para agilizar las evaluaciones y los informes sobre cada original, la aceptación de la revisión ha de estar vinculada a:

- a. **Experticia.** La aceptación conlleva necesariamente la posesión de competencias en la temática concreta del artículo a evaluar.
- b. **Disponibilidad.** Revisar un original exige tiempo y conlleva reflexión concienzuda de muchos aspectos.
- c. **Conflicto de intereses.** En caso de identificación de la autoría del manuscrito (a pesar de su anonimato), excesiva cercanía académica o familiar a sus autores, pertenencia a la misma Universidad, Departamento, Grupo de Investigación, Red Temática, Proyectos de Investigación, publicaciones conjuntas con los autores... o cualquier otro tipo de conexión o conflicto/cercanía profesional; el revisor debe rechazar la invitación del editor para su revisión.
- d. **Compromiso de confidencialidad.** La recepción de un manuscrito para su evaluación exige del Revisor un compromiso expreso de

confidencialidad, de manera que éste no puede, durante todo el proceso, ser divulgado a un tercero.

En caso que el revisor no pueda llevar a cabo la actividad por algunos de estos motivos u otros justificables, debe notificarlo al editor por la misma vía que ha recibido la invitación, especificando los motivos de rechazo.

2. Criterios generales de evaluación de manuscritos

a) Tema

La temática que se plantea en el original, además de ser valiosa y relevante para la comunidad científica, ha de ser limitada y especializada en tiempo y espacio, sin llegar al excesivo localismo.

b) Redacción

La valoración crítica en el informe de revisión ha de estar redactada de forma objetiva, aportando contenido, citas o referencias de interés para argumentar su juicio.

c) Originalidad

Como criterio de calidad fundamental, un artículo debe ser original, inédito e idóneo. En este sentido, los revisores deben responder a estas tres preguntas en la evaluación:

- ¿Es el artículo suficientemente novedoso e interesante para justificar su publicación?
- ¿Aporta algo al canon del conocimiento?
- ¿Es relevante la pregunta de investigación?

Una búsqueda rápida de literatura utilizando repositorios tales como Web of Knowledge, Scopus y Google Scholar para ver si la investigación ha sido cubierta previamente puede ser de utilidad.

d) Estructura

Los manuscritos que se remiten a «**Sophia**» deben seguir la estructura señalada en las normas de publicación tanto para las investigaciones empíricas como para revisiones de la literatura o estudios específicos. En este sentido, los originales han de contener resumen, introducción, metodología, resultados, discusión y conclusión.

- El título, el resumen y las palabras clave han de describir exactamente el contenido del artículo.

- La revisión de la literatura debe resumir el estado de la cuestión de las investigaciones más recientes y adecuadas para el trabajo presentado. Se valorará especialmente con criterios de idoneidad y que las referencias sean a trabajos de alto impacto —especialmente en WoS, Scopus, Scielo, etc. Debe incluir además la explicación general del estudio, su objetivo central y el diseño metodológico seguido.
- En caso de investigaciones, en los materiales y métodos, el autor debe precisar cómo se recopilan los datos, el proceso y los instrumentos usados para responder a las hipótesis, el sistema de validación, y toda la información necesaria para replicar el estudio.
- En los resultados se deben especificar claramente los hallazgos en secuencia lógica. Es importante revisar si las tablas o cuadros presentados son necesarios o, caso contrario, redundantes con el contenido del texto.
- En la discusión se deben interpretar los datos obtenidos a la luz de la revisión de la literatura. Los autores deberán incluir aquí si su artículo apoya o contradice las teorías previas. Las conclusiones resumirán los avances que la investigación plantea en el área del conocimiento científico, las futuras líneas de investigación y las principales dificultades o limitaciones para la realización de la investigación.
- Idioma: Se valorará positivamente si el idioma utilizado facilita la lectura y va en favor de la claridad, sencillez, precisión y transparencia del lenguaje científico. El Revisor no debe proceder a corrección, ya sea en español o inglés, sino que informará a los Editores de estos errores gramaticales u ortotipográficos.
- Finalmente, se requiere una profunda revisión de las referencias por si se hubiera omitido alguna obra relevante. Las referencias han de ser precisas, citando en la lógica de la temática a estudiar, sus principales obras así como los documentos que más se asemejen al propio trabajo, así como las últimas investigaciones en el área.



3. Dimensiones relevantes de valoración

Para el caso de artículos de investigaciones empíricas, «**Sophia**» utiliza una matriz de evaluación de cada original que responde a los criterios editoriales y al cumplimiento de la normativa de la publicación. En este sentido los revisores deberán atender a la valoración cuali-cuantitativa de cada uno de los aspectos propuestos en esta matriz con criterios de objetividad, razonamiento, lógica y experticia.

Para el caso de artículos reflexivos, estudios, revisiones de literatura (estado de la cuestión) u otro tipo de estudio (informes, propuestas, experiencias, entre otras), el Consejo Editorial remitirá a los revisores una matriz distinta, comprendiendo las características propias de estructura de este tipo de originales:

ESTUDIOS, PROPUESTAS, INFORMES Y EXPERIENCIAS	
Ítems valorables	Puntaje
01. Pertinencia del título (claridad, precisión y con un máximo de 85 caracteres).	0/5
02. Resumen (En un solo párrafo y sin epígrafes, mínimo/máximo: 210-220 palabras).	0/5
03. Introducción (breve presentación del tema; formulación del problema; idea a defender o hipótesis a demostrar; objetivo; importancia del tema; actualidad; metodología; estructura del documento).	0/5
04. Revisión de la fundamentación bibliográfica (Además de usar bibliografía actual considerar la inclusión de documentos de Sophia).	0/10
05. Estructura y organización del artículo (capacidad argumentativa, coherencia y redacción científica).	0/10
06. Aportaciones originales y análisis contextualizados.	0/5
07. Conclusiones que respondan al tema, al problema y al objetivo planteado.	0/5
08. Citaciones y referencias de acuerdo a la normativa y al formato solicitado por la revista (Todo documento y autor que conste en la sección de bibliografía debe constar en el cuerpo del artículo y viceversa).	0/5
Total máximo	50 puntos



INVESTIGACIONES	
Ítems valorables	Puntaje
01. Pertinencia del título (claridad, precisión y con un máximo de 85 caracteres)	0/5
02. Resumen (En un solo párrafo y sin epígrafes, mínimo/máximo: 210-220 palabras).	0/5
03. Introducción (breve presentación del tema; formulación del problema; idea a defender o hipótesis a demostrar; objetivo; importancia del tema; actualidad; metodología; estructura del documento).	0/5

INVESTIGACIONES	
Ítems valorables	Puntaje
04. Revisión de la fundamentación bibliográfica (Además de usar bibliografía actual considerar la inclusión de documentos de Sophia). Rigor metodológico y presentación de instrumentos de investigación.	0/10
05. Estructura y organización del artículo (capacidad argumentativa, coherencia y redacción científica). Análisis y resultados de investigación con secuencia lógica en el texto. Presentación de tablas y figuras sin duplicidad de datos.	0/10
0.6. Aportaciones originales y análisis contextualizados de los datos.	0/5
0.7. Discusión, conclusiones y avances que respondan al tema, al problema y al objetivo planteado.	0/5
0.8. Citaciones y referencias de acuerdo a la normativa y al formato solicitado por la revista (Todo documento y autor que conste en la sección de bibliografía debe constar en el cuerpo del artículo y viceversa).	0/5
Total máximo	50 puntos

4. Cuestiones éticas

- Plagio:** Aunque la revista utiliza sistemas de detección de plagio, si el revisor sospechare que un original es una copia sustancial de otra obra, ha de informar de inmediato a los Editores citando la obra anterior con tanto detalle cómo le sea posible.
- Fraude:** Si hay sospecha real o remota de que los resultados en un artículo son falsos o fraudulentos, es necesario informar de ellos a los Editores.
- Omitir declaración de autoría:** En el artículo, es necesario reconocer las contribuciones realizadas por cada uno de los autores de acuerdo a su grado de participación.
- Conflictos de interés:** Con la finalidad de asegurar la transparencia y objetividad en el trabajo, es preciso declarar cualquier posible conflicto de interés que pueda influir en los resultados o la interpretación de la investigación.
- Consentimiento ético y respeto por los participantes:** Cuando el artículo involucre a sujetos humanos o animales, los autores deben haber obtenido los correspondientes permisos éticos y asegurarse de que la investigación se haya realizado en concordancia con los principios éticos establecidos, respetando la privacidad y el bienestar de los participantes.

- f. **Transparentar el uso de inteligencia artificial (IA):** En el caso de que en la investigación se haya utilizado IA, los autores deben declarar su empleo especificando con claridad y precisión la manera en que ha sido utilizada, describiendo los algoritmos, las herramientas y las técnicas empleadas, así como los datos, las partes o secciones elaboradas con el apoyo de la herramienta siguiendo las directrices éticas aplicables.
- g. **Acceso a los datos y replicabilidad:** Los autores deben garantizar que los datos utilizados en la investigación sean accesibles para su verificación y replicación, promoviendo la transparencia y la reproducibilidad de los resultados.

5. Evaluación de los originales

408



Luego de completar la evaluación cuanti-cualitativa del manuscrito en revisión, el revisor podrá proponer recomendaciones destinadas a mejorar la calidad del texto original. La calificación del manuscrito se realizará conforme a las siguientes cuatro opciones:

1. **Aceptar este envío.** El tema, contenido y estructura responden a la temática prevista en la convocatoria y están vinculados con las líneas de investigación de la Revista.
2. **Aceptado con condiciones.** El artículo es interesante, sin embargo, no cumple con algunos aspectos de carácter formal exigidos por la revista para avanzar con el proceso editorial. Es preciso identificar con claridad los componentes que deben ser mejorados, debe enumerar los comentarios, especificar los párrafos y páginas en las que se sugiere las modificaciones. Este criterio, implica dos aspectos: a. Publicable con modificaciones; y, b. Reenviar para nueva revisión.
3. **Reenviar a otra revista.** La aplicación de este criterio aplica cuando el tema es interesante, el documento se encuentra bien estructurado, pero no responde a la naturaleza y líneas de investigación de la revista.
4. **No publicable.** El artículo es rechazado debido a las deficiencias detectadas, justificadas y razonadas con valoración cualitativa y cuantitativa. Si en la evaluación cuantitativa obtiene una valoración menos de 35 de los 50 puntos, el informe deberá ser detallado y explicativo de las razones del rechazo.

Todos los criterios anteriores contienen una sección de comentarios, representada por la expresión: Ver comentarios.

6. Retracción de un artículo

Un artículo puede ser retractado de la revista *Sophia: Colección de Filosofía de la Educación* cuando, tras su publicación, se verifica el **uso indebido de herramientas de Inteligencia Artificial (IA)** que no fue declarado por el autor o autores en el documento de **Declaración de uso de IA**, exigido como requisito durante el proceso editorial.

Aunque el manuscrito haya superado las distintas fases de revisión sin que se detectaran a tiempo similitudes, coincidencias o contenidos inapropiados vinculados al uso automatizado, si posteriormente se comprueba que hubo intervención no declarada de IA en la creación, redacción, análisis o revisión del texto, la revista se reserva el derecho de **retractar oficialmente el artículo**.

Esta retractación implica el retiro del documento publicado, la renuncia a la afirmación original emitida por los autores en su declaración, y la obligación de que los mismos **reconozcan públicamente el error y revoquen su declaración previa**.

Esta medida forma parte del compromiso de *Sophia* con la integridad académica, la objetividad y rigurosidad en la evaluación de los manuscritos, la calidad de la publicación, la transparencia científica y el avance ético del conocimiento.



Protocol of Manuscript Evaluation for External Reviewers

Instructions

- The fulfillment of each one of the articles will be valued in agreement to the following protocol.
- The total sum of the articles will determine the approval or rejection of the article.
- The minimal puntaje in order that the article is approved will be of 48/50.

410



Article Details		
Date of submission for evaluation:	Date of return of evaluation:	Article code:
Title of the article to be evaluated:		
SECTION: REPORTS, STUDIES, PROPOSALS AND REVIEWS		
01.- Relevancy of the title (clarity, precision and with a maximum of 85 characters)	Mandatory comments:	
	Value from 0 to 5	
02.- They summarize (In an alone paragraph and without epigraphs, minimum / minimal: 210-220 words).	Mandatory comments:	
	Value from 0 to 5	
03.- Introduction (brief presentation of the topic; formulation of the problem; it designs to defending or hypothesis to demonstrating; I target; importance of the topic; current importance; methodology; structure of the document)	Mandatory comments:	
	Value from 0 to 5	
04.- Review of the bibliographical foundation (Beside using current bibliography to consider the incorporation of Sophia's documents).	Mandatory comments:	
	Value from 0 to 10	

05.- Structure and organization of the article (argumentative capabilities, coherence and scientific redaction)	Mandatory comments:	
	Value from 0 to 10	
06.- Original contributions and contextualized analyses	Mandatory comments:	
	Value from 0 to 5	
07.- Conclusions that answer to the topic, to the problem and to the raised aim	Mandatory comments:	
	Value from 0 to 5	
08.- Citations and references of agreement to the regulation and to the format requested by the magazine (Any document and author who consists in the section of bibliography must consist in the body of story and vice versa)	Mandatory comments:	
	Value from 0 to 5	
OBTAINED PUNCTUATION	Of the total of 50 predictable points, this assessor grants:	



REDACTED OPINION More detailed if the work does not get 48/50 points, to inform the autor (s). This text is sent verbatim to the autor (s) anonymously			
RECOMMENDATION ON HIS PUBLICATION IN SOPHIA			
Validation criteria	Result		
	Yes	Yes, with conditions	No
01. Widely recommended			
02. Recommended only if his quality is improved attending to the totality of the suggestions realized by the revisers			
03. His publication is not recommended			
PROPOSED CHANGES (In case of "Yes, with conditions")			

Protocolo de evaluación de manuscritos para revisores externos

Instrucciones

- El cumplimiento de cada uno de los ítems será valorado de acuerdo al siguiente protocolo.
- La suma total de los ítems determinará la aprobación o rechazo del artículo. El puntaje mínimo para que el artículo sea aprobado será de 48/50.

412



Datos del artículo		
Fecha envío evaluación:	Fecha devolución evaluación:	Código artículo:
Título del artículo a evaluar:		
SECCIÓN: ESTUDIOS, PROPUESTAS, INFORMES Y REVISIONES		
01.- Pertinencia del título (claridad, precisión y con un máximo de 85 caracteres)	Comentarios obligatorios:	
	Valore de 0 a 5	
02.- Resumen (En un solo párrafo y sin epígrafes, mínimo/máximo: 210-220 palabras).	Comentarios obligatorios:	
	Valore de 0 a 5	
03.- Introducción (breve presentación del tema; formulación del problema; idea a defender o hipótesis a demostrar; objetivo; importancia del tema; actualidad; metodología; estructura del documento)	Comentarios obligatorios:	
	Valore de 0 a 5	
04.- Revisión de la fundamentación bibliográfica (Además de usar bibliografía actual considerar la inclusión de documentos de Sophia)	Comentarios obligatorios:	
	Valore de 0 a 10	
05.- Estructura y organización del artículo (capacidad argumentativa, coherencia y redacción científica)	Comentarios obligatorios	
	Valore de 0 a 10	

06.- Aportaciones originales y análisis contextualizados	Comentarios obligatorios:	
	Valore de 0 a 5	
07.- Conclusiones que respondan al tema, al problema y al objetivo planteado	Comentarios obligatorios:	
	Valore de 0 a 5	
08.- Citaciones y referencias de acuerdo a la normativa y al formato solicitado por la revista (Todo documento y autor que conste en la sección de bibliografía debe constar en el cuerpo del artículo y viceversa)	Comentarios obligatorios:	
	Valore de 0 a 5	
PUNTUACIÓN OBTENIDA	Del total de 50 puntos previsibles, este evaluador otorga:	



OPINIÓN REDACTADA (Más detallada si el trabajo no tiene 48/50 puntos, para informar al autor/es) Este texto se remite textualmente al/los autor/es de forma anónima			
RECOMENDACIÓN SOBRE SU PUBLICACIÓN EN SOPHIA			
PUBLICABLE	Resultado		
	SI	Sí, con condiciones	NO
01. Ampliamente recomendado			
02. Recomendado sólo si se mejora su calidad atendiendo a la totalidad de las sugerencias realizadas por los revisores			
03. No se recomienda su publicación			
MODIFICACIONES PROPUESTAS (En caso de «Sí, con condiciones»)			

Checklist prior to sending the manuscript

1. CHECK OF THE MANUSCRIPT, PRIOR TO SENDING	
To facilitate the process of evaluation of the manuscript and to accelerate the report of its possible publication, a final self-review of the manuscript is advised, checking the following questions.	
COVER LETTER	
Title of the manuscript in spanish (maximum 85 characters).	
Title of the manuscript in english (maximum 85 characters).	
The two versions of the title of the manuscript are concise, informative and collect as many identifiable terms as possible.	
The abstract in spanish is included, in a single paragraph and without epigraphs (minimum / maximum: 210/220 words).	
The abstract in english is included, in a single paragraph and without epigraphs (minimum / maximum: 210-220 words).	
Abstracts in spanish and english respond in order to the following issues: justification of the subject, objectives, study methodology, results and conclusions.	
It includes 6 descriptors (in english and spanish) (only simple words, not phrases or combinations of words), with the most significant terms, and if possible standardized.	
The texts in english (title, abstract and descriptors) have been written or verified by an official translator or expert in this language (The use of automatic translators is prohibited).	
All the identification data of the authors are included in the order stipulated in the norms: identification and correspondence data, professional filiations, last academic degree...	
The first and last name of the authors has been normalized.	
Each author is identified with their ORCID code.	
The maximum number of authors is three, with the exception of those works that justify a higher but limited number of authors	
The author(s) have duly signed the letter of presentation of the article, which includes the partial transfer of rights and the declaration of conflict of interest.	
MANUSCRIPT	
It includes title of the manuscript, abstract, and keywords. All in spanish and english.	

An introduction is included that in order contains: brief presentation of the subject; problem formulation; Idea to defend or hypothesis to prove; objective; Importance of the theme; relevance; methodology; structure of the document.	
The text is within the minimum and maximum extension: In the Review sections: 10,000/11,000 words of text (without including the references). In the research section: 8,000/9,500 words of text (without including the references). Reports, Studies: 8,000/9,500 words of text (without including the references).	
In case of research, the manuscript responds to the structure required in the guidelines (IMRDC).	
In the case of a report, study or review, the manuscript respects the minimum structure required by the guidelines.	
The review work includes three citations from three previous issues of Sophia Journal.	
The manuscript explicitly cites and cites the used sources and materials.	
The methodology described for the research work is clear and concise, allowing its replication, if necessary, by other experts.	
The conclusions follow on objective and problem raised are supported by the results obtained and presented in the form of a synthesis.	
If statistical analyzes have been used, they have been reviewed/contrasted by an expert.	
The citations in the text are strictly in accordance with the APA 6 regulations, reflected in the instructions.	
In case of use of final notes, it has been verified that these are descriptive and cannot be integrated into the general citation system. Footnotes are not acceptable.	
The final references have been rigorously reviewed and only those that have been cited in the text are included.	
The final references conform in style and format to the international standards used in Sophia.	
The number of references is according to the theoretical basis of the study carried out	
DOIs have been included in all References that carry it in the following format: doi: https://doi.org/XXXXXX	
All web addresses of references have been shortened with Google Url Shortner	



If figures and charts are included, they should provide additional and not repeated information in the text. Their graphic quality has been verified.	
The number of charts and / or figures does not exceed 6	
If the case, financial support is declared.	
ASPECTOS FORMALES	
The rules have been strictly observed in the use of bold, capital letters, italics and underlines.	
Arial font, size 12 has been used.	
A single line spacing (1) has been used without tab.	
The epigraphs have been properly and hierarchically numbered in Arabic.	
Double spaces have been deleted.	
The typographic quotes « » (with alt + 174 and alt + 175 for opening and closing) have been used.	
Word dictionary for surface spelling has been used.	
The text has been supervised by external staff to ensure grammar and style.	
PRESENTATION	
The signed Letter of Introduction or Presentation is attached, containing a Declaration that explains the originality of the manuscript; the authorization for the journal's editorial team to make necessary changes to the content, formal aspects, and style of the document; the Rights Transfer and the Conflict of Interest Declaration.	
The attached Cover Letter identifies the section of the journal to which the manuscript is submitted, includes informed consent for experimentation (if applicable); provides the article title in both Spanish and English, as required by the journal; details the complete identification information for each author; includes an abstract of at least 210 words and no more than 220 words; provides an abstract in English with a minimum of 200 words and a maximum of 210 words; does not use automatic translation systems; includes 6 keywords in Spanish and 6 keywords in English, separated by commas, in accordance with the UNESCO Thesaurus and the Journal's Thesaurus; and declares any financial support for the research (optional).	
The CRedit Author Statement clearly and accurately explains the contributions made by each of the article's authors and includes the responsibility signatures.	
The Artificial Intelligence Use Statement contains complete, clear, and precise information regarding its presentation	

The manuscript is uploaded to the platform in Word format and without authors identification	
ANNEXED DOCUMENTS	
The five attached documents are: Presentation, Cover Letter, CRediT Author Statement, Artificial Intelligence (AI) Use Statement, and the article in Word format	
The accompanying documents and annexes have been published with Figshare.	



Chequeo previo al envío del manuscrito

418



1. CHEQUEO DEL MANUSCRITO, PREVIO AL ENVÍO	
Para facilitar el proceso de evaluación del manuscrito y acelerar el informe de su posible publicación, se aconseja una autorevisión final del manuscrito, comprobando las siguientes cuestiones.	
DOCUMENTO PORTADA (Cover Letter)	
Se incluye título del manuscrito en español (máximo 85 caracteres).	
Se incluye título del manuscrito en inglés (máximo 85 caracteres).	
Las dos versiones del título del manuscrito son concisas, informativas y recogen el mayor número de términos identificativos posibles.	
Se incluye resumen en español, en un solo párrafo y sin epígrafes (mínimo/máximo: 210/220 palabras).	
Se incluye abstract en inglés, en un solo párrafo y sin epígrafes (mínimo/máximo 210-220 palabras).	
Los resúmenes en español e inglés responden ordenadamente a las siguientes cuestiones: justificación del tema, objetivos, metodología del estudio, resultados y conclusiones.	
Se incluyen 6 descriptores (en español e inglés) (sólo palabras simples, no sintagmas o combinaciones de palabras), con los términos más significativos, y a ser posibles estandarizados.	
Los textos en inglés (título, resumen y descriptores) han sido redactados o verificados por un traductor oficial o persona experta en este idioma (Se prohíbe el uso de traductores automáticos).	
Se incluyen todos los datos de identificación de los autores en el orden estipulado en la normativa: datos de identificación y correspondencia, filiaciones profesionales, último grado académico.	
Se ha normalizado el nombre y apellido de los autores.	
Cada autor está identificado con su código ORCID.	
El número máximo de autores es tres, a excepción de aquellos trabajos que justifiquen un número mayor limitado.	
El autor/es ha firmado debidamente la carta de presentación del artículo, en la que consta la cesión parcial de derechos y la declaración de conflicto de intereses.	
MANUSCRITO	
Se incluye título del manuscrito en español, inglés, resumen, abstract, descriptores y keywords	

Se incluye una introducción que en orden contiene: breve presentación del tema; formulación del problema; idea a defender o hipótesis a demostrar; objetivo; importancia del tema; actualidad; metodología; estructura del documento.	
El trabajo respeta la extensión mínima y máxima permitidas: Sección de Revisiones: 10.000/11.000 palabras de texto (sin incluir las referencias). Investigaciones: 8.000/9.500 palabras de texto (sin incluir las referencias). Informes, Estudios: 8.000/9.500 palabras de texto (sin incluir las referencias).	
En caso de investigación, el manuscrito responde a la estructura exigida en las normas (IMRDC).	
Si se trata de un informe, estudio o revisión, el manuscrito respeta la estructura mínima exigida en las normas.	
En los trabajos de revisión se incluyen tres citas de tres números anteriores de la Revista Sophia.	
El manuscrito explicita y cita correctamente las fuentes y materiales empleados.	
La metodología descrita, para los trabajos de investigación, es clara y concisa, permitiendo su replicación, en caso necesario, por otros expertos.	
Las conclusiones responden al objetivo y al problema planteados, se apoyan en los resultados obtenidos y se presentan en forma de síntesis.	
Si se han utilizado análisis estadísticos, éstos han sido revisados/contrastados por algún experto.	
Las citas en el texto se ajustan estrictamente a la normativa APA 6, reflejadas en las instrucciones.	
En caso de uso de notas finales, se ha comprobado que éstas son descriptivas y no pueden integrarse en el sistema de citación general. No se aceptan notas a pie de página.	
Se han revisado rigurosamente las referencias finales y se incluyen solo aquellas que han sido citadas en el texto.	
Las referencias finales se ajustan en estilo y formato a las normas internacionales utilizadas en Sophia.	
El número de referencias está de acuerdo a la fundamentación teórica del estudio realizado	
Se han incluido los DOI en todas las Referencias que lo lleven con el siguiente formato: doi: https://doi.org/XXXXXX	
Todas las direcciones web de las referencias han sido acortadas con Google Url Shortner	





Si se incluyen figuras y tablas éstas deben aportar información adicional y no repetida en el texto. Su calidad gráfica se ha verificado.	
El número de tablas y/o figuras no sobrepasa las 6.	
En su caso, se declaran los apoyos y/o soportes financieros.	
ASPECTOS FORMALES	
Se ha respetado rigurosamente la normativa en el uso de negritas, mayúsculas, cursivas y subrayados.	
Se ha utilizado letra Arial, tamaño 12.	
Se ha usado un interlineado sencillo (1) y sin tabulaciones.	
Se han numerado los epígrafes en arábigo de forma adecuada y jerárquicamente.	
Se han suprimido los dobles espacios.	
Se han empleado las comillas tipográficas « » (con alt+174 y alt+175 para apertura y cierre).	
Se ha utilizado el diccionario de Word para corrección ortográfica superficial.	
Se ha supervisado el trabajo por personal externo para garantizar la gramática y el estilo.	
PRESENTACIÓN	
Se adjunta la Carta de Presentación firmada por todos los autores, contiene Declaración que explica la originalidad del manuscrito; la autorización para que la redacción de la revista realice la introducción de cambios necesarios en el contenido, en aspectos formales y en el estilo del documento; la <i>Cesión de Derechos y la Declaración de conflicto de intereses</i> .	
Se adjunta la Cover Letter que identifica la sección de la revista a la que se dirige el documento, el consentimiento informado de experimentación (si el caso lo amerita); contiene el título del artículo en español y en inglés con las características exigidas por la revista, detalla los datos completos de identificación de cada uno de los autores; presenta el resumen mínimo 210 y máximo 220 palabras; contiene el abstract con mínimo 200 y máximo 210 palabras; no utiliza sistemas de traducción automáticos; presenta 6 palabras clave y 6 keywords, separadas por coma, conforme al Thesaurus de la UNESCO y al Thesaurus de la Revista; declara el apoyo y soporte financiero de la investigación (opcional).	
La Declaración de Autoría CRediT explica con claridad y precisión las contribuciones realizadas por cada uno de los autores del artículo y contiene las firmas de responsabilidad.	
La Declaración de Uso de Inteligencia Artificial , contiene la información completa, clara y precisa en lo que amerita a su presentación.	

El manuscrito se sube a la plataforma en formato Word y sin identificación de autores.	
DOCUMENTOS ANEXOS	
Se adjuntan los cinco documentos anexos: Cover Letter; Carta de presentación; Declaración de Autoría CRediT; Declaración de uso de Inteligencia Artificial (IA) y el artículo en versión Word	
Los documentos complementarios y anexos han sido publicados con Figshare.	



Cover Letter

Section (Mark)

Monographic Dossier ____

Miscellaneous ____

Title in Spanish: Arial 14 bold and centered.

Maximum 85 characters with spaces

Title in English: Arial 14 cursive. Maximum 85 characters with spaces

Name author 1 (standardized)

Institution, City, Country

Institutional email

ORCID

Name author 2 (standardized)

Institution, City, Country

Institutional email

ORCID

Name author 3 (standardized)

Institution, City, Country

Institutional email

ORCID

422



Abstract (Spanish)

Minimum 210 and maximum 220 words. It must include 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written “The present paper analyzes...”

Abstract (English)

Minimum 200 and maximum 210 words. It must include 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written “The present paper analyzes...” Do not use automatic translation systems.

Keywords (Spanish)

6 standardized terms preferably of a single word and of the UNESCO Thesaurus separated by commas (,).

Keywords

The 6 terms referred to in English separated by commas (,). Do not use automatic translation systems.

Financial Support of Research (optional)

Entity:

Country:

City:

Subsidized project:

Code of the project:



Cover Letter

Sección (Marcar)

Dossier Monográfico ____

Miscelánea ____

Título en español: Arial 14 negrita y centrado.

Máximo 85 caracteres con espacios

Title in English: Arial 14 cursiva. Máximo 85 caracteres con espacios

Nombre autor 1 (estandarizado)

Institución, Ciudad, País

Correo electrónico institucional

ORCID

Nombre autor 2 (estandarizado)

Institución, Ciudad, País

Correo electrónico institucional

ORCID

Nombre autor 3 (estandarizado)

Institución, Ciudad, País

Correo electrónico institucional

ORCID

424



Resumen

Mínimo 210 y máximo 220 palabras. Debe incluir 1) Justificación del tema; 2) Objetivos; 3) Metodología; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...”

Abstract

Mínimo 200 y máximo 210 palabras cursiva. Debe incluir 1) Justificación del tema; 2) Objetivos; 3) Metodología; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...” No utilizar sistemas de traducción automáticos.

Descriptores

6 términos estandarizados preferiblemente de una sola palabra y del Thesaurus de la UNESCO separados por coma (,).

Keywords

Los 6 términos referidos en inglés separados por coma (,). No utilizar sistemas de traducción automáticos.

Apoyos y soporte financiero de la investigación (opcional)

Entidad:

País:

Ciudad:

Proyecto subvencionado:

Código de proyecto:



PRESENTATION

Letter of introduction

Mr. Editor of «Sophia»

Having read the regulations of the journal «Sophia» and analyzed its coverage, thematic area and approach, I consider that this journal is the ideal one for the dissemination of the work that I hereby attach, for which I beg you to be submitted for consideration for publication. The original has the following title “_____”, whose authorship corresponds to _____.

The authors (s) certify that this work has not been published, nor is it under consideration for publication in any other journal or editorial work.

The author (s) are responsible for their content and have contributed to the conception, design and completion of the work, analysis and interpretation of data, and to have participated in the writing of the text and its revisions, as well as in the approval of the version which is finally referred to as an attachment.

Changes to the content are accepted if they occur after the review process, and also changes in the style of the manuscript by the editorial process of «Sophia».

Transfer of Copyright and Declaration of Conflict of Interest

The Abya-Yala Publishing House (publishing house of the works of the *Universidad Politécnica Salesiana* of Ecuador) preserves the copyrights of the published works and will favor the reuse of the same. The works are published in the electronic edition of the journal under a Creative Commons Attribution / Noncommercial-No Derivative Works 3.0 Ecuador license: they can be copied, used, disseminated, transmitted and publicly displayed.

The undersigned author partially transfers the copyrights of this work to the *Abya-Yala Publishing House* (Ecuador) (RUC: 1790747123001), for the printed editions.

It is also declared that they have respected the ethical principles of research and are free from any conflict of interest.

In ____ (city), by the ____ days of the month of ____ of 202__

Signed. (By the author or in the case, all the authors)

Author first and last name
Identification document

Signature

Author first and last name
Identification document

Signature

Author first and last name
Identification document

Signature

427



Note: Once saved the completed and signed document, it must be register through the OJS system in the section “Complementary Files”.

PRESENTACIÓN

Carta de Presentación

Sr. Editor de «Sophia»

Leída la normativa de la revista «Sophia» y analizada su cobertura, área temática y enfoque, considero que esta revista es la idónea para la difusión del trabajo que le adjunto, por lo que le ruego sea sometida a la consideración para su publicación. El original lleva por título “_____”, cuya autoría corresponde a _____.

El/los autor/es certifican que este trabajo no ha sido publicado, ni está en vías de consideración para su publicación en ninguna otra revista u obra editorial.

El/los autor/es se responsabilizan de su contenido y de haber contribuido a la concepción, diseño y realización del trabajo, análisis e interpretación de datos, y de haber participado en la redacción del texto y sus revisiones, así como en la aprobación de la versión que finalmente se remite en adjunto.

Se aceptan la introducción de cambios en el contenido si hubiere lugar tras la revisión, y de cambios en el estilo del manuscrito por parte de la redacción de «Sophia».

Cesión de derechos y declaración de conflicto de intereses

La Editorial Abya-Yala (editorial matriz de las obras de la Universidad Politécnica Salesiana de Ecuador) conserva los derechos patrimoniales (**copyright**) de las obras publicadas y favorecerá la reutilización de las mismas. Las obras se publican en la edición electrónica de la revista bajo una licencia Creative Commons Reconocimiento / No Comercial-Sin Obra Derivada 3.0 Ecuador: se pueden copiar, usar, difundir, transmitir y exponer públicamente.

El/los autor/es abajo firmante/s transfiere/n parcialmente los derechos de propiedad (**copyright**) del presente trabajo a la editorial Abya-Yala (Ecuador) (RUC: 1790747123001), para las ediciones impresas.

Se declara además haber respetado los principios éticos de investigación y estar libre de cualquier conflicto de intereses.

En ____ (ciudad), a los ____ días del mes de ____ de 202__

Firmado. (Por el autor o en su caso, todos los autores)

428



Nombres y apellidos del autor
Documento de Identidad

Firma

Nombres y apellidos del autor
Documento de Identidad

Firma

Nombres y apellidos del autor
Documento de Identidad

Firma

Nota: Una vez haya guardado el documento cumplimentado y firmado, deberá consignarlo a través del sistema OJS en la sección “Ficheros Complementarios”.



AUTHORSHIP STATEMENT — CREDiT

The CRediT Taxonomy applies to cases of documents or publications created by multiple authors. Its purpose is to specify the type and extent of each contributor's involvement in a multidisciplinary and collective work.

By consensus, the authors of the document declare that the proposed article has not been previously submitted or published in other media outlets.

The authors credit all contributors without omission and specify their contributions according to the CRediT Taxonomy.

In the following section, each participant's contribution to the submitted document is outlined:



Full Name	Contributions made according to the CRediT Taxonomy
Author 1	Example: Investigation: conducting research and exploration, specifically performing experiments or collecting data/evidence.
Author 2	Example: Investigation: Conduct a process of research and exploration, specifically by carrying out experiments or collecting data/evidence.
Author 3	

This document must be signed by the author and all other relevant authors as applicable.

AUTHOR 1:

Full Name:

Identity Document:

Institutional Email:

ORCID Code (mandatory):

Complete Institutional Affiliation:

Google Scholar Profile Link:

h-index:

Signature: _____

AUTHOR 2:

Full Name:

Identity Document:

Institutional Email:

ORCID Code (mandatory):

Complete Institutional Affiliation:

Google Scholar Profile Link:

h-index:

Signature: _____

AUTHOR 3:

Full Name:

Identity Document:

Institutional Email:

ORCID Code (mandatory):

Complete Institutional Affiliation:

Google Scholar Profile Link:

h-index:

Signature: _____

431



In ____ (city), on the ____ day of the month of ____, 202 ____

DECLARACIÓN DE AUTORÍA-CRediT*

La Taxonomía CRediT se aplica para los casos de documentos o publicaciones elaborados por múltiples autores; tiene por finalidad es especificar el tipo y la magnitud de la contribución de cada colaborador en un trabajo multidisciplinario y colectivo.

En consenso, los autores del documento declaran que, el artículo propuesto no ha sido presentado ni publicado con anterioridad en otros medios de divulgación.

Los autores tributan sin omisión de ningún autor e indican la contribución según Taxonomía CRediT (taxonomía CRediT).

En el siguiente espacio se menciona la colaboración realizada por cada uno de los participantes en el documento presentado:

432



Nombres y apellidos completos	Contribuciones realizadas conforme a la Taxonomía CRediT
Autor 1	Ejemplo: Conceptualización.- tratamiento de datos, etc...
Autor 2	Ejemplo: Investigación.- Llevar a cabo un proceso de investigación y exploración, específicamente realizando los experimentos o la recopilación de datos/evidencias.
Autor 3	

* Este documento debe estar firmado por el autor y todos los autores según corresponda al caso.

AUTOR 1:

Nombres y apellidos completos:

Documento de Identidad:

Correo electrónico institucional:

Código ORCID (obligatorio):

Filiación institucional completa:

Dirección de Google Académico:

Índice h:

Firma: _____

AUTOR 2:

Nombres y apellidos completos:
 Documento de Identidad:
 Correo electrónico institucional:
 Código ORCID (obligatorio):
 Filiación institucional completa:
 Dirección de Google Académico:
 Índice h:

Firma: _____

AUTOR 3:

Nombres y apellidos completos:
 Documento de Identidad:
 Correo electrónico institucional:
 Código ORCID (obligatorio):
 Filiación institucional completa:
 Dirección de Google Académico:
 Índice h:

Firma: _____

433



En ____ (ciudad), a los ____ días del mes de ____ de 202__

DECLARATION OF USE OF ARTIFICIAL INTELLIGENCE

The author(s) (full name(s))
of the article titled: submitted to the OJS of the *Sophia Journal: Collection of Philosophy of Education* for review and evaluation within the editorial process, declare that the preparation of the document was supported by Artificial Intelligence (AI) to a percentage of: ____%.

The section, component, or part of the article developed with the help of AI is found on the following page(s): _____.

Please briefly explain how AI was used in the research presented (e.g., preparation, paraphrasing, writing, editing, style correction, bibliography, etc.):

This document must be signed by the author and all authors as appropriate.

AUTHOR 1:

Full name:

Identity document:

Institutional email:

ORCID code (mandatory):

Full institutional affiliation:

Google Scholar profile link:

h-index:

Signature: _____

AUTHOR 2:

Full name:

Identity document:

Institutional email:

ORCID code (mandatory):

Full institutional affiliation:

Google Scholar profile link:

h-index:

Signature: _____

AUTHOR 3:

Full name:

Identity document:

Institutional email:

ORCID code (mandatory):

Full institutional affiliation:

Google Scholar profile link:

h-index:

Signature: _____

In ____ (city), on the ____ day of the month of ____, 202____

435



DECLARATORIA DE USO DE INTELIGENCIA ARTIFICIAL

El autor o los autores (nombres y apellidos completos).....
 del artículo titulado:
 ingresado en el OJS de la Revista Sophia: Colección de Filosofía de la
 Educación, para la revisión y evaluación dentro del proceso editorial,
 declara/n que la elaboración del documento se apoyó con Inteligencia
 Artificial (IA), en un porcentaje de: _____%.

La sección, componente o parte del artículo desarrollado con ayu-
 da de IA se encuentra en la/s página/s: _____.

Explique brevemente la forma en que fue utilizada la IA en la in-
 vestigación presentada (Elaboración, parafraseo, redacción, corrección de
 redacción y estilo, bibliografía, etc):

* Este documento debe estar firmado por el autor y todos los au-
 tores según corresponda al caso.

AUTOR 1:

Nombres y apellidos completos:

Documento de Identidad:

Correo electrónico institucional:

Código ORCID (obligatorio):

Filiación institucional completa:

Dirección de Google Académico:

Índice h:

Firma: _____

AUTOR 2:

Nombres y apellidos completos:
 Documento de Identidad:
 Correo electrónico institucional:
 Código ORCID (obligatorio):
 Filiación institucional completa:
 Dirección de Google Académico:
 Índice h:

Firma: _____

AUTOR 3:

Nombres y apellidos completos:
 Documento de Identidad:
 Correo electrónico institucional:
 Código ORCID (obligatorio):
 Filiación institucional completa:
 Dirección de Google Académico:
 Índice h:

Firma: _____

437



En ____ (ciudad), a los ____ días del mes de ____ de 202____

CALL FOR PAPERS 2026-2030

Sophia 42

Philosophy in media communication and digital media in education

Lines of research:

- Reflections on media education
- Truthfulness of information in digital media
- Philosophical analyses of misinformation phenomena
- Questions on the impact of fake news on society and education
- Critical formation of individuals regarding media and digital technologies
- Reflections on various media and digital formats
- Philosophical foundations of digital literacy and media education
- Critical and competent civic formation in the use of media and digital technologies
- Constructivist and critical approaches to media education
- Philosophical methods for teaching media skills
- Pedagogical strategies for teaching media and digital skills
- Critical thinking for media analysis
- Technical and creative skills for media content production
- Ethics and responsibility in the digital age
- Ethics and responsibility in creating and disseminating digital content
- Impact of media and technology on society
- Education on online privacy and personal data protection
- Strategies for maintaining digital security and ethics in technology use
- Equitable access to technology and media
- Policies and practices to reduce the digital divide and promote technological inclusion
- The role of media literacy in forming informed and participative citizens
- The use of digital media for civic participation
- Ethical dilemmas related to the use of technology and digital media
- Social responsibility and professional ethics in creating and consuming media content
- Integration of media education into the curriculum
- Critical evaluation of educational programs and practices in media literacy
- Emerging trends in digital literacy and their relevance to the future of education
- Globalization through the internet and the power of Artificial Intelligence as a leveling force in education

441



Article contributions: We welcome articles from prominent representatives in the field of philosophy, addressing the central theme and its implications in psychology, pedagogy, or other disciplines.

Manuscript submission deadline: July 15, 2026

Publication date of this edition: January 15, 2027

Sophia 43

Philosophy of neuroeducation

lines of research:

- Ethical, epistemological, and methodological implications of applying neuroscientific knowledge in education
- Nature, limitations, and purposes of neuroeducation
- Philosophical reflection on the relationship between neuroscience, psychology, and pedagogy
- Neurobiological foundations of learning
- Brain plasticity and memory consolidation
- Fundamental cognitive processes: attention, perception, memory, and emotions in education
- Principles of neuroscience to improve teaching and learning
- Ethics of neuroeducation
- Informed consent in neuroeducational research
- Critical evaluation of neuroscientific methodologies
- Criticisms of neuroscience and neuroeducation
- Designing learning environments adapted to students' cognitive and emotional needs
- Impact of emotions on learning and memory processes
- Strategies to foster intrinsic motivation and emotional well-being in the classroom
- Lifelong learning and neuroplasticity in adulthood
- Philosophical reflection on the use of emerging technologies like neuroimaging and brain stimulation in educational research
- Philosophical reflection on teacher training and neuroeducation
- Influence of neuroscientific knowledge on educational practice
- Philosophy of mind and neuroeducation
- Moral neuroeducation
- Neuroethics related to education

Article contributions: We welcome articles from prominent representatives in the field of philosophy, addressing the central theme and its implications in psychology, pedagogy, or other disciplines.

Manuscript submission deadline: December 15, 2026

Publication date of this edition: July 15, 2027

442



Sophia 44
Ethics of artificial intelligence in education

Lines of research:

- Ethical and moral implications of AI development and use
- Transparency, privacy, and data protection
- Ethical handling of personal data
- Autonomy and educational decision-making with AI systems
- Human autonomy and supervision with AI
- Effects of automation and AI in education
- Philosophical reflection on the use of AI
- Strategies to combat misinformation generated by AI
- Criticisms of machine autonomy and robot ethics
- Cultural and ethical differences in the perception and regulation of AI
- Approaches, perspectives, and trends to address the challenges and opportunities of this technology
- The use of AI in virtual educational environments
- Security, justice, and benefits of AI for stakeholders
- Reflections on equity promoted by AI
- Impact of AI on teachers' responsibilities and students' roles
- Ethics as a balance point between technology and human interaction in the educational process
- Educational assessment
- Ethical use of AI to evaluate student performance
- Ethical approach to the implementation of artificial intelligence in education



Article contributions: We welcome articles from prominent representatives in the field of philosophy, addressing the central theme and its implications in psychology, pedagogy, or other disciplines.

Manuscript submission deadline: July 15, 2027

Publication date of this edition: January 15, 2028

Sophia 45
Philosophy of education in truth and post-truth

Lines of research:

- Conceptions, theories, and criteria of truth
- Epistemological foundations of how we know the truth
- Theories of knowledge and their application in education
- Implications of truth in educational processes
- The truth in the teacher vs. the truth in the student

Sophia 41: 2026.

© Universidad Politécnica Salesiana del Ecuador

Print ISSN:1390-3861 / Electronic ISSN: 1390-8626, pp. 441-455.



- Ethics and truth in educational research
- Types of truth, problems, and limits of truth in education
- Education in truth based on critical thinking
- Education in truth in the post-truth era
- Educational dimension of post-truth
- Intellectual honesty, integrity, objectivity, and rigorous pursuit of knowledge
- Truth as the center of the educational process
- The role of truth in civic education and citizen formation
- Relationship between truth, power, and propaganda in education
- Strategies to promote self-reflection and personal pursuit of truth
- Importance of authenticity and honesty in personal and educational development
- Methods of teaching truth
- Truth in the sciences, humanities, and social sciences
- The pursuit of truth in academic and scientific research
- Cultural relativity and truth
- Teaching truth in a multicultural and pluralistic context

Article contributions: We welcome articles from prominent representatives in the field of philosophy, addressing the central theme and its implications in psychology, pedagogy, or other disciplines.

Manuscript submission deadline: December 15, 2027

Publication date of this edition: July 15, 2028

Sophia 46

Philosophy of the environment and education

Lines of research:

- Interaction between environmental philosophy and education
- Philosophical approaches to environmental education
- Environmental ethics in education
- The ethics of respect and care for the environment
- Environmental ethical dilemmas in the classroom
- Transdisciplinary dialogue on sustainable development and regenerative cultures from critical pedagogy
- Philosophy of nature and education, philosophical perspectives on nature influencing education
- The role of education in global sustainability
- Philosophy of ecology in education
- Educational methods to develop ecological awareness
- Environmental education in the formation of ecological values

- Teaching environmental equity
- Ecofeminism in environmental education
- Philosophy of climate change and education
- Climate change from a philosophical perspective
- Critical pedagogy for understanding the environment
- Teaching about the rights of nature
- Philosophical implications of nature
- Philosophical foundations of curriculum integration with environmental topics
- Interdisciplinary curriculum from environmental philosophy
- Anthropocentrism and ecocentrism
- Philosophy and environmental technoscience in education
- Ethics of geoengineering and other technological interventions in the environment
- Ontology of the environment
- Philosophy of ecology
- Criticisms and challenges in implementing the rights of nature



Article contributions: We welcome articles from prominent representatives in the field of philosophy, addressing the central theme and its implications in psychology, pedagogy, or other disciplines.

Manuscript submission deadline: July 15, 2028

Publication date of this edition: January 15, 2029

Sophia 47

Problems and challenges in the philosophy of education

Lines of research:

- Philosophical foundations of inequality and educational equity in education
- The role of the philosophy of education in cultural diversity
- The role of the philosophy of education in political and civic formation
- Intercultural philosophy and educational competencies in globalization
- Evaluation of the relevance and updating of educational content
- Alternative methods of educational assessment
- Decentralization and governance in education
- Philosophy of education for understanding the mental health of teachers and students
- Pedagogical orientations based on philosophical currents
- Critical thinking in the classroom

Article contributions: We welcome articles from prominent representatives in the field of philosophy, addressing the central theme and its implications in psychology, pedagogy, or other disciplines.

Manuscript submission deadline: December 15, 2028

Publication date of this edition: July 15, 2029

Sophia 48

The role of the teacher in character formation and virtue modeling

Lines of research:

- Character education from philosophy
- Articulation of ethical theory, pedagogical practices, and cultivation of a school environment for moral development
- Philosophical strategies for character education
- Teaching values
- Modeling virtues
- Teachers' behavior and decisions
- Teachers as role models of virtues
- Moral and ethical dilemmas in the classroom
- Philosophy for children programs for developing critical thinking skills
- Experiential learning for character education
- Project-based learning as an experience to strengthen human character
- Importance of interdisciplinarity in character formation
- Influence of the school environment in character formation
- The practice of virtues as a mechanism for forming the character of the subject
- Character education through developmental stages
- Teaching values
- Philosophical methods, techniques, and strategies for character formation
- Philosophical-pedagogical proposals for character formation
- Personal reflection and self-knowledge as mechanisms for character formation
- Philosophical currents for character formation
- Ethical theories for character formation
- Theories of moral development (Piaget, Kohlberg, etc.)
- Understanding character formation through the relationship between moral and psychological development
- Role of character education in civic participation and the common good
- Role of religion and spirituality in character education
- Importance of religions in character formation
- Criticisms and defenses of character education programs

446



- Role of mentors in character education
- Character formation from philosophy
- Character formation from pedagogy
- Philosophical and pedagogical strategies for character education
- Interdisciplinary approach to moral education
- Relationship between character and knowledge
- Theories, practices, and school environments in moral development and character education
- Pedagogy and philosophy in moral education
- The art of character formation from pedagogy and moral philosophy
- Philosophy and pedagogical practices for character development

Article contributions: We welcome articles from prominent representatives in the field of philosophy, addressing the central theme and its implications in psychology, pedagogy, or other disciplines.

Manuscript submission deadline: July 15, 2029

Publication date of this edition: January 15, 2030

447



Sophia 49

Philosophical foundations and perspectives of transformative education

Lines of research:

- Theoretical foundations of critical consciousness
- Participatory pedagogy as a basis for transformative education
- Contextualized education as key to personal and social transformation
- Interdisciplinarity as a mechanism to address problems
- Critical consciousness as the basis for transformative education
- Participatory pedagogy as a reference for transformative education
- Interdisciplinary approach to education and social transformation
- Foundations of transformative education from Freire to Foucault
- Holistic learning as a foundation for transformative education
- Theory, praxis, and philosophy towards transformative education
- Contextualized education as a basis for personal and social transformation
- Interdisciplinarity and critical consciousness in transformative education
- Philosophical perspectives of transformative education: Freire, Dewey, etc.
- Theories and practices for holistic understanding of transformative education
- Holistic perspective of learning and understanding as a basis for transformative education
- Philosophical foundations of transformative education from Freire, Dewey, Kant, Rousseau, Giroux, Foucault, Gramsci, etc.

Article contributions: We welcome articles from prominent representatives in the field of philosophy, addressing the central theme and its implications in psychology, pedagogy, or other disciplines.

Manuscript submission deadline: December 15, 2029

Publication date of this edition: July 15, 2030

Sophia 50

Phenomenology of experience in education

Lines of research:

- Study of subjective experience
- Phenomenological methods to understand the mind
- Importance of lived and subjective experiences in integral formation
- Philosophical foundations of lived experience
- Attention and focus as necessary aspects for understanding
- Sensory and cognitive perception in educational experience
- Influence of the temporality of experience on learning
- Impact of time perception on educational experience
- Importance of situational context, physical, educational, social, and cultural space in the learning experience
- Development of personal and professional identity of the main educational agents
- Importance of authenticity in education
- Influence of emotions and feelings on educational experience and learning process
- Relationship between emotion and cognition
- Influence of emotional experiences on understanding and academic performance
- Critical reflection on educational experiences to foster deep and meaningful learning
- Adapting the curriculum to respond to perceptions and needs
- Experiential learning and self-directed discovery
- Reflective and empathetic teaching based on students' perspectives and experiences
- Learning environments to foster interaction and collaboration

Article contributions: We welcome articles from prominent representatives in the field of philosophy, addressing the central theme and its implications in psychology, pedagogy, or other disciplines.

Manuscript submission deadline: July 15, 2030

Publication date of this edition: January 15, 2031

448



CONVOCATORIAS 2026-2030

Sophia 42

Filosofía en la comunicación mediática los medios digitales en la educación

Líneas de Investigación: Reflexiones sobre la educación mediática; la veracidad de la información en medios digitales; análisis filosóficos de los fenómenos de desinformación; cuestionamientos sobre el impacto de las noticias falsas (fake news) en la sociedad y la educación; la formación crítica de los individuos en relación con los medios de comunicación y las tecnologías digitales; reflexiones sobre diversos formatos mediáticos y digitales; fundamentos filosóficos de la alfabetización digital y la educación mediática; formación ciudadana crítica y competente en el uso de medios y tecnologías digitales; enfoques constructivistas y críticos en la educación mediática; métodos filosóficos para la enseñanza de habilidades mediáticas; estrategias pedagógicas para la enseñanza de habilidades mediáticas y digitales; pensamiento crítico para el análisis de medios; habilidades técnicas y creativas para la producción de contenido mediático; ética y responsabilidad en la era digital; ética y responsabilidad en la creación y difusión de contenido digital; impacto de los medios y la tecnología en la sociedad; educación sobre la privacidad en línea y protección de datos personales; estrategias para mantener la seguridad digital y la ética en el uso de tecnologías; acceso equitativo a la tecnología y a los medios de comunicación; políticas y prácticas para reducir la brecha digital y promover la inclusión tecnológica; rol de la alfabetización mediática en la formación de ciudadanos informados y participativos; el uso de los medios digitales para la participación cívica; dilemas éticos relacionados con el uso de tecnología y medios digitales; responsabilidad social y ética profesional en la creación y consumo de contenido mediático; integración de la educación mediática en el currículo; evaluación crítica de programas y prácticas educativas en alfabetización mediática; tendencias emergentes en la alfabetización digital y su relevancia para el futuro de la educación; La globalización mediante internet y el poder de la Inteligencia Artificial como fuerza de nivelación de la educación

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2026

Fecha de publicación de esta edición: 15 de enero de 2027

449



Sophia 43
Filosofía de la neuroeducación

Líneas de Investigación: Implicaciones éticas, epistemológicas y metodológicas de aplicar conocimientos neurocientíficos en la educación; naturaleza, limitaciones y finalidades de la neuroeducación; reflexión filosófica de la relación entre neurociencia, psicología y pedagogía; bases neurobiológicas del aprendizaje; plasticidad cerebral y consolidación de la memoria; procesos cognitivos fundamentales: atención, percepción, memoria y emociones en la educación; principios de la neurociencia para mejorar la enseñanza y el aprendizaje; ética de la neuroeducación; el consentimiento informado en la investigación neuroeducativa; evaluación crítica de las metodologías neurocientíficas; críticas a la neurociencia y a la neuroeducación; diseño de entornos de aprendizaje adaptados a las necesidades cognitivas y emocionales de los estudiantes; impacto de las emociones en los procesos de aprendizaje y memoria; estrategias para fomentar la motivación intrínseca y el bienestar emocional en el aula; aprendizaje a lo largo de la vida y neuroplasticidad en la edad adulta; reflexión filosófica sobre el uso de tecnologías emergentes como la neuroimagen y la estimulación cerebral en la investigación educativa; reflexión filosófica sobre la formación docente y la neuroeducación; influencia de los conocimientos neurocientíficos en la práctica educativa; filosofía de la mente y neuroeducación; neuroeducación moral; neuroética vinculada con la educación.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de diciembre de 2026

Fecha de publicación de esta edición: 15 de julio de 2027

Sophia 44
Ética de la inteligencia artificial en la educación

Líneas de Investigación: Implicaciones éticas y morales del desarrollo y uso de la IA; transparencia, privacidad y protección de datos; manejo ético de los datos personales; autonomía y toma de decisiones educativas con los sistemas de IA; autonomía y supervisión humana con la IA; efectos de la automatización y la IA en la educación; reflexión filosófica sobre el uso de la IA; estrategias para combatir la desinformación generada por la IA; críticas sobre la autonomía de las máquinas y la ética de los robots; diferencias culturales y éticas en la percepción y regulación de la IA; enfoques, perspectivas y tendencias para abordar los desafíos y oportunidades que presenta esta tecnología; el uso de la IA en entornos virtuales educativos; seguridad, justicia y beneficios de la IA para los involucrados; reflexiones sobre la equidad promovida desde la IA; impacto de la IA en las responsabilidades del docente y en el rol del estudiante;

450



la ética como punto de equilibrio entre tecnología e interacción humana en el proceso educativo; la evaluación educativa; uso ético de la IA para evaluar el rendimiento estudiantil; enfoque ético en la implementación de la inteligencia artificial en la educación.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2027

Fecha de publicación de esta edición: 15 de enero de 2028

Sophia 45

Filosofía de la educación en la verdad y la post-verdad

Líneas de Investigación: Concepciones, teorías y criterios de verdad; fundamentos epistemológicos de cómo conocemos la verdad; teorías del conocimiento y su aplicación en la educación; implicaciones de la verdad en los procesos educativos; la verdad en el docente vs la verdad en el estudiante; ética y verdad en la investigación educativa; clases de verdad, problemas y límites de la verdad en la educación; educación en la verdad basada en el pensamiento crítico; educación en la verdad en la era de la posverdad; dimensión educativa de la posverdad; honestidad intelectual, integridad, objetividad y búsqueda rigurosa del conocimiento; la verdad como centro del proceso educativo; el rol de la verdad en la educación cívica y en la formación de ciudadanos; relación entre verdad, poder y propaganda en la educación; estrategias para fomentar la auto-reflexión y la búsqueda personal de la verdad; la importancia de la autenticidad y la honestidad en el desarrollo personal y educativo; métodos de enseñanza de la verdad; la verdad en las ciencias, las humanidades y las ciencias sociales; la búsqueda de la verdad en la investigación académica y científica; relatividad cultural y verdad; enseñanza de la verdad en un contexto multicultural y pluralista.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de diciembre de 2027

Fecha de publicación de esta edición: 15 de julio de 2028

Sophia 46

Filosofía del medio ambiente y educación

Líneas de Investigación: Interacción entre filosofía del medio ambiente y la educación; enfoques filosóficos en la educación ambiental; ética ambiental en la educación; la ética de respeto y cuidado por el medio ambiente; dilemas éti-

451



cos ambientales en el aula; diálogo transdisciplinar sobre el desarrollo sostenible y culturas regenerativas desde la pedagogía crítica; filosofía de la naturaleza y educación, perspectivas filosóficas sobre la naturaleza que influyen en la educación; el papel de la educación en la sostenibilidad global; filosofía de la ecología en la educación; métodos educativos para desarrollar una conciencia ecológica; la educación ambiental en la formación de valores ecológicos; enseñanza de la equidad ambiental; ecofeminismo en la educación ambiental; filosofía del cambio climático y educación; cambio climático desde una perspectiva filosófica; pedagogía crítica para la comprensión del medio ambiente; enseñanza sobre los derechos de la naturaleza; implicaciones filosóficas sobre la naturaleza; fundamentos filosóficos de la integración curricular con temas ambientales; currículo interdisciplinario desde la filosofía ambiental; antropocentrismo y ecocentrismo; filosofía y tecnología ambiental en la educación; ética de la geoingeniería y otras intervenciones tecnológicas en el medio ambiente; ontología del medio ambiente; filosofía de la ecología; críticas y desafíos en la implementación de los derechos de la naturaleza.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2028

Fecha de publicación de esta edición: 15 de enero de 2029

Sophia 47

Problemas y desafíos de la filosofía de la educación

Líneas de Investigación: Fundamentos filosóficos de la desigualdad y la equidad educativa en la educación; papel de la filosofía de la educación en la diversidad cultural; función de la filosofía de la educación en la formación política y ciudadana; filosofía intercultural y competencias educativas en la globalización; evaluación de la relevancia y actualización del contenido educativo; métodos alternativos de evaluación educativa; descentralización y gobernanza en la educación; la filosofía de la educación para la comprensión de la salud mental de docentes y estudiantes; orientaciones pedagógicas basadas en corrientes filosóficas; el pensamiento crítico en el aula.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de diciembre de 2028

Fecha de publicación de esta edición: 15 de julio de 2029



Sophia 48

La función del docente en la formación del carácter y en la modelación de virtudes

Líneas de Investigación: La educación del carácter desde la filosofía; articulación de teoría ética, prácticas pedagógicas y cultivo de un ambiente escolar para el desarrollo moral; estrategias filosóficas para la educación del carácter; enseñanza de valores; modelado de virtudes; comportamiento y decisiones de los docentes; docentes como modelos de las virtudes; dilemas morales y éticos en el aula; programas de filosofía para niños para el desarrollo de habilidades de pensamiento crítico; el aprendizaje experiencial para la educación del carácter; el aprendizaje basado en proyectos como experiencia para fortalecer el carácter del ser humano; importancia de la interdisciplinariedad en la formación del carácter; influencia del ambiente escolar en la formación del carácter; la práctica de las virtudes como mecanismo para la formación del carácter del sujeto; la educación del carácter a través del desarrollo evolutivo; la enseñanza de valores; métodos filosóficos, técnicas y estrategias para formar el carácter; propuestas filosófico-pedagógicas para la formación del carácter; la reflexión personal y el autoconocimiento como mecanismos para la formación del carácter; corrientes filosóficas para la formación del carácter; teorías éticas para la formación del carácter; teorías del desarrollo moral (Piaget, Kohlberg, etc.); comprensión de la formación del carácter desde la relación entre desarrollo moral y desarrollo psicológico; función de la educación del carácter en la participación ciudadana y el bien común; rol de la religión y la espiritualidad en la educación del carácter; importancia de las religiones en la formación del carácter; críticas y defensas de los programas de educación del carácter; rol de los mentores en la educación del carácter; la formación del carácter desde la filosofía; formación del carácter desde la pedagogía; estrategias filosóficas y pedagógicas para la educación del carácter; enfoque interdisciplinario en la educación moral; relación carácter y conocimiento; teorías, prácticas y ambientes escolares en el desarrollo moral y la educación del carácter; pedagogía y filosofía en la educación moral; el arte de formar el carácter desde la pedagogía y la filosofía moral; filosofía y prácticas pedagógicas para el desarrollo del carácter

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2029

Fecha de publicación de esta edición: 15 de enero de 2030

Sophia 49

Fundamentos y perspectivas filosóficas de la educación transformadora

Líneas de Investigación: Fundamentos teóricos sobre la conciencia crítica; la pedagogía participativa como base para la educación transformadora;

453



educación contextualizada clave para la transformación personal y social; la interdisciplinariedad como mecanismo para abordar problemas; conciencia crítica como base para la educación transformadora; la pedagogía participativa como referente para una educación transformadora; enfoque interdisciplinario para la educación y transformación social; fundamentos de la educación transformadora de Freire a Foucault; aprendizaje holístico como fundamento para la educación transformadora; teoría, praxis y filosofía en clave hacia una educación transformadora; la educación contextualizada como base para la transformación personal y social; interdisciplinariedad y conciencia crítica en la educación transformadora; perspectivas filosóficas de la educación transformadora: Freire, Dewey, etc.; teorías y prácticas para la comprensión holística de la educación transformadora; perspectiva holística del aprendizaje y la comprensión como base para la educación transformadora; fundamentos filosóficos de la educación transformadora desde Freire, Dewey, Kant, Rousseau, Giroux, Foucault, Gramsci; etc.

454



Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de diciembre de 2029

Fecha de publicación de esta edición: 15 de julio de 2030

Sophia 50

Fenomenología de la experiencia en la educación

Líneas de Investigación: Estudio de la experiencia subjetiva; métodos fenomenológicos para comprender la mente; importancia de las experiencias vividas y subjetivas en la formación integral; fundamentos filosóficos de la experiencia vivida; atención y focalización como aspectos necesarios para la comprensión; la percepción sensorial y cognitiva en la experiencia educativa; influencia de la temporalidad de la experiencia en el aprendizaje; incidencia de la percepción del tiempo en la experiencia educativa; importancia del contexto situacional, del espacio físico educativo, social y cultural en la experiencia del aprendizaje; desarrollo de la identidad personal y profesional de los principales agentes de la educación; importancia de la autenticidad en la educación; influencia de las emociones y los sentimientos en la experiencia educativa y en el proceso de aprendizaje; relación entre emoción y cognición; influencia de las experiencias emocionales en la comprensión y rendimiento académico; reflexión crítica sobre las experiencias educativas para fomentar el aprendizaje profundo y significativo; adaptación del currículo para responder a las percepciones y necesidades. aprendizaje experiencial y el descubrimiento autodirigido; enseñanza reflexiva y empática basada en las perspectivas y vivencias de los estudiantes; ambientes de aprendizaje para fomentar la interacción y la colaboración.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2030

Fecha de publicación de esta edición: 15 de enero de 2031

