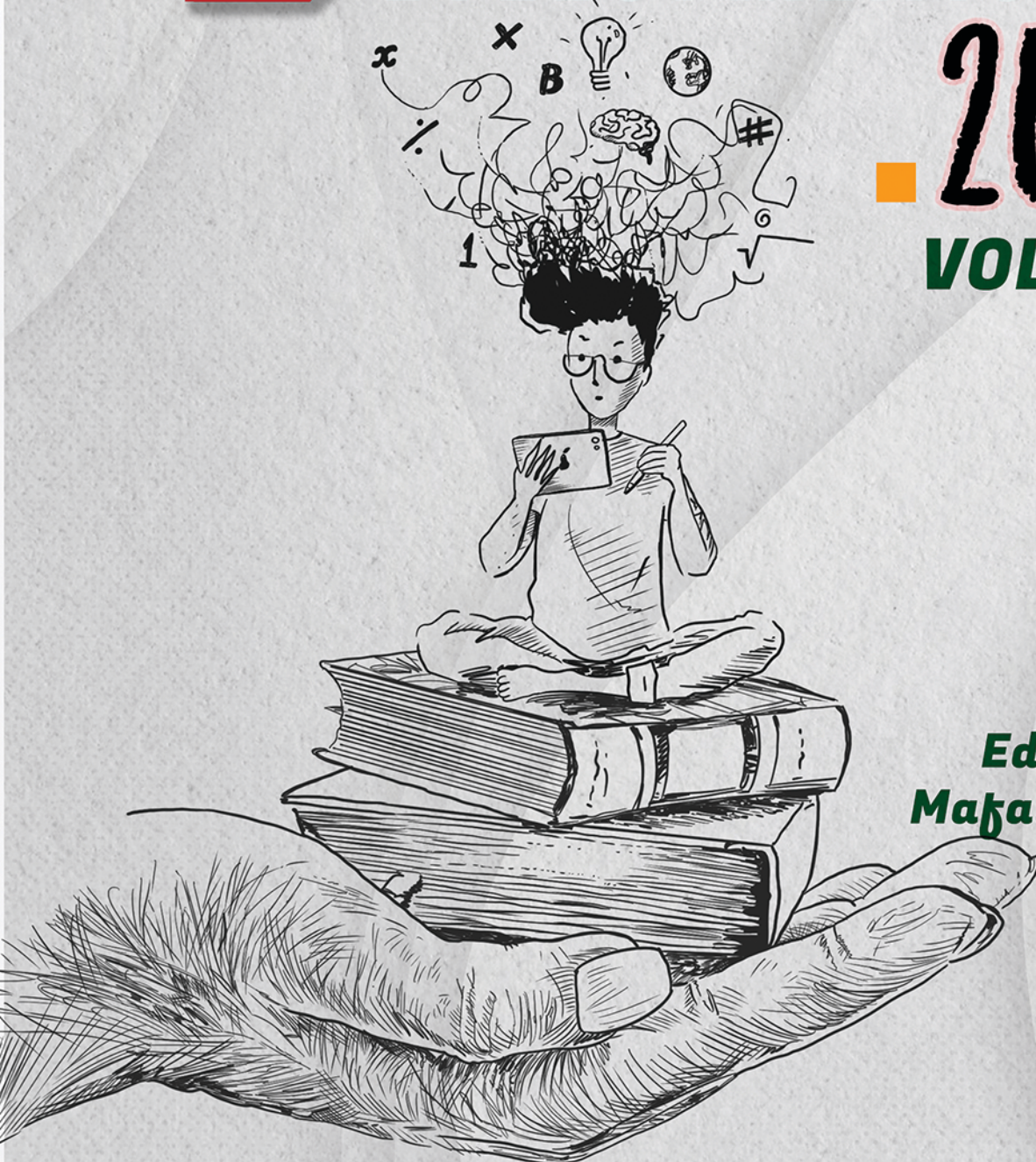


EDUCATION and NEW DEVELOPMENTS

2026
VOLUME 2



Edited by
Mafalda Carmo

Education and New Developments 2026

Volume 2

**Edited by
Mafalda Carmo**

Edited by Mafalda Carmo, World Institute for Advanced Research and Science (WIARS), Portugal

Published by inScience Press, Rua Tomas Ribeiro, 45, 1º D, 1050-225 Lisboa, Portugal

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ISSN (electronic version): 2184-1489

ISSN (printed version): 2184-044X

ISBN: 978-989-36839-5-8

Legal Deposit: 428062/17

Printed in Lisbon, Portugal by GIMA - Gestão de Imagem Empresarial, Lda.

BRIEF CONTENTS

Foreword	v
Organizing and Scientific Committee	vii
Sponsor	xiii
Keynote Lecture	xv
Index of Contents	xvii

FOREWORD

Dear Colleagues,

This book contains the full text of papers and posters presented at the International Conference on Education and New Developments (END 2026), organized by the World Institute for Advanced Research and Science (WIARS).

Education is a fundamental right that accompanies us from the very beginning of our lives. It encompasses every experience we encounter, influencing and shaping our thoughts, emotions, and actions. Whether we engage in formal education within classrooms or learn from the world around us, the process of acquiring knowledge plays a vital role in our personal growth and development. It equips us with the tools to navigate the complexities of life, broadens our perspectives, and empowers us to make informed decisions. This International Conference seeks to provide some answers and explore the processes, actions, challenges and outcomes of learning, teaching and human development. Our goal is to offer a worldwide connection between teachers, students, researchers and lecturers, from a wide range of academic fields, interested in exploring and giving their contribution in educational issues.

We are delighted to have successfully facilitated connections among academics, scholars, practitioners, and individuals who share a common interest in a field abundant with fresh perspectives, ideas, and knowledge. Our event has attracted a diverse range of contributors and presenters, enriching our understanding of human nature and behavior by showcasing the influence of their unique personal, academic, and cultural backgrounds. This diversity is a testament to the international reach of our conference, fostering multi-disciplinary collaborations and fostering intellectual growth and exchange.

END 2026 received 883 submissions, from more than 48 different countries, reviewed by a double-blind process. Submissions were prepared to take form of Oral Presentations, Posters, Virtual Presentations and Workshops. For presentation, the conference accepted 344 submissions (39% acceptance rate).

The conference also includes one Keynote presentation by Prof. Pedro Isaias, Universidade Aberta (Portuguese Open University), Portugal. We would like to express our gratitude to our invitee.

This conference addressed different categories inside the Education area and papers are expected to fit broadly into one of the named themes and sub-themes. To develop the conference program, we have chosen four main broad-ranging categories, which also covers different interest areas:

- In **TEACHERS AND STUDENTS**: Teachers and Staff training and education; Educational quality and standards; *Curriculum* and Pedagogy; Vocational education and Counselling; Ubiquitous and lifelong learning; Training programs and professional guidance; Teaching and learning relationship; Student affairs (learning, experiences and diversity; Extra-curricular activities; Assessment and measurements in Education.
- In **PROJECTS AND TRENDS**: Pedagogic innovations; Challenges and transformations in Education; Technology in teaching and learning; Distance Education and eLearning; Global and sustainable developments for Education; New learning and teaching models; Multicultural and (inter)cultural communications; Inclusive and Special Education; Rural and indigenous Education; Educational projects.
- In **TEACHING AND LEARNING**: Critical, Thinking; Educational foundations; Research and development methodologies; Early childhood and Primary Education; Secondary Education; Higher Education; Science and technology Education; Literacy, languages and Linguistics (TESL/TEFL); Health Education; Religious Education; Sports Education.
- In **ORGANIZATIONAL ISSUES**: Educational policy and leadership; Human Resources development; Educational environment; Business, Administration, and Management in Education; Economics in Education; Institutional accreditations and rankings; International Education and Exchange programs; Equity, social justice and social change; Ethics and values; Organizational learning and change, Corporate Education.

The contributions were published across two volumes, and this book represents Volume 2 of Education and New Developments 2026. It showcases the outcomes of innovative research and development efforts undertaken by authors committed to advancing teaching, learning, and the practical applications of education in contemporary contexts. Within its pages, you will find a diverse array of contributors and presenters who expand our understanding of educational matters by sharing their unique personal, academic, and cultural perspectives. Through their valuable insights and experiences, they enrich our exploration and contribute to the growth of educational discourse in our contemporary world.

This second volume only focuses on the main area of PROJECTS AND TRENDS, being the contributions of the other three areas published in Volume 1.

We would like to express thanks to all the authors and participants, the members of the academic scientific committee, and of course, to our organizing and administration team for making and putting this conference together.

Hoping to continue the collaboration in the future.

Respectfully,

Mafalda Carmo
World Institute for Advanced Research and Science (WIARS), Portugal
Conference and Program Chair

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KEYNOTE LECTURE

“AI AND THE DIGITAL TRANSFORMATION OF HIGHER EDUCATION ASSESSMENT”

Prof. Pedro Isaías

Universidade Aberta (Portuguese Open University), Portugal

Abstract

Artificial Intelligence (AI) is increasingly influencing how assessment is designed, delivered and interpreted in higher education. Its use extends beyond the automation of grading to areas such as formative assessment, personalised feedback, adaptive learning, learning analytics, academic integrity and student support. At the same time, the growing integration of AI into assessment raises important questions concerning transparency, accountability, privacy, bias, academic judgement and the credibility of evidence of student learning.

This keynote examines the adoption and non-adoption of AI-enabled assessment in higher education through a comparative study conducted in 2024 and 2026. It explores how university teachers' perceptions, practices and intentions regarding AI-supported assessment have evolved during a period of rapid technological and institutional change. Particular attention is given to the purposes for which AI is being used, the perceived benefits and barriers associated with its adoption, and the factors that continue to influence lecturers' willingness to incorporate AI into assessment practices.

The keynote also examines the distinctive capabilities of key categories of AI-enabled assessment technologies, illustrated through representative tools such as adaptive learning platforms, automated grading systems, intelligent tutoring systems, plagiarism-detection tools, learning analytics platforms, learning management systems and secure digital assessment environments.

The presentation concludes by addressing the institutional policies, professional development, transparency mechanisms and forms of human oversight required for responsible adoption. It invites participants to reflect on how higher education can redesign assessment while preserving academic integrity, teacher–student relationships and trust in qualifications in an environment where human and artificial intelligence increasingly interact.

Keywords: *Artificial Intelligence, higher education, assessment, Generative AI, academic integrity, digital transformation, teacher perceptions, educational innovation.*

Biography

Pedro Isaías is an associate professor with Habilitation at Universidade Aberta (Portuguese Open University) in Lisbon, Portugal. Previously, Pedro was an associate professor at the Information Systems & Technology Management School of The University of New South Wales (UNSW – Sydney), Australia, an associate professor at The University of Queensland, Brisbane, Australia, and an invited professor at ISEG-University of Lisbon, Portugal. At Universidade Aberta, he is currently responsible for several courses in the Information Systems areas and also a member of the coordination team of the postgraduation in Digital Innovation and Business Analytics. At Universidade Aberta, Pedro was director of the master degree program in Management / MBA and also director of the master degree program in Electronic Commerce and Internet for 10 years. He is co-founder and president of IADIS – International Association for Development of the Information Society, a scientific non-profit association. Author of several books, book chapters, papers and research reports, all in the information systems area, he has headed several conferences and workshops within the mentioned area. He has also been responsible for the scientific coordination of several EU funded research projects and has had participation as a principal investigator in various research projects. Currently he conducts research activity related to MIS in general, and more specifically Learning Technologies, Data Analytics, Business Intelligence, Digital Transformation, e-Business and WWW related areas. Pedro has more than 198 publications: 34 journal papers, 76 conference papers, 11 authored books, 33 edited books, 24 book chapters, and 21 journal special issues. Pedro has delivered 35 keynote/invited talks & workshop panels and has received over 4.793 citations, resulting in an h-index of 35 (Google Scholar, February 2026).

INDEX OF CONTENTS

ORAL PRESENTATIONS

Projects and Trends

Gathering content validity evidence for a mathematics and statistics diagnostic tool using qualitative methodology	3
<i>Carlos Fresneda-Portillo, Juan F. Luesia, & Carlos Benjamín Córdova-Portillo</i>	
Reimagining assessment: AI-driven strategies for transforming teacher education	8
<i>Kay Carroll</i>	
Growing skills and inclusion with a hydroponic orchard	10
<i>Javier Andrade-Garda, Víctor Carneiro-Díaz, Sonia Suárez-Garaboa, & Fidel Cacheda-Seijo</i>	
An experimental study of the mechanical engineering knowledge of ChatGPT and Gemini in higher education	15
<i>Michael Wendland</i>	
The model of digital transformation of higher education institutions	20
<i>Matevž Zebec, & Mitja Dečman</i>	
Institutional experience of the UERJ Pró-SUS network: A model of academic collaboration and public health innovation	25
<i>Tatiane Alves Baptista, Ronaldo Damião, Marcia Paes, & Mariana Florentino</i>	
Wallet-based micro-credentials in immersive education: European governance for privacy-preserving verification	29
<i>Alberto Nico, Flavio Manganello, Giannangelo Boccuzzi, Giancarlo Masi, Rosa Rondinelli, & Martina Ragusa</i>	
Challenges and development opportunities of global team learning projects	33
<i>Tiit Elenurm</i>	
Citizen science and connection with nature in the Bio-Solar project: Ecosocial involvement in research on biodiversity and renewable energy	38
<i>Rocío Serrano Rodríguez, Tamara Murillo Jiménez, & Francisco Sánchez Tortosa</i>	
AI teaching assistants for teacher education: A mixed-method study	43
<i>Noam Topelberg, & Esther Isman</i>	
From peripheral to core: Entrepreneurship education in the creative industries	48
<i>A. Treshi-Marie Perera, Silke Hassreiter, Tuki Clavero, Lindsey Bouwels, & Mata Haggis-Burridge</i>	
Development scenarios of collaboration in the field of inclusive higher education between Russia and CIS countries: Project-foresight	53
<i>Zhanna Puzanova, Maria Simonova, & Tatiana Larina</i>	
Inclusive learning environments: A research in Tuscan schools	58
<i>Silvia Panzavolta, Lorenza Orlandini, Antonio Lezzi, & Pierpaolo Infante</i>	

The REALISE project – responsible education and learning with Artificial Intelligence in systems and electronics	63
<i>Fernando Fernández-Martínez, Iván Martín-Fernández, Sergio Esteban-Romero, Pedro Malagón-Marzo, Manuel Gil-Martín, & Juan Manuel Montero-Martínez</i>	
“What’s next?”: A project-based STEM work experience model for future technologists	68
<i>Catherine Teehan, & Elaine Haigh</i>	
An integrated educational content on water security as a tool for achieving sustainable development goals	72
<i>Olena Mitryasova, & Andrii Mats</i>	
Rethinking space to rethink learning: Designing inclusive schools for all	77
<i>Lorenza Orlandini, & Silvia Panzavolta</i>	
Fostering positive attitudes toward English learning: A Japanese school case using “small talk” and international understanding	82
<i>Hiromi Ishimori</i>	
AVENUE: Early findings from a Pan-European centre of vocational excellence on emerging skills in the creative visual industries	87
<i>Zoltán Bathó G, Silke Hassreiter, A. Treshi-Marie Perera, Roberta Jablonskyté, Carlos Pereira Santos, & Mata Haggis-Burridge</i>	
Learning by solving and sensing: Data-informed perspectives on problem-based learning	91
<i>Damijana Keržič, Dejan Ravšelj, & Vida Zorko</i>	
Gamification and facilitation methods in sustainability training for SMES	96
<i>Suvi Sivén, & Taina Lintilä</i>	
Opportunities and challenges of AI in education: A didactic perspective	101
<i>Thomas N. Jambor</i>	
“2 Long 2 Read”: Student perception of reading in higher education institutions	106
<i>Gaby Probst, & Laura Zizka</i>	
Transformative teaching and learning: How to bridge Spanish language learning and lived experiences in a Latin American literature classroom?	111
<i>Ericka H. Parra Téllez</i>	
Exploring teachers’ self-efficacy for inclusion through a Tutor-AI assistant: A preliminary expert validation study	116
<i>Martina Giorgi, Andrea Sterbini, Guido Benvenuto, Giulia Brandi, Federica Stefanelli, Keith Johnston, & Andrea Chirico</i>	
Seamless collaboration in distance learning: Exploring the role of an embedded video-conferencing-system in group work	121
<i>Thomas Kasakowskij</i>	
Identifying the drop-out decision moment in programming MOOC student progress data	126
<i>Jakub Swacha</i>	
A curriculum-aligned screening tool for identifying mathematical learning difficulties in grade 3	131
<i>Kadrian Allika, & Liina Malva</i>	

Promoting education and careers in logistics through an online platform centred on the needs of teachers and students	136
<i>Sandra Eitler, Reinhold Schodl, Manuel Tuscher, Alexandra Haller, Christina Pum, & Lisa-Maria Putz-Egger</i>	
Innovative Tech Challenges as catalysts of student creativity: Cross-national evidence from the Erasmus+ Smart Solutions project	141
<i>Anna Stefanowicz-Kocol</i>	
On the impact of subject of study, self-regulation learning and mathematics anxiety on academic dropout	146
<i>Carlos Fresneda-Portillo, Ane Gutiérrez-Aguirregabiria, Susana Romero-Yesa, & David Simón-Grábalos</i>	
Gender stereotypes in education: Hidden mechanisms and their impact on attitudes toward STEM	150
<i>Agata Lada, & Anna Stefanowicz-Kocol</i>	
Teachers' perceptions of learner support in South African rural secondary education	155
<i>Newlin Marongwe</i>	
Education for the future in the field of energy savings and energy literacy	160
<i>Tetjana Tomášková, Jan Krotký, & Jarmila Honzíkova</i>	
Could you teach me how to think?	165
<i>María Jesús Santos Sánchez, Deolinda Rasteiro, Marián Queiruga-Dios, & Araceli Queiruga-Dios</i>	
Reconceptualizing humanities pedagogy in contemporary American universities: Culture, literature and foreign languages in transition	170
<i>Amarilis Hidalgo de Jesús</i>	
Analysis of academic discourse on sustainability through Natural Language Processing (NLP)	174
<i>Nora Gavira-Durón, Luis Enrique García-Pérez, Muhammad Kashif, Angelica Alonso-Rivera, & Ana Lorena Jiménez-Preciado</i>	
Generative AI and the deepening of understanding: A human-AI co-thinking model for higher education	179
<i>Abdurrahman Gülbeyaz, & Yoichiro Nonaka</i>	
Self-directed language learning trajectory: A case study of language learner of Korean as a foreign language	184
<i>Boo Kyung Jung</i>	
Generative Artificial Intelligence as a tool for information management in higher education: An empirical study on student practices and perceptions	189
<i>Thomas Naprawski, & Anna Pilarczyk-Naprawski</i>	
Internationalization and teaching innovation in higher education through an Erasmus+ initiative	194
<i>Araceli Queiruga-Dios, María Jesús Santos Sánchez, Marián Queiruga-Dios, María Anciones-Polo, & Deolinda Rasteiro</i>	
Peer power in practice: A systematic review of peer programs supporting inclusive and supportive school environments	199
<i>Edit Felső, & Anikó Fehérvári</i>	

From algorithm to understanding: The role of AI literacy in student acceptance of AI grading <i>Hayden Noel, Adam King, & Julia Sabin</i>	204
Co-design with Timorese artists: Practice-led reflections on design for development in Timor-Leste <i>Ana Catarina Silva, & João Tiago Santos</i>	209
Gamification for the Streber-App – engaging students in a modern competence oriented assessment App <i>Grischa Schmiedl, & Daniela Grul'ová</i>	214
How young bilinguals translate stories: A study of lexical equivalence and expressive strategies <i>Karin Kopasová, & Edita Hornáčková Klapicová</i>	219
The image of school at the intersection of theory and practice in the discourse of future teachers <i>Agnieszka Koterwas, Edyta Nowosielska, & Małgorzata Zambrowska</i>	224
Star Wars, Jenga and sustainable business models - experiences and findings from an EU project on usage of game elements in entrepreneurial education <i>Helge Fischer, Thomas Köhler, Marina Letonja, Linda Mertens, Ria Slingerland, Antonio Roldán-Ponce, Pawel Urgacz, Denis Spahija, Yvonne Farrand, Jose Tummers, & Magne Ortmann</i>	228
Exploring teacher perceptions of integrating STEAM and home economics through the STEAMKitchen handbook <i>Kristi Paas</i>	233
Complex assessment and multidisciplinary intervention in children after pediatric stroke using MYRO: Systematic case study <i>Edita Satinská, & Marcela Dabrowská</i>	238
Using knowledge graphs to structure and summarize instruction in STEM classrooms <i>Elina Benenson Opalinsky, Lina Vinitsky-Pinsky, & Maayan Zhitomirsky-Geffet</i>	242
Designing for learner variability at scale: A UDL-aligned framework for asynchronous online teaching <i>Melissa Beck Wells</i>	247
Integrating Artificial Intelligence in curricular design from pre-service teachers' perspectives: The role of pedagogical competence <i>Cristiana Dell'Erba, Lisa Ruffini, & Roberta Silva</i>	251
Educational provocations in teaching a foreign language: A "spark chamber" promoting students' creative linguistic thinking <i>Nijole Ciuciulkiene, & Viktorija Polismakaite</i>	256
Bridging sectors in language education: A cross-sectoral community of practice approach to modern foreign language implementation in Irish primary schools <i>Julia Collins</i>	261
The future of university education: Transformation, disruption and adaptation to 2040 <i>Daniela Ilieva</i>	266
A data-driven, inclusive and student-centred model for engagement, belonging and success in higher education <i>Sarvin Hassani, & Alessia Mevoli</i>	271

Florence Project – designing from within: A living lab model for innovative higher education inside a medical center <i>Michal Eitan</i>	276
Prevention of postural defects in children and adolescents in public health care on the example of selected European countries <i>Agnieszka Jankowicz-Szymańska, Katarzyna Wódka, Gabriela Hudyka, Fatma Dilara Akara Çamyar, Andreea-Daniela Braguta, Gökhan Özkoçak, Manuel Monfort Panego, Ligia Rusu, Neville Schembri, & Vicente Minana Signes</i>	280
Enhancing student engagement through movement and proactivity: A comparative classroom study using an ISO 26000 game <i>Sandrine Stervinou</i>	285
ALISIO - a STEAM educational project bringing earth observation to Canary Islands classrooms <i>Sara González Pérez, Carlos Colodro-Conde, & Álex Oscoz Abad</i>	290
Family comprehensive sexuality education experiences and opinions from adolescents and their parents <i>Valeria Bruno, Jessica Pistella, & Roberto Baiocco</i>	295
The Trialogical Learning Approach as a tool for supporting lifelong learning <i>Eleonora Perrone Capano</i>	300
Immersive pedagogy and embodied data: IP and privacy risks in European educational metaverses <i>Alberto Nico, Flavio Manganello, Giannangelo Boccuzzi, Giancarlo Masi, Rosa Rondinelli, & Martina Ragusa</i>	303
Ecological imperative and co-evolutionary education through methodological synthesis <i>Olena Mitryasova, & Andrii Mats</i>	307
Assessment of AI impact on lectures and theses in university education <i>Ronny Wang</i>	312
Exploring the utility of extended reality in rural medical education: A programmatic research synthesis <i>Vernon Curran, Norman Burry, Nicole Hollohan, Mustafa Yalin Aydin, Peter Magued Mounir Attia, Susan White, Lourdes Peña-Castillo, & Oscar Meruvia-Pastor</i>	317
Designing a teacher development MOOC camp to promote anti-racist education <i>Janaina Cardoso</i>	322
Managing religious diversity in primary schools: Educators' perspectives on inclusion, belonging and school climate <i>Diana-Sinziana Duca, Andreea Ursu, Alina Ionescu-Corbu, Christos Papakostas, Efsthios Lianos Liantis, Emmanuil Karageorgoudis, & Maria-Doina Schipor</i>	327
Touching the soil, cultivating a common home: A lived experiment in regenerative education <i>Benjamin Bräutigam, & Elisa Bertolotti</i>	332
Developing work-relevant digital competencies in rural secondary education: Insights from Homa Bay, Kenya <i>Vivian Harberts, Julian Ng, Peter Kaune, & Andreas Saniter</i>	337

Integrating living lab webinars into university teaching for digital and sustainable operations	342
<i>Irene Navarro-del Águila, Jerónimo de Burgos-Jiménez, Jose Felipe Jiménez-Guerrero, & Eva Carmona-Moreno</i>	
Rethinking online STEM "best practices": Evidence from a Hispanic-serving institution	347
<i>Anna Y. Ni</i>	
From field to feed: A social network analysis of a phygital experiential learning case in higher education	352
<i>Marina Galioto, Francesca Pedone, Maria Moscato, Gabriella Ferrara, & Antonino Bianco</i>	
Inclusive education and network-based training: The development of a pedagogical guide within the INTEGRAR project (UERJ)	357
<i>Mariana Florentino, Tatiane Alves Baptista, Marcia Paes, Heloisa Pereira, & Livia Silva</i>	
Fostering mental clarity and intuitive thinking in the digital age: Results from an intercultural mental training program	361
<i>Andreas Schmitt, Benjamin Bräutigam, Bárbara Tagliaferro, Dominik Dupont, & David Martin</i>	
Children's narratives of belonging – a participatory arts-based study in diverse schools in England	366
<i>Holly Bennion</i>	
Thesis Buddy – Generative Artificial Intelligence in thesis supervision	369
<i>Krista Sorri, Anu Helena Suominen, & Nasir Md Shuvo</i>	
CSI-POM: Empowering Ocean Literacy through marine research and monitoring	374
<i>Tymon Zielinski, Tomasz Kijewski, Joanna Piwowarczyk, Lidia Dzierzbicka-Glowacka, Dawid Dybowski, & Maciej Janecki</i>	
Balancing teaching and research: Integration of scientific project outcomes into university curricula	379
<i>Dunja Srpak, Ivan Šumiga, Josip Srpak, & Antonija Šumiga</i>	
Co-creating learning spaces: Student agency and collaboration in the metaverse	384
<i>Marie-Luce Bourguet, & Elise Gasser</i>	
Drivers and barriers to Generative AI adoption among students of initial teacher education programmes	389
<i>Marian Carcary, & Patrick Buckland</i>	
#TrustinTruth: Media competence of invisible youth	394
<i>Raphaella Tkotzyk, Kim Hebben, & Johanna Lategahn</i>	
“Brain knowledge for learning” program: Design and short-term assessment	399
<i>María Ángeles Vicente-Torres, Margarita Martínez-Núñez, Oriol Borrás-Gené, Marta Navarro, Teresa Pérez, & José Agustín Vicente</i>	
An educational model focused on comprehensive university education: Experiences in its implementation	404
<i>Mariano Sánchez Cuevas</i>	
Talking it out: Using interactive oral assessment to authenticate learning in an age of Gen AI	409
<i>Colum A. Foley, & James Byrne</i>	

Beyond technical proficiency: Conceptualising intercultural project-based learning through the GIPE and GIPE++ initiatives	412
<i>Manfred Meyer, Alfonso Harrison, & Joshelyn Paredes-Zavala</i>	
Mobile, meaningful and inclusive: Rethinking online course design for diverse student populations	417
<i>Tricia Hudson, & Shawn Worthy</i>	
The use of mobile clicker technology in foundational organic chemistry for enhanced student engagement	421
<i>Parveen B. M. Beebejaun-Boodoo, & Jeanine N. Mwambakana-Mutombo</i>	

POSTERS

Projects and Trends

Hands-on physics: Experimental teaching from primary to tertiary education <i>Peter Hockicko</i>	429
Wearable-assisted task support for children with Autism Spectrum Disorder in educational contexts <i>Noé Vila, Paula M. Castro, & Adriana Dapena</i>	432
Empowering higher education lecturers through TEMP: An innovative e-mentoring model <i>Naama Katz, & Orit Lahav</i>	435
From story to STEM: Empowering students through digital storytelling in gender equality education <i>Anna Stefanowicz-Kocol</i>	437
Can the different forms of prejudice blatant or subtle, aversive, reification, etc be applied in Saudi Arabia? Are there any other ways in which prejudice is expressed, shown in Saudi Arabia <i>Jabr Almutairi</i>	440
An interdisciplinary doctoral program for creative and sustainable innovation <i>María de los Ángeles Cancela-Carral, Rosa M. Ricoy-Casas, Eva M. Lantarón-Caeiro, & Ana Belén Fernández-Souto</i>	443
Gamification and visual models as tools to support understanding of atomic structure among secondary schools students <i>Agata Lada</i>	446
Electronic testing as a motivational tool in pre-service teacher education: A pilot study <i>Katerina Biernatova, Lilla Korenova, & Angelika Schmid</i>	449
Developing emotional intelligence to foster sustainable consumption: An integrated approach to future educator training <i>Elena Martino, Maria Cinque, & Giovanni Ferri</i>	452
Integrating AI tools in UX and software education: Insights from teaching practice <i>Robert Pucher</i>	455
Rethinking online doctoral education: Digital innovation, e-learning and AI in the CREA program <i>Rosa M. Ricoy-Casas, María de los Ángeles Cancela-Carral, Eva M. Lantarón-Caeiro, & Ana Belén Fernández-Souto</i>	458
Implementing research-based learning to enhance competencies in industrial biotechnology education for chemical engineering students <i>Irene Gómez-Cruz, María del Mar Contreras, Minerva C. García-Vargas, Cristóbal Cara, & Juan Miguel Romero-García</i>	461
Educational program for teaching reading and writing: Item construction and agreement among judges <i>Patrícia Mendes Comassio, & Simone Aparecida Capellini</i>	464
Rolling dice, building futures: Using board game to enhance career planning <i>Zsófia Kocsis</i>	467

Flipped webinars for online psychology students: Is attendance an appropriate quality indicator?	470
<i>Helga Fjærvoll</i>	
Digital tool use and mathematics performance: Evidence from PISA 2022	473
<i>Balázs János Csajkos, & Klára Kovács</i>	
ChatGPT as a language trainer for enhancing the interaction skills of German learners in Japan	476
<i>Axel Harting</i>	
Evolve2Care Training Series: Building capacity for innovators and living labs	479
<i>Marta De Los Ríos White, Francesca Sperandio, Metaxas Gamvrelis, Konstantinos Balioukas, & Adriane Thrash</i>	

VIRTUAL PRESENTATIONS

Projects and Trends

From transparency to accountability: A framework for ethical and empowering use of Generative AI in higher education <i>Matthew Montebello</i>	485
Models of interaction between library education and library resources in the context of digital transformation <i>Iskra Tsvetanska, & Paola Galovich</i>	490
Emotional release in digital learning spaces: Integrating Sedona-inspired practices into elearning platforms for student well-being <i>Iulian Zonenstain</i>	495
Functions of the school as a space for preserving ethnocultural identity in a foreign environment (aspects of the work of the Bulgarian school in Cyprus) <i>Vanya Dobreva, Boriana Buzhashka, Roumen Draganov, Nina Debruyne, & Ventzislav Velez</i>	500
Attitudes and opinions of preschool educators and elementary school teachers regarding ecological education and their awareness of sustainable development <i>Snezana Stavreva Veselivovska, Despina Sivevska, & Sonja Petrovska</i>	505
Sustainable education in written heritage conservation: Incorporating environmental practices into student training <i>Iskra Tsvetanska, & Ivanka Yankova</i>	510
Literature analysis on the application of machine learning algorithms for the prevention of university drop out <i>José Guadalupe Landaverde-Vaca, Ana María Pacheco-Martínez, & Carlos Fresneda-Portillo</i>	514
Teaching with technology: Lecturer challenges in adopting AI tools for STEM <i>Denzyl Soobramoney Govender</i>	519
The teacher as a consolidating factor in the contemporary Bulgarian diaspora <i>Vanya Dobreva, Stoyan Denchev, Hristina Hristova, & Grudy Angelov</i>	524
Hyper-realistic avatars in education: A systematic review for hyper-realistic avatar design in education <i>Keith Azzopardi, Gabriel Borg, Matthew Montebello, Dylan Seychell, Luke Cassar, & Luke Cardona</i>	529
A comparative analysis of AI models for scenario-based learning <i>Gabriel Borg, Keith Azzopardi, Matthew Montebello, Vanessa Camilleri, & Luke Cardona</i>	534
Exploring the implementation of support services in enhancing teachers' inclusive pedagogical practices <i>Thabo Makhalemele, Rachel Rirhandzu Mayimele, & Pateka Pamela Jama</i>	539
Language education: Cultural mediation through creating an image of the foreign country <i>Natália Rusnáková, & Fabien Gibault</i>	543
Escaping the pathogen: An educational escape room as an assessment tool for microbial pathogenesis subject in higher education <i>Rubén Salvador-Clavell, María López-Heredia, Héctor Carmona-Salido, & Carmen Amaro</i>	548

Integrating sustainable e-waste management into the school curriculum: A response to limited institutional support <i>Magdeline Stephen, & Reuben Dlamini</i>	553
AI-enabled design pipelines and their impact on teaching practice <i>Xiaozhu Lin, & Matteo Oreste Ingaramo</i>	558
Teachers' experiences creating teaching materials as a tool for teachers' literature training <i>Leetwane Anna Ntlhare, & Alfred Makura</i>	563
Let me show you something – notions of video-based assignments in university <i>Pasi Hellsten, & Annamaija Paunu</i>	568
The mediating role of misconceptions in blended learning's impact on 3D trigonometry achievement: A structural equation modelling study <i>Joseph Baidoo</i>	573
Gender disparities in STEM degrees: Evidence from higher education and labor market <i>Mónica Martínez-Gómez, Elena de la Poza Plaza, M^a Ángeles Alcaide González, & Silvia Casino Colom</i>	578
Inclusive practices in large primary classrooms: Teacher training and research in São Tomé and Príncipe <i>Isabel Piscalho, & Ana Artur</i>	583
Exploring the role of Artificial Intelligence in design-driven startup education <i>Gianluca Carella, & Marta Conte</i>	588
Instructional design in practice: Contributions to the structuring of online courses for women entrepreneurs <i>Helen Rosa, Bruno F. Gonçalves, & Maria Raquel Patrício</i>	593
Declarative and poetic symbols in art students' exploration of environmental renewal through Lanthimos's Bugonia <i>Dimitra Gounari, & Agnes Papadopoulou</i>	597
Between expectations and recognition: Perceptions of preschool teachers' professional status and the path toward transformation within the TEACH-MC project <i>Renata Čepić, & Anja Basara</i>	602
Does Finnish education system matter for choosing future career path? A comparative study among the eighth graders <i>Florentina Alina Grigorescu (Pîrvu), Cezar Scarlat, & Alexandra Ioanid</i>	607
Implementing a STEAM-oriented hands-on curriculum in general education courses <i>Shao Ying Li, Yen Chun Li, & Yi Chen Li</i>	612
Futures literacy as an inclusive concept <i>Ariane Steuber</i>	615
Embedding AI literacy within disciplinary curriculum through structured assignment design <i>Ronald J. Glotzbach</i>	620
Investigating contradictions regarding education for sustainable development integration among academics: An interdisciplinary perspective <i>Portia Mabenge, & Eunice Nyamupangedengu</i>	625

Between prototypes projects and creative processes - educational robotics takes shape through the maker challenge	630
<i>Márcia Luzia Correia de Abreu, & Fabiana Leta</i>	
“Life is your block of clay.” Applying a typology for learning in makerspaces	635
<i>Nuria Jaumot-Pascual, Teresa Lara-Meloy, Ken Rafanan, & Elise Levin-Güracar</i>	
Intercultural communication as a challenge and as a tool in multicultural environments	640
<i>Rasa Poceviciene</i>	
Developing a framework for the integration of education for sustainable development into science teaching and learning	645
<i>Monde Kazeni, & Eunice Nyamupangedengu</i>	
CBL project and sustainability – SARRIKO SUSTAINABLE: The challenge to reduce, reuse and recycle	650
<i>Lidia García-Zambrano, & Maite Ruiz-Roqueñi</i>	
A pilot study on the effects of involving the secondary school students in JAR (Junior Achievement - Romania) activities on their entrepreneurial intentions	655
<i>Florentina Alina Grigorescu (Pîrvu), Cezar Scarlat, & Andrei Nicolae</i>	
Physical sciences pre-service teachers’ VR-supported 5E instructional practices during microteaching of electron configuration	660
<i>Samukelo Sibiyi, & Noluthando Mdlalose</i>	
Innovative teaching of renewable energy technologies through real-time data monitoring of microgrids	665
<i>Antonio Escámez, Daniel Sánchez-Lozano, Roque Aguado, David Vera, Marcos Tostado-Véliz, & Manuel Gómez-González</i>	
Navigating business language: Pre-service teachers’ LoTL practices in multilingual classrooms	670
<i>Nthabiseng Masehle, Abelwe Maluleka, & Rhulani Maluleka</i>	
Integrating Artificial Intelligence in strategic design education: Empirical evidence from design courses	675
<i>Gianluca Carella, & Marta Conte</i>	
Strategic models and human resource challenges in global K–12 AI education	680
<i>Márk Kovács</i>	
Innovative experiential education: Socratic Games for All	685
<i>Anna Lazou, Nektaria Skouteli, & Yorghos Voutos</i>	
The role of Generative AI in low-code robotics in STEM education	689
<i>Mafor Penn</i>	
Transformative learning for sustainability: A synthesis of learning outcomes	694
<i>Jonna Käpylä</i>	
Learners’ perceptions of digital tool use in business studies through DigComp	699
<i>Mpho Lucky Kgalushi, Rhulani Maluleka, & Abelwe Maluleka</i>	
Grade 11 physical sciences teachers’ experiences of using PhET simulations-enhanced inquiry-based teaching of chemical change	704
<i>Audrey Sifunda, & Noluthando Mdlalose</i>	

Initial teacher education and the development of intercultural competence: The mentors' perspective	709
<i>Jasna Maksimović, Marina Semiz, Jelena Stamatović, Sanja Maričić, Snežana Marinković, & Nenad Milinković</i>	
Indigenous research methodologies adoption in postgraduate research: Opportunities and challenges	714
<i>Lwazi Nsindiso Mkhwebane</i>	
Educational decision-making in contexts of inequality: A data analysis of the gap between poverty and academic success	719
<i>Fredy Olarte, & Liz Karen Herrera</i>	
Teachers' pedagogical practices when using interactive whiteboards for integrating indigenous knowledge in Life Sciences teaching	723
<i>Lwazi Nsindiso Mkhwebane, & Lydia Mavuru</i>	
Degrowth pedagogy in management and business education	728
<i>Jonna Käpylä</i>	
Challenges in adapted physical education in mainstream and special schools in the BRICS countries	733
<i>Charlene Engelbrecht, Dorita Du Toit, Chanelle Kemp, & Niekie Van Der Merwe</i>	
Intercultural and diasporic education in rural schools: Narratives and drawings on migration and belonging	738
<i>José Javier Luis Tello, Ana Gracia Gil, Alfonso Burgos Risco, Estefanía Monforte García, & Jennifer Moreno Moreno</i>	
Learning mathematics through integration of music activities	743
<i>Mimoza Kurshumlia, & Rajmonda Kurshumlia Sylä</i>	
Pre-service teachers' perceptions and experiences of using smartboards to promote active learning during teaching practice	747
<i>Lwazi Nsindiso Mkhwebane, & Alex Mbanze</i>	
The application of Assistive Technology in a special program for acquiring competencies in activities of daily living	752
<i>Tena Tej, Renata Pinjatela, & Mateja Vukašinec</i>	
Grade 10 South African learners' experiences during face-to-face and online learning - implications for social interaction	757
<i>Elmarie Kleynhans, & Nazreen Dasoo</i>	
Spaced learning in secondary school: A cross-border teaching proposal	762
<i>Gabriella Ferrara, Maria Moscato, Francesca Pedone, & Marina Galioto</i>	

WORKSHOPS

Projects and Trends

- Taming ChatGPT (and other AI beasts): Designing a GenAI code of conduct for meaningful learning** 769
Jeroen Lievens
- Saving the planet by saving environmental education. What can arts-based pedagogy offer?** 772
Martin Braund
- Facilitating classroom dialogue in sexuality education through game-based learning and GenAI** 775
Valeria Bruno, Giorgio Gaudio, Jeroen Lievens, & Björn Sjöden
- A case study on trauma-informed culturally responsive teaching: Core concepts for school professionals** 778
Karen M. VanDeusen, Dee A. Sherwood, Linda Reeser, & Marian Tripplett
-

AUTHOR INDEX

781

INSTRUCTIONAL DESIGN IN PRACTICE: CONTRIBUTIONS TO THE STRUCTURING OF ONLINE COURSES FOR WOMEN ENTREPRENEURS

Helen Rosa, Bruno F. Gonçalves, & Maria Raquel Patrício

Instituto Politécnico de Bragança (Portugal)

Abstract

The growth of female entrepreneurship in the context of online education has driven the creation of digital courses as a strategy for sharing knowledge and generating income. However, many female entrepreneurs face difficulties in pedagogical organization, content structuring, and defining effective teaching-learning strategies. In this context, Instructional Design (ID) emerges as a methodology capable of supporting the systematic and pedagogical design of online courses. The present study aims to analyze how the application of Instructional Design contributes to the organization, content development, and definition of teaching-learning strategies in the creation of online courses by women entrepreneurs. Methodologically, the study adopts a quantitative approach, using questionnaires before and after specific training in Instructional Design, aimed at women entrepreneurs with previous experience in digital content production. The results show that the use of Instructional Design principles promotes greater clarity in the definition of objectives, better sequencing of content, and more appropriate choices of pedagogical strategies and technological resources. It is concluded that Instructional Design is a relevant tool for improving the quality of online training developed by women entrepreneurs, contributing to pedagogical effectiveness, the sustainability of courses, and the promotion of female entrepreneurship in the digital context.

Keywords: *Instructional design, online courses, women's entrepreneurship, digital education, teaching-learning strategies.*

1. Introduction

The contemporary educational landscape has been profoundly transformed by globalization and digitalization, driving demand for new learning modalities and greater flexibility (Nkoa & Song, 2023). This phenomenon has also fostered the growth of digital entrepreneurship, particularly among women, who view the digital education market as an opportunity for financial independence (IBQP, 2018).

In this context, women's entrepreneurship involves not only creating and managing one's own businesses, but also overcoming social and cultural barriers, as well as affirming gender equality within the entrepreneurial ecosystem.

However, several studies have shown that this trajectory is marked by structural challenges. Santos et al. (2023) emphasize that numerous obstacles to developing educational businesses in the digital environment—especially in online formats—persist due to inadequate pedagogical and technological guidance. These constraints add to the well-documented difficulties faced by women entrepreneurs, including balancing personal and professional responsibilities, limited access to credit and support networks, and limited training opportunities. Thus, it becomes evident that women's digital entrepreneurship should be understood as a complex process influenced by multiple factors, which calls for methodological strategies that support both pedagogical organization and the informed use of educational technologies.

Although many women have strong technical expertise in their fields, they often face the challenge of transferring offline knowledge into structured digital learning experiences. However, the lack of a solid pedagogical foundation often leads to the improvised use of formats and tools not designed for educational purposes, affecting the coherence of learning pathways and learning outcomes.

The literature (Azevedo et al., 2024; Filatro, 2020; Filatro & Piconez, 2004), indicates that creating effective courses requires more than content expertise; it requires a pedagogical foundation that supports the development of meaningful learning. This calls for reflection, discussion, and, above all, relevant considerations for addressing and examining the topic.

Within this framework, Instructional Design (ID) emerges as an approach that guides women entrepreneurs in systematically designing courses by aligning objectives, content, strategies, and resources. As Filatro (2008) argues, ID constitutes a body of knowledge oriented toward the planning and theorization of instructional strategies. Rodrigues et al. (2024) further emphasize that what truly makes this approach a powerful tool is its capacity to empower, plan, and structure courses and training programs that meet learners' needs, while remaining attentive to the specific demands of each woman entrepreneur. Based on this perspective, the following research question was defined: How does ID influence the creation of online courses developed by women entrepreneurs?

The general objective was to analyze the impact of applying ID methodologies on the autonomy and quality of online course production by women entrepreneurs.

The specific objectives were to: (i) identify the main technological and pedagogical barriers faced by digital entrepreneurs; (ii) assess the level of digital literacy and mastery of educational tools before and after exposure to ID; (iii) evaluate the effectiveness of transitioning from communication tools (WhatsApp/Telegram) to structured Virtual Learning Environments (VLEs); and (iv) explore participants' perceptions of the use of multimodal resources to support student engagement.

The paper is organized as follows: the next section presents the methodology, describing the study design, the sample, the data collection instruments, and the analysis procedures. Section 3 reports the main results, focusing on the technological and pedagogical barriers identified and the changes observed after the Instructional Design training. Finally, Section 4 presents the conclusions, discussing the implications for women's digital entrepreneurship, the study's limitations, and recommendations for future research.

2. Methodology

This research adopts a quantitative approach. This methodological choice is grounded in the need to objectively measure data, enabling the identification of patterns and trends through quantifiable responses. In addition, the purpose of this approach is to quantify how ID influences the creation of online courses, focusing on the strategies entrepreneurs use to organize and structure content.

The study aims to understand the practical effects of using ID in these women's day-to-day work. Data collection was conducted through two questionnaire-based surveys with closed-ended questions: Questionnaire 1 (pre-training), administered to assess participants' prior knowledge of the topic; and Questionnaire 2 (post-training), administered after specific ID training to understand how learning influenced participants' capacity to develop courses.

Data was organized and processed in Microsoft Excel. The analysis was based on percentages, frequencies, and means, and the results were presented visually in charts and tables to facilitate objective interpretation.

The sample included 15 women recruited through social media, with more than one year of experience creating digital content and at least 1,000 followers, but with no prior success with their online courses. The analysis focused on identifying motivations and difficulties. Strict ethical criteria were ensured, including anonymity, privacy, and informed consent, promoting transparency and trust throughout the research process.

3. Results

In the context of women's digital entrepreneurship, the transition from tacit knowledge to the provision of online courses is often marked by barriers that go beyond pedagogical organization. One of the most prominent obstacles is a lack of knowledge and technological insecurity.

While digital entrepreneurship offers opportunities for flexibility and income generation, limited mastery of specific tools remains a major constraint. The data indicate that approximately 38% of women entrepreneurs identify technical/technological knowledge as the main obstacle to organizing, planning, and implementing their courses.

Another relevant aspect is that many women attract students through social networks and become highly skilled in producing content for these platforms. However, there is a clear distinction between being a content creator and being a digital educator. Despite having experience creating free content for social media—especially Instagram—many study participants reported feeling blocked by the technical infrastructure required to develop an online course.

Entrenched gender stereotypes and social expectations that may affect entrepreneurs' self-esteem were also considered; these factors can generate insecurity about their ability to succeed in the digital world.

The lack of training in integrating technology with pedagogy meant that 75% of the entrepreneurs initially interviewed had not yet started creating their courses due to a lack of guidance. This indicates that ID functions not only as a method for organizing content but also as a solid foundation for addressing technological and planning pedagogical challenges.

The method helps identify which resources are truly necessary, preventing entrepreneurs from feeling overwhelmed by unnecessary tools. Because it is a process with multiple purposes, it allows for rapid adaptation and can be implemented at low cost. ID thus becomes an effective solution for women who face challenges in using technology.

The impact of ID training on women's technological perceptions is notable. The study shows that after exposure to the methodology, participants' views of digital tools changed significantly.

Overcoming technological barriers in women's entrepreneurship does not occur solely through the use of digital tools, but also through understanding the rationale behind their use in shaping the educational journey. ID plays a transformative role because understanding its processes gives the entrepreneur a clear view of how to apply technology in practice.

It is common for digital entrepreneurs to start delivering content via instant messaging apps like WhatsApp and Telegram. These tools are chosen for their ease of use and low initial cost, enabling rapid communication. Although they are more popular and seem easier, they hinder logical content organization and do not provide an environment conducive to the pedagogical depth required for meaningful learning. The study shows that before ID training, about 50% of participants had limited knowledge, mastering only these communication tools.

Unlike messaging applications, the VLE is the space where organized interaction and learning activities effectively take place. Migrating to a structured VLE provides features that communication tools lack, such as centralized multimodal materials and support for clear learning pathways.

The research data reveals a qualitative leap: after ID training, 75% of participants reported fully understanding VLE functionalities, demonstrating greater confidence in using these technologies and enabling diagnostic, formative, and summative assessments. The greatest gain from moving to a VLE platform is the ability to implement a robust assessment process. Before ID, entrepreneurs struggled to align assessments with learning objectives.

This alignment enables measuring student progress, identifying difficulties, and adjusting pathways in real time. After the training, 75% of participants reported learning to plan assessments that accurately reflect course objectives. This change is not merely technical; it is a fundamental step for business sustainability, contributing to training with a logical sequence, pedagogical clarity, and high added value. By mastering these tools autonomously, women entrepreneurs strengthen their authority and ensure that their students' learning is effective and transformative.

Finally, the results reinforce that the effectiveness of an online course does not depend on sophisticated media production, but rather on the quality of pedagogical interaction. ID supports the process as a facilitator that enables contextualized knowledge transfer, maintaining the priority of establishing a clear dialogue between educator and learner, thereby fostering an environment of trust and support.

Frequent interaction through these channels enables rapid feedback, which is essential to sustaining learners' motivation and attention throughout the process. One of the most widely used ID models, the Successive Approximation Model (SAM), offers strategies and tools that facilitate the exchange of ideas, opinions, and experiences (Castelhano, 2022).

4. Conclusions

This study concludes that applying Instructional Design (ID) significantly improves the quality of online courses developed by women entrepreneurs. The use of structured methodologies contributed to clarifying pedagogical objectives, sequencing content, and making more appropriate choices of teaching strategies and technological resources. It was also found that ID supports autonomy in building coherent learning pathways, promotes greater confidence in the use of educational technologies, and facilitates the transition from communication tools to Virtual Learning Environments.

In addition, ID proved essential for strengthening entrepreneurs' authority in the digital market by providing solid pedagogical foundations that enhance the effectiveness of training and add value to students' experiences. The study shows that the success of an online course does not depend exclusively on sophisticated resources, but on building consistent pedagogical interactions aligned with structured feedback processes and establishing a clear dialogue between educator and learner.

Given the identified limitations—particularly participants’ difficulties in reconciling schedules, the dropout of some participants throughout the process, geographic distance that hindered interaction, and limited diversity of perspectives—future research should increase the number of participants and improve interaction mechanisms to strengthen representativeness, engagement, and data reliability. In addition, incorporating qualitative interviews may deepen understanding of the impacts of training, the challenges faced, and entrepreneurs’ motivations in developing online courses.

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