

Education never stands still—it moves, adapts, and transform in response to new realities, while reshaping society in turn. This collection explores some forces defining learning today: digital tools, intercultural dialogue, artistic expression, and the call for ecological responsibility. At its core, education remains a space for negotiation and reinvention.

third international conference
of the journal *Scuola Democratica*

education and/for social justice

University of Cagliari
June 3-6, 2024



PROCEEDINGS

02

Cultures, Practices, and Change

Published by



ASSOCIAZIONE PER SCUOLA DEMOCRATICA
Via Francesco Satolli, 30
00165 – Rome
Italy



Published in Open Access

APA 7th citation system:

Scuola democratica (Ed.) (2025). *Proceedings of the Third International Conference of the journal Scuola democratica. Education and/or Social Justice. Vol. 2: Cultures, Practices, and Change*. Associazione Per Scuola Democratica.

Please cite your contribution as follows:

Smith, A. (2025). *Closing the Gender Gap in Education. Symmetrical Practices from a Didactical Laboratory in STEM Fields*. In Scuola democratica (Ed.), *Proceedings of the Third International Conference of the journal Scuola democratica. Education and/or Social Justice. Vol. 2: Cultures, Practices, and Change* (pp. 72-84). Associazione Per Scuola Democratica.

This book is digitally available at:

<https://www.scuolademocratica-conference.net/conference-proceedings-iii/>

ISBN 979-12-985016-3-8

3rd International Conference
of the journal *Scuola democratica*
Education and/or Social Justice

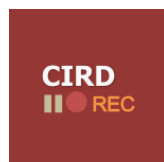
3-6 June 2024, Cagliari (Italy)

PROCEEDINGS

Vol. 2

**Cultures,
Practices,
and Change**

Organizers and partners



TEACHING, LEARNING, AND PROFESSIONALISM	18
Towards Authenticity: The Narrative Structure of the Hero's Journey as an Educational Method to Find Freedom and Security Within Sofia Nicolosi	19 19
Call to Action: Narratives of Experience Amidst Transformative Possibilities in Teacher Education (TE) Programs Darlene Ciuffetelli Parker Dane Di Cesare Steven Khan	27 27 27 27
Teacher education and Social and Emotional Learning: Experiences and perceptions of specialized teachers on socio-emotional skills Asja Mallus Daniele Bullegas Antonello Mura	34 34 34 34
The role of the explicit and the implicit in teacher training. The case of Emergency Remote Teaching Marco Giganti	42 42
Synchronous Self-Assessment: Pending Needs and Challenges for Change in Classroom Assessment at Compulsory Education Ana Remesal Flor G. Estrada	49 49 49
The Special Need Assessment Procedure in the Federal Republic of Germany between the 1950s and 1970s – reliably questionable, doing difference Lisa Sauer Agnes Pfrang Michaela Vogt	57 57 57 57
Mediology of Education Alessio Ceccherelli Elisabetta Gola Emiliano Ilardi	65 65 65 65
The Bluey Version. A Cartoon Between Mediology, Educational Processes and Imagination Alfonso Amendola Emiliana Mangone Martina Masullo	69 69 69 69
Matters Of Touch: Body, Space and Movement in School Buildings of the New Digital Manual Skills: A Mediological Point of View Mario Garzia	76 76
Coding and Public Speaking: Old Soft Skills For A New Challenging Digital World Elisabetta Gola Stefano Federici	82 82 82
Addressing inequality. Four paths for a mediology of education Giovanni Ragone Donatella Capaldi	89 89 89
Potentials and limits of educational mediation with digital storytelling Angela Spinelli	96 96
Professional development of teachers and inclusive teaching: Development of a formative self-assessment tool Letizia Capelli Paola Damiani	102 102 102
Self-narrative as an Orientation Tool aimed at promoting the Professional Development of Specialized Teachers: Results of a Qualitative Study Giusi Castellana Martina Lippolis	109 109 109
Triggering a Virtuous Cycle: Enhancing Argumentative Abilities in SFP Students to Enhance their Academic Success and Professional Development Laura Landi Maria Elena Favilla Michela Maschietto	116 116 116 116
The Training School of Maestri di Strada "Carla Melazzini": A Teachers Participatory Action Research Santa Parrello Elisabetta Fenizia Filomena Carillo Lucia Irene Porzio Cesare Moreno	124 124 124 124 124 124

Teaching Innovation in Secondary Schools in Supporting Study and Text Processing Skills Lucia Scipione	131 131
Teachers' Professional Identity: An Exploratory Study With In-Service And Pre-service Teachers Agnese Vezzani Lucia Scipione Chiara Bertolini	137 137 137 137
Training of PhD students in Education in Italy: Phd students' in Education in the Contemporary Society of Milan-Bicocca lived experience Giulia Lampugnani	144 144
Reforming and (Teaching?) Through Metaphors: From the Good to the New University Andrea Lombardino Paolo Brescia	152 152 152
Quality of Teaching: Developing Teachers' Skills to Improve Students' Learning and Participation Giorgia Pasquali Francesco De Maria Giovanna Del Gobbo Marta Pampaloni	158 158 158 158 158
Metaphors of Community of Inquiry in Flipped Learning. Mixed-method Exploration to Unveil Student Perspectives and Navigate Innovation in Higher Education Giuseppe C. Pillera Raffaella C. Strongoli	166 166 166
Strengthening university teaching through faculty development: Strategies to reduce the gap between research and teaching in Italian universities Luca Refrigeri Lucia Mentore Noemi Russo	174 174 174 174
Working at school. Career pathways, professional deontology, professional relationships and identities in the face of social justice Antonietta De Feo Gabriele Pinna	180 180 180
"We lost the fragile subjects, the broken ones". Principals and technologies, between opportunities and risks: lessons learnt from the pandemic Claudia Andreatta Maria Chiara Cianfriglia Luciana Rossi	186 186 186 186
Why work at school? The teaching profession through the prism of the pupil experience Anne Barrère	193 193
Inclusive School and the Treatment of Educational Inequalities in French Primary Schools Florence Legendre Serge Katz Frédéric Charles	198 198 198 198
The Difficult of Teaching between Burnout, Professional ethics, and Community Giorgia Coppola	206 206
Organizational Work Context and Inclusive Teaching Practices: A Survey of Teachers' Perceptions Irene Stanzione Marianna Traversetti Sara Germani	211 211 211 211
CIVICNESS, CITIZENSHIP, AND INTERCULTURAL EDUCATION	219
Democracy Through Meritocracy. A reflection on Higher Education Daniela Sideri	220 220
Forced Meritocracy as a Way of Democratization: How to (re)build the higher education in Russia? Roman Smirnov	227 227
Paradox and rhetoric of meritocracy in the age of the crisis of democracy Andrea Velardi	234 234
Teacher Educators' Attentiveness to Democracy. An Exploratory Case Study at a Swiss University of Teacher Education Andrea Plata Sonia Castro Mallamaci Marco Lupatini Giusi Boaretto	240 240 240 240 240

Citizenship Education and International Pupil Mobility as tools for social justice	247
Eleonora Clerici	247
Valeria Damiani	247
Leonardo Piomalli	247
Giuseppe Ricotta	247
Piero Valentini	247
Educating for Responsible Digital Transformation	254
Cathrine E. Tømte	254
Silvia Zanazzi	254
Digital Literacy: Linguistic and Technological Knowledge for Education and Social Justice	258
Chiara Benedetta Sofia Bertelli	258
Digital transformation through non-digital game-based learning	264
Fride Haram Klykken	264
Countering Hate Speech In The Digital Era Through A Pedagogical-Philosophical Approach In Teaching Practice	271
Arianna Marci	271
Algorithmic Critical Intelligence and Artificial Intelligence: Educating in and to Digital Transformation	277
Giorgio Poletti	277
Navigating Emergent Media in Education: The Case of Interactive Digital Narratives	283
Michael Schlauch	283
Artificial Intelligence and Inclusive Education. A Critical Look from a Pedagogical Perspective	290
Cathrine E. Tømte	290
Silvia Zanazzi	290
Intercultural natives: How to promote the citizenship starting from early childhood education and care	296
Massimiliano Fiorucci	296
Veronica Riccardi	296
Lisa Stillo	296
In-service training to support an integrated education in contexts of social marginalization	300
Monica Amadini	300
Sara Damiola	300
Annalisa Pasini	300
Ethical Awareness: A Cross-cutting Element in the Intercultural Skills of Early Childhood Educators	307
Marco Iori	307
Growing interculturally. Experiences and research perspectives for the 0-6 educational services of Roma Capitale	314
Alessandra Casalbore	314
Giorgia Meloni	314
Veronica Riccardi	314
Lisa Stillo	314
Inhabiting The Liminal, Disrupting The Conventions: Music And Political Activism As Transformative Experiences For Muslim Immigrants' Descendants	321
Sara Khatab	321
Challenges and opportunities of civic education based on common EU values: The experience of a board game	328
Andrea Carlà	328
Roberta Medda-Windischer	328
Doris Kofler	328
Managing Cognitive Dissonance in the Pluralistic School: Towards a Non-Neutral Education	334
Daniele Parizzi	334
Migrations, coexistence, intercultural education: The pedagogical challenges for the global citizenship	340
Massimiliano Fiorucci	340
Veronica Riccardi	340
Lisa Stillo	340
“Carta di Rebbio”: Case-Study on a Social Network of Solidarity for Migrants in Transit	344
Francesca Audino	344

SONRIE: SOcial eNtertaining Robotics for Intercultural Education in Early Childhood Education Services and in Nursery school	352
Alessia Bartolini	352
Maria Filomia	352
Marco Milella	352
Carmine Recchiuto	352
Antonio Sgorbissa	352
Lucrezia Grassi	352
Alice Nardella	352
<i>Beyond Inclusion. Coexistence and Ideology, between Educational Fieldwork and Pedagogical Supervision</i>	358
Lavinia Bianchi	358
Alessandro D'Antone	358
Inter-action: interculture, Second Language and non-formal education	366
Aurora Bulgarelli	366
“Intercultural kinscripting”. Preteens with a migration background building intergenerational relationships and belonging in the local community	372
Sara Damiola	372
Civic Knowledge and Student Attitudes Toward Immigrants in Slovenia: Insights from ICCS Cycles	379
Špela Javornik	379
Conceptions and Orientations of Italian Primary School Teachers Concerning the Management of Cultural and Religious Pluralism in Schools	387
Daniele Parizzi	387
How Teachers at School Should Promote Coexistence and Global Citizenship: Prejudices and Power as a Limit	396
Lavinia Pia Vaccaro	396
Disruptive Subject. The use of diagnosis as an effect of the lack of pedagogical analysis on the school dispositif	403
Veronica Berni	403
DIGITALIZATION AND TECHNOLOGY IN THE EDUCATIONAL FIELD	408
Digital Reputation and Social Injustice. Tools and Strategies for Media Education	409
Eleonora Sparano	409
Nicola Strizzolo	409
Digital Reputation. Family responsibility and digital challenges	413
Chiara Bellotti	413
Digital Reputation. A multidisciplinary comparison	419
Nicola Strizzolo	419
Eleonora Sparano	419
Ubiquity, equalization and <i>omni-switchability</i> of the traces. The instrumental degeneration of the concept of identity in digital era	425
Andrea Velardi	425
Digitalisation processes in Italian schools: Lessons from the pandemic and vision for the future against social inequalities	431
Domenico Carbone	431
Cristina Calvi	431
Experiences of University Inclusion and Critical Issues During the Pandemic Period. Research Results	435
Carlotta Antonelli	435
Lessons learnt from the Italian experience of distance learning: Some useful indications for future policies on ICT in school systems	441
Cristina Calvi	441
Domenico Carbone	441
Assessing Digital Transition and Inclusion in Schools: A Twofold Level Survey	447
Claudia Marcellan	447
Daide Zanardi	447
Paola Milani	447
Barbara Arfé	447
Digitalisation Processes in Italian Schools: Lessons from the Pandemic and a Vision for the Future Against Social Inequalities	454
Mariella Pia	454
Silvio Marcello Pagliara	454
Gianmarco Bonavolontà	454

Digital Transformation in Mongolian Higher Education: A European Perspective for Lifelong Learning	462
Ylenia Falzone	462
Alessandra La Marca	462
Savannah Olivia Mercer	462
Inclusive Digital Horizons: Navigating Policy Crossroads in EU and Italy for digital provision of continuing training in the AI era	469
Alessandra Pedone	469
When education becomes open: The experience of the OLA project	475
Claudia Pennacchiotti	475
Valentina Tudisca	475
The Anthill Model of Collective Intelligence in AI systems: Some critical concerns for Social Justice and Democratic Education	482
Pietro Corazza	482
Data Citizenship and Data Literacy. The Challenges of the Artificial Intelligence Era	488
Veronica Punzo	488
Non-Humans at School. Blackboards, Robots, Platforms...	495
Assunta Viteritti	495
Leonardo Piroballi	495
Letizia Zampino	495
Navigating the Onlife Era. Rethinking Education in a Digital World	502
Simone Digennaro	502
Empowering Educators Against Disinformation: A Study on Assessing Media Literacy Skills Among Secondary School Teachers	506
Nicola Bruno	506
Annamaria De Santis	506
Challenges of <i>onlife</i> education between the Third Sector and schools. Critical issues, strategies and relationships in a Florentine case study	514
Martina Crescenti	514
Martina Lippolis	514
Benedetta Turco	514
Higher Education Between Digital Transformation and Organisational Challenges. A Comparative Research	519
Maria Chiara De Angelis	519
Stefania Capogna	519
Me, Myself And (Virtual)I. The Use of Social Media Among Pre-Teens And Its Body-Related Consequences. An Exploratory Study	526
Alice Iannaccone	526
Simone Digennaro	526
Synthographies. The Aesthetic and Educational Challenges Posed by AI Generated Images	539
Lorenzo Manera	539
Identity and social media addiction in the Onlife era: A Social Media Diet proposal	545
Gianfranco Rubino	545
Social Media and Youth: Navigating the Complex Terrain of Beauty Standards and Body Image Distortion. A Systematic Review	558
Alessia Tescione	558
Lidia Piccerillo	558
Nurturing Body Literacy in the Digital Age: The Role of Social Media and Virtual Reality in Shaping Children's Body Image within Educational Contexts	570
Angela Visocchi	570
Large Language Models at University: Pedagogical, Ethical and Interactive Implications	578
Claudia Andreatta	578
Davide Girardi	578
Tiziana Piccioni	578
Marco Zuin	578
Are we already there? Artificial intelligence for Enhanced Lesson Plan Creation and Personalisation	585
Jessica Niewint-Gori	585
Sara Mori	585
Empowering Teachers in the AI-driven Educational Landscape: Fostering Self-efficacy and Familiarity with AI Tools	592
Matteo Borri	592
Samuele Calzone	592
Teachers' perception and attitudes: Harnessing the potential of AI in Education	598
Emiliana Murgia	598
Filippo Bruni	598

Teachers' Perceptions and Attitudes Towards the Use of Artificial Intelligence: Evaluating the Impact of Training in an International Project	605
Francesca Storai	605
Jessica Niewint	605
Sara Mori	605
Teachers Attitudes, behaviors and sense of self-efficacy towards Artificial Intelligence	612
Francesca Storai	612
Jessica Niewint	612
Sara Mori	612
Invisible AI: Investigation of Emotional Perception and Self-efficacy in Dyslexic Students Using Compensatory Tools Powered by AI	615
Francesca Rita Loi	615
Gabriele Luigi Pia	615
Demining the foundations of the teaching-learning process. Scoping review on opportunities and risk for teaching practices supported by intelligent tutoring system	623
Loredana Perla	623
Laura Sara Agrati	623
Synergies Between New Technologies and Educational Methodology: Exploring the New Frontiers of Learning with AI Mediated Technologies and Design Thinking	632
Alessandro Barca	632
Mariella Tripaldi	632
Activating Processes of Youth Participation and (digital) Citizenship. The "Online/Onlife Project Diritti in Internet"	640
Mariangela D'Ambrosio	640
Teaching innovation and the skills gap in Connected Learning Environments. A Study of Higher Education Teachers from four European Universities	648
Veronica Lo Presti	648
Maria Paola Faggiano	648
Maria Dentale	648
Alfonsina Mastroli	648
Inequalities and Psycho-social Well-being in Italian Universities: What Has Changed After the Pandemic?	656
Matteo Moscatelli	656
Michele Bertani	656
Challenging the crisis: The future of education between catastrophism and hope	662
Daide Ruggieri	662
SPACE AND ART IN EDUCATION	671
Art Education and social justice: New ways for the development of democracy	672
Marco Morandi	672
Alessia Rosa	672
Claudia Chellini	672
Empathy and Cinematic Sound – An Educational Proposal for Primary School	676
Stefania Bonelli	676
Tor Vergata University	676
Aesthetic education and children's literature: Visual Analysis of Paper Cut from "Il piccolo teatro di Rebecca" AND "Ti aspetto" Book by Rébecca Dautremer	682
Maria Filomia	682
(Re)discovering the Art of Narration as Inclusive Opportunity: A University Laboratory of Intermedia Autobiography	689
Laura Invernici	689
On the thread of stories: Art, nature and narration	697
Maria Laura Belisario	697
"The (Im)Possible Forms of Sound": Research and Sound Explorations in the Park	704
Annalisa Liuzzi	704
Matilde Teggi	704
Elena Sofia Paoli	704
Fashion, Art and Social Responsibility: The Challenge of Sustainability in Training Programs	712
Lia Luchetti	712
Narratives for Interspecies Education	719
Ludovica Malknecht	719
Muholi's Visual Activism as a Public and Critical Pedagogical Practice	725
Olga Solombrino	725

Enhancing Cultural Heritage through Extended Reality and 3D Printing: Towards Inclusive and Sustainable Experiences	731
Alessia Sozio	731
Stefano Di Tore	731
Lucia Campitiello	731
Tonia De Giuseppe	731
Alfonso Amendola	731
Drawing on artistic languages to approach tangible and intangible heritage. Towards shared knowledge building	738
Franca Zuccoli	738
Existing School Network and Teachers' Sense of Agency as Stepping-stones to Enhance the Socio-educational Ecosystem	743
Erica Biagini	743
Laura Landi	743
Small and Rural Schools as Learning Hubs. Inventive methods for identifying the grammar of educational futures	751
Stefania Chipa	751
Serena Greco	751
Lorenza Orlandini	751
Giuseppina Rita Jose Mangione	751
Leveling Up: The Influence of Game Design on Education and Social Justice	760
Tiziano Antognozzi	760
Carlo Andrea Pensavalle	760
The Game Designer is present. Revealing The Cultural Role Of Game Creators Within Social Change	763
Tiziano Antognozzi	763
Alessandro Crociata	763
Alessandro Giovannucci	763
TTRPG and Language Learning: From Game Design to Classroom Play	770
Alessia Caviglia	770
How Edu-larp Can Promote Social Justice in Legal Education: The Case of "I Soliti Sospetti"	776
Chiara De Robertis	776
Costanza Agnella	776
Cecilia Blengino	776
Game-Based Leadership Development for Occupational Stress Reduction in Correctional Settings: A Social Change Approach	783
Salvatore Fadda	783
Francesca Brembilla	783
Carlo Andrea Pensavalle	783
Transformative Game Design Pedagogy: Fighting Social Media Risks and Driving Social Change	789
Christian Gardoni	789
Carlo Andrea Pensavalle	789
Tiziano Antognozzi	789
The Next Generation of Change Makers. Developing an entrepreneurship competence in VET students through a board game from the EduSpace Lernwerkstatt	795
Daniele Morselli	795
Stephanie Mian	795
Susanne Schumacher	795
Giovanna Andreatti	795
Is inclusive education an opening and a freedom from the scholar form?	802
Dominique Gillet-Cazeneuve	802
"Movement in Between" as a gender-inclusive movement program in everyday school life	809
Carla Schwaderer	809
Learning space design: The right to a fair space design, an interdisciplinary approach between pedagogy, architecture and design. The results of an open dialogue	816
Simona Galateo	816
Beate Weyland	816
The Upturned School: An interdisciplinary educational co-design experience for 'educating furnishings' and unconventional learning environments	820
Marina Block	820
Antonella Falotico	820
Re-designing schoolyards through photovoice. A participatory experience with preschoolers	829
Letizia Luini	829
Monica Guerra	829

BiB-Lab. An innovation lab to co-create fair spaces for education Karin Harather	835 835
Reconstructing the campus of the Somali National University in Mogadishu: The vision for a park of knowledge Alessandro Frigerio Laura Montedoro	842 842 842
Eco-Inclusive Play Spaces for Children: Reflections on Institutionalised and Non- Institutionalised Environments in Italy and Spain Roberta Piazza Giusy Pappalardo	849 849 849
Designing Inclusive Outdoor Spaces: An Advanced University Training Course Michela Schenetti Francesca Thiebat Anna Costa	856 856 856 856
The role of building culture mediation in achieving social justice in school space design issues. relevance, methods and examples of participatory processes that promote democracy Katharina Tielsch	865 865
Bringing Schools Among Plants: A Case Study From The Botanical Garden Of Florence Giulia Torta	872 872
Innovative Learning Environments: A Comparative Analysis of Projects with New Versus Established Schools Franca Zuccoli Maria Fianchini	879 879 879
YOUNG PEOPLE IN/AND EDUCATION	886
Becoming adult. Higher education impact practices to ensure an equitable and quality transition Laura Fedeli Rosita Deluigi Gigliola Paviotti	887 887 887 887
Self-efficacy in the internship environment for educators and pedagogists: Some reflections Roberta Bertoli	891 891
Employability Of Young People In lefp And lfts Training Courses Andrea Carlini Claudia Spigola	897 897 897
Designing Experiential, Inclusive, and Intercultural Learning Environments. Participatory Methodologies, Plural Languages, and Technologies for University Teaching Rosita Deluigi Laura Fedeli	904 904 904
Narratives and biographies in employability discourse Gigliola Paviotti	910 910
Social robotics and virtual environments to prepare adolescents with ASD for employment Valentina Pennazio Rita Cersosimo	918 918 918
Don Lorenzo Milani and Maria Maltoni: Two experiments of the democratic school Rita Baldi	925 925
The Future Reimagined by Generation Z in the Face of the Crisis of Democracy Francesco Bearzi	931 931
Public schools in Brazil: History and struggles for democracy and social justice Kátia Augusta Curado Pinheiro Cordeiro da Silva	937 937 937
Education for democratic citizenship through simulation games at secondary level Marco Lupatini Andrea Plata	943 943 943
Democracy and Social Justice from an Early Age. Beyond the Democratic Crisis with Children's Ideas Laura Pinna	951 951
Rethinking Citizenship Education Carla Podda	958 958
Teaching French between Fascism and Democracy. An Investigation into the History of Education and Didactics of French as Foreign Language Livia Romano Mariangela Albano	964 964 964

Between gesture, silence, and words. Dancing to give birth to thought and rhythm to dialogue. The Dancephilosophy labs	972
Enrica Spada	972
Giovanna Frongia	972
Addressing the crisis of Democracy and the escalation of conflicts: Philosophy for Children paths in the Autonomous Province of Trento	979
Chiara Tamanini	979
Paolo Bonafede	979
Educating for Democracy through Physical Education	986
Michele Zedda	986
Promoting Youth Entrepreneurship Through Student Cooperatives. First Results of a NEET Prevention Program	992
Alessia Maria Aurora Bevilacqua	992
Claudio Girelli	992
Giorgio Mion	992
Irene Gottoli	992
Michela Cona	992
Camilla Pirrello	992
Is The School A Democratic Learning Environment? A Research Project On The Whole-School Approach (WSA) To CCE	999
Andrea Ciani	999
Alessia Bevilacqua	999
Valeria Damiani	999
Alessandra Rosa	999
Claudio Girelli	999
Gianluca Salamone	999
Camilla Pirrello	999
Empower Youth Leadership in Rural Areas of South Western Europe. The YouLeaders Action Research	1006
Maria Chiara De Angelis	1006
The development of citizenship skills in a multicultural context: The case of PCTO in the San Siro district (Milan)	1013
Claudia Fredella	1013
Producing media in the classroom to struggle digital educational poverty: A research in lower secondary school	1019
Michele Marangi	1019
Stefano Pasta	1019
Ensemble: A Participatory Methodology for University Student Collaboration within a Bachelor's Degree Course	1028
Andrea Plata	1028
Michela Papandrea	1028
Laura Di Maggio	1028
The perception of cyberbullying and its impact in the informal educational context: The GUARD2 Project	1036
Maddalena Bartolini	1036
Lisa Sella	1036
Beyond information: Professional development in cultural heritage engagement	1046
Marianna Di Rosa	1046
Sara Maccioni	1046
University of Florence; Associazione Italiana Educatori Museali	1046
Life in Nepal's Lhotshampa Refugee Camp through the Lens of its Youth: Capturing Multiplicity	1050
Jessica Moss	1050
Empowering Youth through Entrepreneurship Education: Fostering Critical Thinking and Lifelong Learning through the Assessment Process	1057
Aurora Ricci	1057
Elena Luppi	1057
Flavio Brescianini	1057
Habitual nuances and their impact on the career choice process of first-generation students	1064
Michael Holzmayer	1064
Which (public) space for young people's engagement in contemporary urban areas	1070
Elisabetta Biffi	1070
Chiara Montà	1070
The B-Youth Forum Research Lab: Youth Emancipation Through Research. First Reflections On Research Approaches And Methodologies	1075
Maria Ratotti	1075
Chiara Buzzacchi	1075

Young People and Fondazione PInAC: Reappropriating Heritage to Transform the Museum Alessia Trivigno	1082 1082
A Need to Nurture Public Nature: Urban Public Space as a Co-educator for Youth Sander Van Thomme Sven De Visscher Lieve Bradt	1089 1089 1089 1089
Integrating multiple selves: British-Bangladeshi women's constructions of 'being Muslim' Berenice Scandone	1096 1096
From the Past to the Present: Awareness of the Construction of Prejudice Among Young Roma and Adolescents Through an Action research Maria Teresa Tagliaventi	1103 1103
ECOLOGICAL JUSTICE IN/AND EDUCATION	1110
Adolescents, Intergenerational Relationships and Sustainable Future: The Role of School and Education Silvia Zanazzi	1111 1111
Sustainability Education: A Pedagogical Responsibility That Aims to Create Inclusive and Sustainable Environments Fabio Alba	1115 1115
The Six Italys: The Influence of Socio-economic and Educational Background on the Environmental Awareness of Youth Italian Population Alessandro Bozzetti University of Bologna	1121 1121 1121
Global Citizenship Education: A Research Training In Piedmont Paola Ricchiardi Emanuela Maria Teresa Torre Federica Emanuel	1129 1129 1129 1129
Promoting Sustainable Assessment Among Future Primary Education Teachers Rosanna Tammaro Deborah Gragnaniello Iolanda Sara Iannotta	1136 1136 1136 1136
Ecosophy and Philosophy for Children: Accompanying Models for the Planning of Possible Futures Oscar Tiozzo Brasiola Jessica Soardo	1143 1143 1143
Adolescents and sustainable learning. The practice of Outdoor Education Maria Tiso Concetta Ferrantino Alessia Notti	1148 1148 1148 1148
Against Teenagers Ethnicization. The Political Role of Pedagogy in the Italian Case Study Alessandro Tolomelli	1154 1154
<i>I am what I eat.</i> Education must support adolescents' sustainable food choices Silvia Zanazzi	1161 1161
Climate change, education, social justice: Main characters, processes, educational implications Monica Guerra Gabriella Calvano	1168 1168 1168
Towards Global Citizenship: Rewriting Italian History? Fabrizio Bertolino Lorena Palmieri Anna Perazzone	1172 1172 1172 1172
A Reflection for An Ecological Transformation: Looking For New Educational Approaches Rosa Buonanno	1178 1178
The Urgency of education for sustainable development: Concerns about climate change in the <i>Laudate Deum</i> Paola Dal Toso	1185 1185
Education for Sustainable Development and Climate Change as a Participatory Challenge Rosaria Parisi Rosa Colacicco	1191 1191 1191
Sharing Lessons: Learning, Changing and Envisioning Together Francesco Vittori	1198 1198

Educating in a more-than-human world: Ecological crisis and social inequalities	1204
Alessandro Ferrante	1204
Andrea Galimberti	1204
Maria Benedetta Gambacorti-Passerini	1204
In Touch with the More-than-Human World: A Phenomenological Perspective on Children's Lifeworld Experiences	1208
Evi Agostini	1208
Stephanie Mian	1208
Cinzia Zadra	1208
Educating to Generate New Eco-centric Wor(l)ds. Precarious Scaffolding and Imperceptible Cracks	1214
Camilla Barbanti	1214
A materialist ethics and the strangeness of educational life	1221
Jesse Bazzul	1221
Biodiversity and Intercultural Education. Reflections From a Workshop Experience at The University of Catania	1227
Giambattista Bufalino	1227
Gabriella D'Aprile	1227
Lights and shadows of <i>GreenComp</i> . The contribution of the sociomaterial perspective in reviewing the European competency framework for sustainability	1232
Chiara Buzzacchi	1232
Guendalina Cucuzza	1232
The "Work that Reconnects": A Collective Process to cultivate Hope and promote Action, facing the Eco-Climatic Crisis	1239
Pietro Corazza	1239
"Toxic Bodies" and the Ecology of Beauty in a Rural Area of Sicily	1245
Gabriella D'Aprile	1245
Davide Bocchieri	1245
Cristina Trovato	1245
Eco-literacy between theory and practice: FIERi's experience in Catania	1251
Emanuele Liotta	1251
Playful and Inclusive Science Communication: Transforming Lisbon Botanic Garden's Old Butterfly House into an Eco-Sensory Garden	1257
Sergio Passanante ^a	1257
Raquel Barata	1257
Educating for Symmetrical Relationalities: Socio-materialism and Ecological Post-humanism	1264
Raffaella C. Strongoli	1264
Organizing Committee	1271
Volunteer Staff	1272
Scientific Committee	1273
Promoters and Partners	1275

METAPHORS OF COMMUNITY OF INQUIRY IN FLIPPED LEARNING. MIXED-METHOD EXPLORATION TO UNVEIL STUDENT PERSPECTIVES AND NAVIGATE INNOVATION IN HIGHER EDUCATION

Giuseppe C. Pillera^a

Raffaella C. Strongoli^a

^aUniversity of Catania

The contribution returns some outcomes of a university teaching experimentation inspired by the methodological approach of the flipped learning, declined in the form of mastery learning conceived by Bloom (1973). The research on this project has adopted the epistemological paradigm of the Community of Inquiry (Garrison, Anderson & Archer, 2001), in this mix-method study integrated with the powerful of metaphors of education conceived by the students. The analysis of the metaphors, based on a classification process, contributes to explain the results obtained in previous studies (Coco, Strongoli & Pillera, 2022; Strongoli & Pillera, 2022) and to unveil the complexity of students' views on the university teaching innovation.

university teaching; community of inquiry; mixed method; metaphors of education.

1. INTRODUCTION

Over the past decade, the exponential growth in the production and dissemination of digital media has led to a significant shift in their use, moving from serving simply as tools for educational activities at all levels to functioning as immersive virtual environments (Rivoltella, 2019; De Simone & Annarumma, 2018). This has fostered a growing attention by the pedagogical scientific community to the equally burgeoning diffusion of medial teaching practices, among which the so-called flipped classroom plays an increasingly significant role. This educational practice, with a twenty-year history behind it (Talbert, 2017), aims to subvert the logic and functioning of the traditional teaching organization: the pair composed of the frontal lecture, conducted by the teacher, and the subsequent individual study by the students.

The flipped model reshapes both components of the pair: traditional lectures are replaced by videos, multimedia and interactive content, while independent in-depth study evolves into a collaborative session between students and the teacher.

During these sessions, students engage in reflection, elaboration and application of the contents, guided by the teacher. The teacher casts off the role of the bestower of knowledge and becomes the director of the knowledge path, according to a constructivist-inspired perspective. Against the backdrop of this complex phase of technological and digital change, this contribution outlines the latest findings from a five-year university teaching experimentation, grounded in the methodological frameworks of flipped learning (Bevilacqua, 2018) and flipped classroom (Bergman & Sams, 2012) and designed within the perspective of mastery learning elaborated by Benjamin Bloom (1973).

2. RESEARCH CONTEST AND DESIGN

The research was developed as part of the international ERASMUS+ Task-21 project *EdTech & AI: Creating pedagogical material for the 21st century*, which started in 2019 and ended in 2024 at the Department of Education Sciences, University of Catania. The project involved six European partners, including four universities, Pôle Universitaire Léonard de Vinci in Paris (France), Universidade de Lusófona (Portugal), Oslo Metropolitan University (Norway), University of Catania, and two technology partners, the NetPort Science Park (Sweden) and Claned (Finland).

The main objectives of the project were:

- development of a pilot university course inspired by the flipped learning model;
- creation of a Massive Open Online Course (MOOC);
- study of the possible development of transversal skills in students participating in the teaching experimentation.

The Italian research unit contributed by conceiving, designing and implementing an undergraduate course on educational design, that was designed during the first year of experimentation according to flipped classroom criteria in the form of mastery learning (Fioretti, 2013). The course was supported by the Claned e-learning platform (www.claned.com) and involved students attending the teaching of Methods and Techniques of Educational Design, Organization and Research, offered in the second year of the Master's Degree in Pedagogical Sciences and Educational Design (LM-85) at the University of Catania.

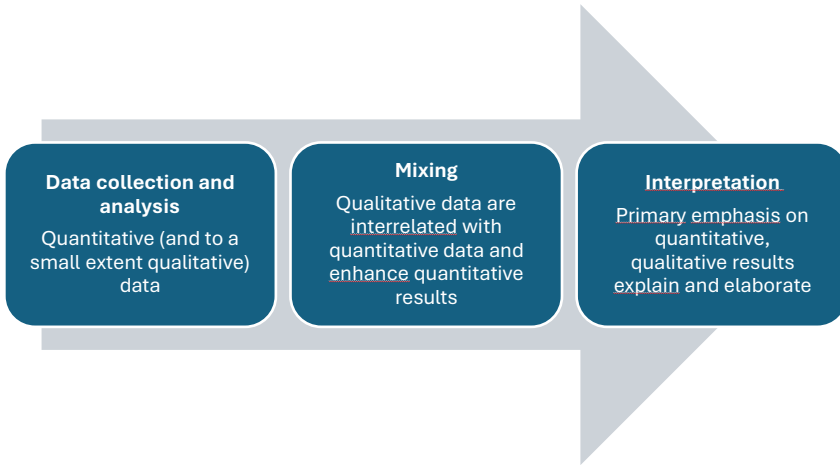
3. RESEARCH QUESTIONS, SAMPLE AND METHODOLOGY

By interweaving quantitative and qualitative data in a mixed methods design (fig. 1), this study seeks to holistically understand students' views on university teaching innovation based on the flipped learning model. Specifically, we investigate the following three research questions.

1. How much did students feel part of a research community?
2. How did they represent this belonging through the use of metaphors?
3. What relationships can be drawn between quantitative results and the analysis of metaphors?

The sample analysed in this essay refers to two years of experimentation and consists of 74 female and 1 male student: including 46 students attending during the academic year 2021/2022 and 29 during the academic year 2022/2023. The majority of them (49 students) were between 23 and 26 years old, but the average age was 27 years, because a substantial group (14) were between 29 and 41 or more years old.

Fig. 1. The used mix-method design.



The research methodology involved the administration via GoogleForm of the COI-s (Community of Inquiry survey by Arbaugh et al., 2007), that operationalizes the Community of Inquiry framework (Garrison, Anderson & Archer, 2001) in order to support the creation of effective online learning environments. The Italian translation of the COI-s was based on a Spanish validated one (Ballesteros Velázquez, Gil-Jaurena & Morentin Encina, 2019) carefully compared with the English original. The 34 items of the COI-s, answered on a 5-steps Likert scale, are divided into three dimensions: teacher presence (TP), social presence (SP) and cognitive presence (CP), each composed of 3-4 indicators specified in tab. 1.

The COI-s results are examined alongside students’ responses to three open-ended questions, each linked to one of the COI-s dimensions. These questions aim to elicit metaphorical representations of how students perceived the flipped classroom experience in relation to the teacher’s role, peer relationships and the learning process itself. The classification process, aimed at synthesizing and extracting representative elements from the complex images created by students, was based on a previous study (Strongoli, 2017). It employed three categories – organic, mechanical (or technical) and movement metaphors – which are among the most commonly used semantic domains in scientific literature to represent the teacher-student relationship and the teaching-learning dynamic. Furthermore, each metaphor was traced back and combined with one of the COI-s indicators of the dimension corresponding to the question asked.

Finally, Pearson’s chi-square test was conducted to analyse the contingency between the distributions of COI-s results and metaphors in these categories.

4. RESULTS

On the basis of what we synthesized in tab. 1 and fig. 2, we can try to answer to the three research questions. On the first one, the students involved in the flipped classroom experimentation, on average, feel part quite enough of an inquiry community, but their sense of belonging seems a little stronger in terms of CP and especially of TP, than in terms of SP (tab. 1). Nevertheless, the evidence from a quasi-experimental study (with a sample partially overlapping that of this study) did not allow us to identify an advantage of the flipped model over CP, while offered partial evidence in favour of traditional teaching on some factors of TP and in favour of flipped learning on some aspects of SP (Coco, Pillera & Strongoli, 2022).

Regarding the second research question, the sample offered a vivid and kaleidoscopic depictions of the flipped experience, with some particularly suggestive examples reported in tab. 1. In most cases, students chose movement metaphors to symbolize the guiding role of the teacher and, to a lesser extent, the progression of the learning process (fig. 2). However, they consistently portrayed themselves as protagonists of this challenging journey, likening it to a climb, a labyrinth, or a roller coaster. This appears interesting because the learning process itself – out of metaphor – is somewhat a change of position, in which the teacher is represented as variously involved, as its generator, medium or viaticum, guide and regulator (movement metaphors) but also as its designer, stimulator, support and correction agent (mechanical metaphors) or, more classically, as its curator and protector (organic metaphors). The peer relationships have been described with metaphors that can be attributed more or less equally to all three categories used, although a little more to the organic one (fig. 2), with images mainly attributable to the animal world, such as a spider web or a hive of bees (tab. 1). However, it is interesting, suggestive and very explicative also the use of way to describe sociality as mechanical devices, likening it to a catalyst (a funnel), an interdependent game (a jigsaw puzzle), or as a movement that is sometimes harmonious (a merry-go-round), sometimes contrastive (a tug of war).

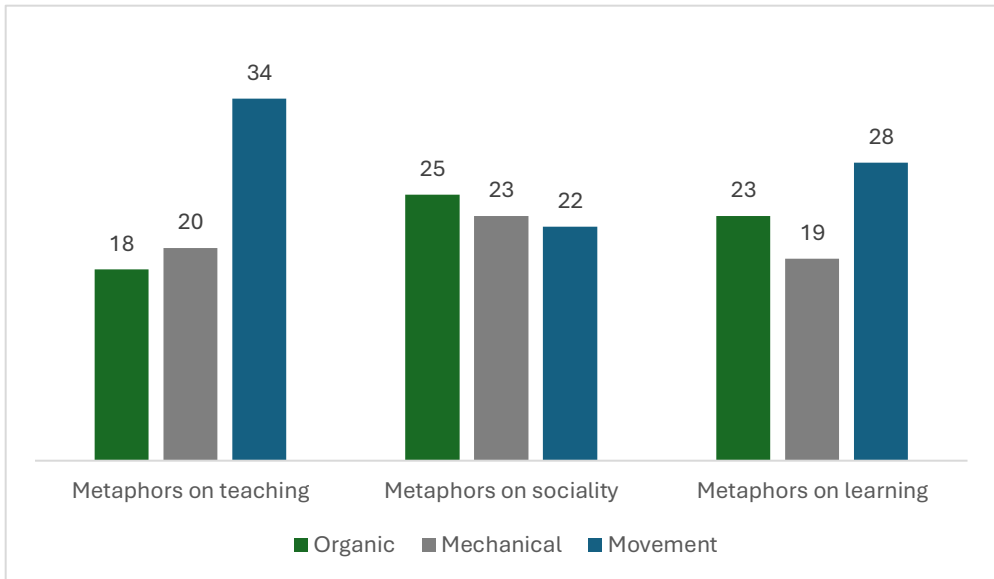
About the third question, no significant contingency relationship emerged from the Pearson's chi-square test between the distribution of the COI-S results and the distribution of metaphors in the three categories. Maybe, using a different – parallel or second level – coding system, e.g. more addressed to some specific research questions, could lead to find significant associations. Nonetheless, the process of matching the metaphors provided in response to the three open questions associated with the three dimensions of the COI-S allows us to capture a wealth of nuances of meaning around the indicators used in the quantitative instrument and thus enhance the point of view of the students in a way that is impossible with the sole use of rating scales.

Tab. 1. COI-S dimensions, indicators and average results, with examples of the metaphors (generally one for each category) considered explanatory of each indicator.

<p>TP Design and organization: 4.62</p>	<p>Organic: A gardener who creates the environmental conditions that favour the flowering of his creatures. Mechanical: An architect who plans and takes care of the experience down to the smallest details. Movement: The treasure hunt cards, they guide you but it's you who manages to solve.</p>
<p>TP Facilitation: 4.56</p>	<p>Organic: A pot for a plant: it gives support, contains the roots to allow the plant to grow independently. Mechanical: A talented miner. The table legs. A stick, because it supported us in the most complex and uncertain moments. Movement: A bridge between the contents and the students.</p>
<p>TP Direct instruction: 4.54</p>	<p>Organic: A big sister who guides and accompanies by pointing out the error without judging but offering wisdom dictated by experience and competence. Mechanical: A pen that evaluates and corrects any errors. The steering inside a car, in fact it gives a direction and acts as a guide for the students. Movement: The teacher orients us as the North Star of our project.</p>
<p>SP Affective expression: 4.13</p>	<p>Organic: A spider that weaves an increasingly dense web of relationships with every meeting. Mechanical: Like pieces of a jigsaw puzzle, slowly each one finds its missing piece resulting in a wonderful landscape. Movement: A merry-go-round where you all have to hold hands.</p>
<p>SP Open communication: 3.95</p>	<p>Organic: A rainbow in which each element contributed its own fundamental colour. Mechanical: A circle, in which each person donates and provides part of his or her knowledge to build something greater. Movement: A wall that collapses, expanding imagination and thought.</p>
<p>SP Group cohesion: 3.97</p>	<p>Organic: A hive of bees producing together. If the ants get together they can move an elephant. Mechanical: A funnel full of different ideas. Everyone contributes their own ideas to work on a single final project. Movement: A tug of war.</p>
<p>CP Activation: 4.32</p>	<p>Organic: My learning process, consisting of persistence and gradual attention, can be represented with the metaphor of a sprouting seedling. Mechanical: The driver and the vehicle: if the driver does not decide and commit to driving himself to a place, the vehicle remains stationary. Movement: A fascinating labyrinth in which you have the map that indicates the direction but, unlike the traditional</p>

	labyrinth, there is the freedom to explore spaces, follow interests and deepen knowledge.
CP Exploration: 4.09	Organic: A sponge in an ocean. Mechanical: A car engine requires numerous components for its operation; the flipped classroom is the instruction manual: it allows the assembly of the components and their correct functioning. Movement: Reaching a summit after a gradual climb.
CP Integration: 4.22	Organic: My learning process is a chameleon, slowly adapting to the surface on which it rests. Mechanical: A chain, in which the missing link is inserted each time. Movement: A roller coaster, moments of steep uphill and moments of easy descent.
CP Application: 4.16	Organic: A bare tree that gradually fills with new fruit. Mechanical: Lego bricks, I started assembling the pieces slowly until I came up with a final design that was not described anywhere. Movement: Red hot air balloons raising obstacles in a labyrinth.

Fig. 2. Occurrences of coded metaphors used by students to represent the three COI dimensions.



5. CONCLUSIONS

In the framework of a multi-year experimentation on flipped learning at university, this study was useful to complete and enrich previous research outcomes. Specifically, the reading of the metaphors in the light of COI-S indicators helped us to clarify, contextualize and enhance their results and to make the dimensions of the

Community of Inquiry framework vivid and three-dimensional.

Even if it is not always possible to attribute the complex and holistic meaning of a symbol to the analytical indicators of a quantitative tool in a unambiguously way (and therefore we were unable to trace contingencies between the results on the COI-S indicators and the categories with which we divided the metaphors), nonetheless, the collection of metaphors with respect to the dimensions of a quantitative tools proved to represent not only an alternative information source useful to triangulate the quantitative data, but also a powerful key to mine and to expand the understanding of quantitative results, and an integrative way to describe, narrate and discuss them.

Although it is not always possible to unambiguously attribute the complex and holistic meaning of a symbol to the analytical indicators of a quantitative tool (and perhaps for this reason, we were unable to identify contingencies between the results of the COI-S indicators and the categories used to classify the metaphors), the collection of metaphors related to the dimensions of a quantitative tool, their analysis, and their matching with the tool's indicators proved to be research processes capable not only of providing an opportunity to triangulate quantitative data but also of revealing a powerful key to extracting and expanding the understanding of quantitative results. Additionally, these processes offered an integrative and stimulating way to describe, narrate and discuss them.

Acknowledgements

The article presents outcomes of the research project Erasmus+ Task 21, Key Action 2: Cooperation for innovation and the exchange of good practices. Strategic Partnerships in the field of higher education. Topic: EdTech & AI: Creating pedagogical material for the 21st century. Erasmus+ project 2019-1-FR01-KA203063063.

REFERENCES

- Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, D. R., Ice, P., Richardson, J. C., & Swan, K. P. (2007). Developing a community of inquiry instrument: Testing a measure of the Community of Inquiry framework using a multi-institutional sample. *Internet and Higher Education*, 11 (3-4), 133-136. <https://doi.org/10.1016/j.iheduc.2008.06.003>
- Bergmann, J., & Sams, A. (2012). Flip your classroom. Reach every student in every class every day. ISTE/ASCD.
- Bevilacqua, A. (2018). *Flipped Learning in ambito universitario*. Pensa MultiMedia.
- Bloom, B. S. (1973). Recent developments in mastery learning. *Educational Psychologist*, 10 (2), 53-57.
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *The American Journal of Distance Education*, 15 (1), 7-23.

- <https://doi.org/10.1080/08923640109527071>
- Ballesteros Velázquez, B., Gil-Jaurena, I., & Morentin Encina, J. (2019). Validación de la versión en castellano del cuestionario 'Community of Inquiry'. *Revista de Educación a Distancia*, 19 (59), 4. <https://doi.org/10.6018/red/59/04>
- Coco, E., Pillera, G. C., & Strongoli, R. C. (2022). "Capovolgere" la didattica universitaria: sperimentazione di una flipped classroom nel framework della Community of Inquiry. *Ricerche di Pedagogia e Didattica*, 17 (3), 1-23. <https://doi.org/10.6092/issn.1970-2221/14686>
- Coco, E., Pillera, G. C., & Strongoli, R. C. (2021). Flipped Classroom e approccio filosofico alla progettazione didattica universitaria. Un caso di sperimentazione internazionale. *Annali della Facoltà di Scienze della Formazione*, 20, 231-246. <https://doi.org/10.15169/unict-asdf.20.2021.11>
- Denzin, N. K., & Lincoln, Y. S. (Eds.) (2000). *Handbook of qualitative research*. Sage.
- De Simone, G., & Annarumma, M. (2018) (Eds.). *Multidimensionalità mediale e complessità educativa: Affordance tecnologiche per una didattica 3.0*. Pensa Editore.
- Fioretti, S. (2013). Flipped learning classroom. Uno strumento per ripensare al Mastery Learning. *MeTis*, 3, 1.
- Pillera, G. C., & Strongoli, R.C. (2022). Flipped learning e sperimentazione didattica universitaria: Un'esplorazione con metodo misto sull'ambiente di apprendimento online e l'interazione tra pari. *Formazione & Insegnamento*, 20 (3), 413-430. https://doi.org/10.7346/-fei-XX-03-22_29
- Rivoltella, P. C. (2019). *Media education. Idea, metodo, ricerca*. Schòle Morcelliana.
- Stame, N. (2001). Tre approcci principali alla valutazione: distinguere e valutare. In M. Palumbo (Ed.), *Il processo di valutazione* (pp. 21-46). FrancoAngeli.
- Strongoli, R. C. (2017). *Metafora e pedagogia. Modelli educativo-didattici in prospettiva ecologica*. FrancoAngeli.
- Talbert R. (2017). *Flipped learning: a guide for higher education faculty*. Stylus Sterling, VA.