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Editorial: Education and innovative perspectives in higher education

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Editorial on the Research Topic
Education and innovative perspectives in higher education

Globalization, digitalization, and a rapid technological development of many areas of life and society, bring humanity to another level of development. Changes in the educational organizations are inevitable and the university must meet new requirements in a new paradigm (Gafurov et al., 2020).

This Research Topic "*Education and Innovative Perspectives in Higher Education*" invited the submission of articles on: globalization effects; impact of education on development and new challenges in the higher education area; generic, soft, and transversal skills and global citizenship education; entrepreneurship education and innovation in educational institutions; new pedagogical and didactic developments, including learning, assessment and teaching methodologies and models, as active learning and flipped classroom; and technological issues in education, as distance education, technology-enhanced learning, technological skills, and digital platforms.

This edition had 70 submissions of which 23 articles were accepted for publication by 74 authors from different countries, including 6 systematic review, 15 original research, 1 conceptual analysis article, and 1 brief research report, as shown in Table 1.

The publications involved a multiplicity of ideas and perspectives on innovative issues in higher education, with five main themes being particularly evident: issues related to the quality of education; the development of transversal competences by students that can be framed within education for global citizenship; issues related to technologies and innovation; new teaching, assessment and learning methodologies; and general academic issues.

Therefore, this Research Topic addresses theoretical, conceptual, and methodological aspects and topics, including issues related to the quality of education and learning (Ikramand and Kenayathulla; Liu et al.). It also involved studies into the development of skills (Galindo-Domínguez et al.; Serrão et al.; Silva and Palaré), including the global citizenship (Simon et al.) and entrepreneurial questions (Silveyra-León et al.; Tian). Most of the articles in this Research Topic focus on learning, teaching models and methodologies associated with technologies in higher education (see articles by: Alismaiel et al.; Atout and Nalubega; Ding and Li; Mahmud and Wong; Zakaria et al.), covering an active learning experience in didactic stations (Navarro-Durán et al.), an analysis of the flipped classroom pedagogical model (Arco et al.), a study on service-learning (Pinto and Costa-Ramalho), and experiences of interprofessional learning (Berger-Estilita et al.), with

academic language demands (Russell et al.), and an exam villa for exam preparation at university (Reschke et al.). Also addressed general issues related to reputation (Mateus and Acosta), doctoral graduate attributes (Senekal et al.), academic integration (Abdul-Raham et al.), and learning environment (Solovieva et al.).

In this sense, innovative perspectives on teaching and learning are needed in higher education (Rodrigues, 2023a) and new models of training and instructional methods must be thought of (Rodrigues, 2020; Rodrigues and Alonso, 2022). Teaching contents and techniques should be structured in line with the learners' objectives, students' needs, and professional and soft skills required by the fourth industrial revolution (Atiku and Boateng, 2020) and should be supported by an innovative technology-enhanced pedagogy (Blau et al., 2020). Issues and challenges such as entrepreneurship education, development, and soft and

technological skills should be considered (Fayolle, 2013; Liñán and Fernández-Serrano, 2014; Núñez, 2016; Rodrigues et al., 2021).

In addition to implementing entrepreneurship programmes and analyzing the most recommended instructional methods for developing transversal skills (Rodrigues, 2023b), it is essential to study the entrepreneurship education based on an experiential learning approach, namely through effective practices with technology-based simulation gaming (Yasin and Hafeez, 2018). The future of entrepreneurship education will have to involve a comprehensive theoretical and practical discourse for the innovation of pedagogies with the integration of technology. These will increase student motivation and engagement by making learning more interesting and interactive, with student-centered approaches such as the flipped classroom and gamification activities, involving students in real-life scenarios such as "the

TABLE 1 Titles of articles published by type.

Systematic review	Authors
Views and experiences of using advanced technologies in higher education of healthcare professionals: a systematic mixed-method Review	(Atout and Nalubega)
A review of the application of virtual reality technology in higher education based on Web of Science literature data as an example	(Ding and Li)
Bibliometric analysis of the flipped classroom pedagogical model: trends and strategic lines of study	(Arco et al.)
Academic integration in higher education: a review of effective institutional strategies and personal factors	(Abdul-Raham et al.)
Reputation in Higher Education: a Systematic Review	(Mateus and Acosta)
A systematic review of doctoral graduate attributes: domains and definitions	(Senekal et al.)
Original research	
Multi-level education for sustainability through global citizenship, territorial education and art forms	(Simon et al.)
Drawing skills at the beginning of higher education: teachers' perspectives, expectations, and realities	(Silva and Palaré)
The effects of a mindfulness-based program on higher education students	(Serrão et al.)
The influence of work values of college students on entrepreneurial intention: the moderating role of psychological capital	(Tian)
Do entrepreneurship challenges raise student's entrepreneurial competencies and intention?	(Silveyra-León et al.)
Social Media Technologies Used for Education: an Empirical Study on TAM Model During the COVID-19 Pandemic	(Alismaiel et al.)
Digital age: the importance of 21st century skills among the undergraduates	(Mahmud and Wong)
Active learning to develop disciplinary competencies related to automatic control in engineering curricula using low cost do-it-yourself didactic stations	(Navarro-Durán et al.)
Mapping the helix model of innovation influence on education: a bibliometric review	(Zakaria et al.)
Effects of service-learning as opposed to traditional teaching-learning contexts: a pilot study with **three** different courses	(Pinto and Costa-Ramalho)
Pre-licensure medical students' knowledge and views on interprofessional learning: a qualitative concept analysis based on real-world data	(Berger-Estilita et al.)
A mixed-method investigation into international university students' experience with academic language demands	(Russell et al.)
The potential of an exam villa as a structural resource during prolonged exam preparation at university	(Reschke et al.)
Education quality and student satisfaction nexus using instructional material, support, classroom facilities, equipment and growth: higher education perspective of Pakistan	(Ikram and Kenayathulla)
Exploring the relationship between students' note-taking and interpreting quality: a case study in the Chinese context	(Liu et al.)
Conceptual analysis	
A teachers' based approach to assessing the perception of critical thinking in Education university students based on their age and gender	(Galindo-Domínguez et al.)
Brief research report	
Developing effective student learning environment: case study from Sharjah, United Arab Emirates	(Solovieva et al.).

development of university-based business" (Hyams-Sesseki and Yasin, 2022, p. 258).

Higher education institutions can play an important role in the development of global citizenship education for young adults and even in lifelong learning (Massaro, 2022; Saperstein, 2023), either by integrating it into curricula or by creating their own programmes (Ennals et al., 2009; Maire, 2023). At the same time, they can make a strong contribution to the Sustainable Development Goals, especially Goal 4 on Quality Education (Fang et al., 2023; Ludvik et al., 2023).

The European Union study on innovation in higher education (Brennan et al., 2014) concluded that there are three main sets of challenges to enhance innovation in higher education: "(i) challenges from globalization; (ii) challenges from the changing supply and demand for higher education; and (iii) challenges from changes in higher education funding." (p. 81), which require various innovative practices to tackle, build on an interplay between national/regional and institutional factors, and between bottom-up and top-down approaches to innovation. Policy recommendations for consideration encompass the innovation in teaching and learning, the improvement of student performance through technology, and the consideration of globalization and multi-campus universities.

Thus, this Research Topic is justified to strengthen the current state of international research on new perspectives and reflections regarding the role of higher education in society and how it can contribute to increase the Quality of Education as one of the Sustainable Development Goals. This topic also contributes to discussions on the importance of the changes needed in teaching, assessment and learning processes in higher education, in the context of emerging technology-based environments.

Taken as a whole, the selected articles could serve as a reference for articulating future directions in research and contributing to better practices in the higher education landscape. They also highlight new perspectives for future research, particularly in entrepreneurship and global citizenship education, and new forms of learning, anticipating the potential and challenges of new digital tools and technologies in education.

Without forgetting the fundamental mission of higher education as the guardian of scientific knowledge, new perspectives on innovation are relevant in order to continue to ensure its impartiality, credibility, ethics, and democratic culture.

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Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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