EDITORIAL

The Cátedra Journal is pleased to present volume 5, number 1 in the electronic version. The contents of this special edition bring together research papers presented at the First International Congress for the Improvement of the Educational System (CIPSE). On this occasion, the central theme was "the challenges of virtual education in the context of the pandemic and post-pandemic" organized by the Experimental Sciences of Computer Pedagogy of the Faculty of Philosophy, Letters and Education Sciences of the Central University of Ecuador.

The academic meeting held on November 15, 16 and 17, 2021 had the participation of 18 international and national lecturers. The thematic areas of research were: inclusion in virtual education, virtual teaching-learning methodologies and the incorporation of information technology in curricula. The papers were presented online and were presented through oral presentation, publication or both alternatives. Each research work, from its perspective, managed to incorporate the need to include in the teaching practice processes of inclusion in virtual education, virtual educational tools to improve the teaching-learning process and digital entrepreneurship processes according to the needs of the educational community.

The current issue consists of nine approved articles:

The first article entitled *Teaching-learning methodologies in virtual education*, authored by José Daniel Espinosa-Rodríguez. The manuscript arises from the need for a continuous and diverse process that requires knowledge and competencies to face life and the challenges of the 21st century, which have become more acute due to the health emergency caused by covid-19. In this sense, the implementation of active methodologies in virtual learning environments, problem-based learning, project-based learning and the inverted classroom are a response to overcome the challenges presented in terms of the development of significant learning in non-face-to-face modalities and the innovation of pedagogical practice mediated by learning and knowledge technologies.

The second article entitled *Educaplay: a gamification tool for academic performance in virtual education during the pandemic covid-19*, by Cristina Páez-Quinde, Ruth Infante-Paredes, Mayorie Chimbo-Cáceres and Estefanía Barragán-Mejía. The objective of the manuscript was to analyze the use of Educaplay as a didactic resource within virtual education and how this process improves student performance, taking into consideration the change of model and application of new methodologies within virtual classes. The research showed favorable results in academic performance with the use of gamification resources, since it was demonstrated that they motivate active participation, collaborative work, and that the teacher is the one who generates his own resources, based on the needs of the students.

The third article entitled *ICT in the family context in times of confinement: connectivity and communication experiences of university students*, by Jorge Silva-Castillo, Mirian Peñafiel-Rodríguez and Amparo Cazorla-Basantes. The manuscript arises from the need to give continuity to a face-to-face work interrupted due to covid-19. The use of Information and Communication Technologies has become an essential element, and under this need, social actors with different realities converged, so the present study aimed to reveal which were the forms of access to information and communication by students of the National University of Chimborazo (UNACH) during the year 2020. A quantitative diagnosis was made of the percentage of connectivity, type of service, with a descriptive transectional non-experimental design in reference to access to technological devices that university students have. The results obtained in this research allowed to know that 70% of students of the four faculties that make up the UNACH during the year 2020 made shared use of devices with other family members to run their academic activities and teleworking within the home.

The fourth article, entitled *Quality Assurance Systems: a tool for the continuous improvement of training programs, centers and universities*, was written by Gloria Zaballa-Pérez. The manuscript is based on the analysis of the Quality Assurance System that covers all undergraduate, master's and doctoral degrees, as well as the management of the activities carried out in all the faculties as a whole. The Global Quality Management System is deployed in the Centers, Functional Areas and Services involved in the life of the university community. The system includes the Institutional Accreditation of the Faculties and the Quality Certifications according to the UNE-EN ISO 9001:2015 standard, in the following Functional Areas and Services: New Students, Library, Hall of Residence and Employment Service.

The fifth article entitled *Challenges of virtual education in Latin América*, authored by Pedro Cantú-Martínez. The purpose of the manuscript was to express and exhibit the challenges of virtual education in Latin America as a result of the advances in communication and information technologies that are currently being deployed internationally, and which were also accelerated after the covid-19 pandemic. In Latin America, education was transfigured from institutions to homes, leading to mostly negative rather than positive educational experiences for a large number of students at all school levels. This was due to the great social inequality prevailing in Latin America, creating a new social categorization, such as the inforricos and the infopobres. In other words, between those who can and cannot access virtual education. This showed once again the great social, economic and educational differences that still exist in Latin America. Finally, the author concludes by indicating that unfortunately technology does not contribute to people's literacy, nor to the universal right to education.

The sixth article, entitled *Didactic, technological and communicational considerations for EVEA design*, was written by Jorge Santamaría-Muñoz. The manuscript determines the didactic, pedagogical, technological and learning methodologies aspects that are considered to develop a VLEE in order to guarantee quality learning. In this sense, 8 experts on the subject of EVEA design and implementation were interviewed and the data obtained were analyzed using

ATLAS.TI 8 software, following the emergent conception model. According to the results obtained, we determined that in order to design an EVEA, the instructional model of Analysis, Design, Development, Implementation and Evaluation should be used, and the EVEA resources should be varied to meet the diversity of learning styles. Finally, the author indicates that the development of the contents should be current, the activities should be focused on solving problems of the students' professional context and should encourage autonomous and collaborative learning. In addition, the andragogical foundations of the students should be considered, as well as the use of the hybrid learning approach (b-learning) and the flipped classroom methodology, so that ICTs are used to support the teaching and learning process and class time is taken advantage of.

The seventh article entitled *Establishing the digital accessibility care unit at the Tecnológico Nacional de México / IT Aguascalientes*, authored by Ricardo Mendoza-González, Juan-Miguel Tovar-Luevano, and Rafael Portillo-Rosales. The objective of the manuscript was to present the set of basic services of the Digital Accessibility Attention Unit of the Tecnológico Nacional de México / IT Aguascalientes (TecNM/ITA), as well as its initial integration to the organizational structure of the institution. These actions were carried out within the framework of the project "Technological assistance to accessibility in Virtual Higher Education, EduTech", registration number: 609785-EPP-1-2019-1-ES-EPPKA2-CBHE-JP, co-financed by the ERASMUS+ program of the European Union. In this sense, emphasis was placed on the implementation of the results derived from two deliverables of said project: "1.1 Report on the state of the art of technological accessibility care units applied to Higher Education", and "2.1 Guide for the implementation and management procedures of a technological accessibility care unit applied to Higher Education". The findings and recommendations of these deliverables made it possible to establish the foundations of the first Digital Accessibility Attention Unit in the entire national technological system, which has 254 institutes throughout the country. It is hoped that the content of this article will inspire other Higher Education Institutions (HEI) to create their own Digital Accessibility Attention Units.

The eighth article entitled *Relational analysis of the graduation profile of the unified general baccalaureate and the academic offer of the Pedagogy in Experimental Sciences and Computer Science degree program,* by Gladys Cabascango-Trávez, Omar Pérez-Narváez, Javier Guaña-Moya and Nelson Salgado-Reyes. The manuscript focused on the factors that influence the relationship between the graduation profile of the students of the Unified General Baccalaureate (BGU) for the entrance to the Pedagogy in Experimental Sciences of Computer Science of the Faculty of Philosophy, Letters and Educational Sciences of the Central University of Ecuador. Non-experimental research was carried out, with a field approach, at a descriptive level using quantitative methodology; in addition, a test was conducted, which worked with the students entering the career as essential informants and data was processed using SPSS 23 statistical software. Among the main findings it was evidenced that the students graduated under the BGU program of study evidence certain shortcomings before the demands of the entrance profile required by the Central University of Ecuador, also that the skills and abilities acquired by BGU students are elementary, and the expectations that students reach the level of

excellent achievement is scarce; decreasing the chances of entry into higher education.

The ninth article entitled *Inclusion in times of pandemic: The advantages and difficulties of virtual education for students with functional diversity*, authored by Carmen Ángela López-Álvarez. The manuscript arises from the need to examine the advantages and difficulties of virtual education for both typical (non-disabled) and disabled students in recent months. It also analyzes the impact - favourable or adverse - of virtual education on the inclusion of students with functional diversity. Throughout this article, definitions such as virtual education, impairment, functional diversity, inclusion, reasonable accommodation/modification and universal design are provided. Finally, the author offers recommendations for incorporating universal design into online courses and what the future of education looks like in times of pandemic.

Cátedra Journal thanks all the authors and reviewers of the articles that have made possible the publication of this issue. It extends an invitation to the national and international academic community to submit their research papers related to Educational Sciences in its different specialties and educational levels.

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Directors/Editors-in-Chief

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