# International Journal of Human Sciences Research

Acceptance date: 29/10/2024 Submission date: 21/10/2024

## RETHINKING THE CURRICULUM: TOWARDS A STATE OF THE ART ON MULTIMODALITIES AND FLEXIBILITY IN HIGHER EDUCATION

### Ana Milena Morales Sossa

Universidad de Antioquia Medellín – Colombia https://orcid.org/0009-0009-0267-0909

### Elvia María González Agudelo

Universidad de Antioquia Medellín – Colombia https://orcid.org/0000-0002-6397-1432

### María Isabel Duque Roldán

Universidad de Antioquia Medellín – Colombia https://orcid.org/0000-0003-4830-5033



All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).

Abstract: The article analyzes the need to make curricula more flexible in higher education, highlighting how distance and virtual modalities, driven by the pandemic, have challenged the traditional face-to-face model. Through an analysis of 24 research studies, it highlights the importance of adopting hybrid models, which combine the best of face-to-face and virtual education, allowing for more flexible and accessible learning. It also highlights the relevance of curricular innovation and teacher training to adapt to new social and technological demands, thus guaranteeing quality education. Universities must listen to the voices of students and modernize their approaches to offer a more inclusive and relevant education.

**Keywords:** curricular flexibility, multimodalities, university education, innovation.

Higher education has undergone profound transformations over the centuries, adapting to the needs of society at each historical moment. Traditionally, the face-to-face educational modality has been the standard for academic training, based on direct interaction between students and teachers, which facilitates the process of socialization and learning within a shared physical space. However, with the advent of new technologies and growing social and economic demands, this modality is being challenged by alternatives that offer greater flexibility, such as distance education and, more recently, the virtual modality.

Despite the historical benefits of face-to-face education, such as direct contact with the teacher and the social relationships generated in the classroom, its rigidity in terms of time and space has limited access for many students, especially those in geographically distant or economically constrained areas. In Colombia, the educational offer continues to be dominated by face-to-face programs, which raises questions about the capacity of universities to adapt to the new educational and social realities.

A dialectical analysis of the problem facing higher education in terms of educational modalities is proposed. The face-to-face modality, although still predominant, is being challenged by the growing importance of distance and virtual modalities, which emerge as alternatives to overcome the barriers of time and space. There is a need to make university curricula more flexible in order to respond to the current demands of society and facilitate equitable access to education, especially in an increasingly interconnected and globalized world.

The aim is to explore how universities around the world are rethinking their organizational and pedagogical dynamics, integrating approaches that combine the best of each educational modality. The adoption of information and communication technologies (ICT), as well as the redesign of academic programs, are presented as keys to guarantee quality education that adapts to the realities of students, without sacrificing the fundamental principles of the teaching-learning process.

For the analysis of the state of the art, a documentary exercise was carried out with the aim of understanding and interpreting research carried out in the last decade. These studies address key concepts such as educational modalities and curricular flexibility in Higher Education Institutions. The search was conducted in specialized academic databases, such as Scielo, Dialnet, Latindex and Scopus, in addition institutional repositories and digital libraries. The descriptors used included terms such as "curriculum", "hybrid curriculum", "flexible curriculum" and "multimodalities". Most of the sources selected are in English and include both empirical studies and reflective articles.

Twenty-two articles published in indexed journals, one master's thesis and one doctoral thesis were selected, making a total of 24 sources for reading and analysis. The analysis process followed the stages of the **PRACCIS** 

method (Prejudice, Reflection, Analysis, Comparison, Comprehension, Interpretation and Synthesis), a methodology that seeks to mediate between scientific language and everyday language in the interpretation of texts, as described by González et al. (2012). The results of the analysis according to the origin of the texts and the years of publication are presented below.

In reviewing the last 10 years of publications, it can be noted that there are studies from every year, but it is in 2021 where we see a significant increase of interest in the topics of this research. This seems to be directly related to the profound changes brought by the pandemic to the teaching and learning processes, such as the more widespread use of multimodalities and the growing call to make curricula more flexible to better adapt to the new realities.

The following is an analysis of the 24 selected scientific investigations, according to the semantic fields that emerge from this hermeneutic exercise and in accordance with the specific objectives of this work.

## SEMANTIC FIELDS AND UNITS OF MEANING

Semantic Field	Units of Significance
Educational	Gaps in higher education, educational innovations, quality education, modernization of education, type of society.
Pedagogical	The subject to be trained, graduate profile, comprehensive training, development of capabilities
Curricular	Traditional and innovative curriculum design, interdisciplinarity, flexibility, relevance, adaptability, etc.
Didactic	Teacher's role, teaching innovation, technology, learning environments, learning freedom, hybrid learning models, time-space relationships, courses in different modalities.

In education, the focus is on higher education. According to López (2017),have the responsibility universities recognize the characteristics and knowledge gaps with which students arrive at the institution, to ensure that they can successfully complete their training, regardless of whether or not the university should make up for the deficiencies they bring from secondary education. The study highlights the urgent need for universities to promote the development of the competencies of their teachers, given the crucial role they play in the training of future professionals. In addition, it is evident that, in most cases, the curriculum in higher education has been designed empirically, which highlights the importance of developing academic programs structured by specialists in curriculum design for this educational level.

In the pedagogical and didactic field, the role of teachers and students in training is analyzed. The starting point of several investigations is the role of the teacher. In this regard, Gonța and Tripon (2020) conducted a study that argues that modernizing education implies approaching it in an innovative way and finding solutions that respond to both the current and future needs of society. These Romanian researchers argue that, before implementing innovative curricula in higher education, it is crucial for university institutions to ask themselves: what do teachers understand by 'curricular innovation'? This question is key because it is the teachers who identify the needs for change in the curriculum. However, in order for them to actively participate in the creation of these new curricula, it is necessary to know their perceptions about innovation and the curriculum, making this construction more meaningful for them. One of the most relevant conclusions of this study, and fundamental for this research, is that a key aspect in the

implementation of curricular innovation is that teachers understand the importance of modernizing education. Being an innovative teacher requires abandoning passivity and a sense of self-sufficiency.

Leatemia, Susilo and Berkel (2016), in their research in Indonesia, had already identified this same need. These researchers point out that curricular innovation not only involves changes in the content and approaches to what is taught, but also important transformations in the roles of teachers, who move from being mere transmitters of information to becoming facilitators of learning. Therefore, they recommend paying more attention to how teachers are involved in these change processes. Their study reveals that teachers are very aware of the need for more innovative curriculum development, although, in many cases, curriculum systems and teaching experiences are still very teacher-centered. In order to achieve significant change, it is essential to strengthen the competencies of teachers as facilitators of educational innovation.

López (2017) stresses the need to continue researching teachers' beliefs and how they manage to integrate new ideas into their prior knowledge about teaching and learning processes. In his study, conducted in Chile, it becomes clear that some teachers still believe that learning occurs only through the transmission of knowledge, which leads them to think that it is enough to master the content for students to learn. This approach, centered on an exclusively transmissive or technical teaching role, as has also been observed in previous research in Colombia, generates resistance to curricular changes and innovations, since these are usually implemented from a legal or administrative perspective, without the direct experience of teachers. López warns that curricular reforms may lose their impact if teachers, who are in

charge of carrying out the educational process in practice, are not actively involved. In addition, he suggests that the growing interest of institutions in curricular issues and teacher professional development is a recent concern that had not been part of the academic debate or considered an indicator of quality in the Chilean educational system, a situation also observed in other Latin American countries.

In Switzerland, Leijon and Lundgren (2019) reveal a new role for teachers: that of designers of educational experiences. Teaching is no longer just about imparting knowledge, but about creating dynamic and meaningful learning environments that combine learning theories, subject mastery, and didactic skills. In the context of multimodal teaching models, such as HyFlex, teachers must adapt to spaces of interaction that are often novel and, in some cases, beyond their control. The challenge they face is how to effectively manage these interactions in such diverse environments. HyFlex spaces are noted for their complexity and flexibility, which means that teachers develop different strategies for designing how they engage with students. However, it is emphasized that this model demands greater didactic awareness in terms of the design of learning experiences.

In Mexico, Woodley and Parra (2019) argue that for teaching to be truly transformative, teachers must modify both their mindset and their classroom practices. Those committed to creating innovative learning environments must make changes from curriculum design to implementation. Their study reveals that while teachers are asked to incorporate new technologies to engage students, they are rarely invited to reflect on how theoretical principles influence curriculum design and their pedagogical practices. This paper highlights the importance of fostering constant reflection and promoting collaboration among teachers. They stress that, through self-reflection,

dialogue with other colleagues, and the use of approaches such as collaborative autoethnography, teachers can identify how their beliefs and practices evolve, favoring student-centered classrooms, rather than maintaining the traditional teacher-centered approach.

At Askum University in Ethiopia, the Faculty of Medicine conducted a mixed study, led by Kidane, Roebertsen and Van der Vleuten (2020), with the aim of understanding students' perceptions of self-directed learning and their preferences for learning modalities, as well as their impact on curriculum selection within an innovative curriculum. The research combined qualitative and quantitative data. The results show that, although the New Innovative Medical Curriculum (NIMC) offers numerous advantages for students, the teacher still exerts a strong influence on the learning process. Furthermore, it is highlighted that many of the Ethiopian teachers have been trained under traditional approaches, making continuous training key for them to adapt and effectively promote this new hybrid curriculum model.

It is important to mention the phenomenological study by Gonța and Tripon (2020), in which eight key categories were identified after analysis of the data collected. These categories include 1) The adaptation of university practices to the demands of society, 2) The updating of curricular content to align with 21st century competencies, 3) The continuous improvement of curricula, 4) The adaptation of teaching methods, 5) The use of modern technologies to prepare students for the labor market, 6) The integration of successful practices from other countries, 7) The promotion of reflective practice among both students and teachers, and 8) The training and redefinition of faculty roles. The authors point out that many graduates enter the labor market with outdated knowledge, since social needs have changed since they began their studies.

Ojeda (2019) points out that education faces challenges and pressures arising from the increasingly dynamic social environment, and must adapt to meet the demands of new professionals entering the labor market. These professionals require updated skills and competencies. Today, with the accelerated digital evolution, needs change in a matter of minutes, making knowledge quickly obsolete. Therefore, developing a flexible curriculum is essential, as it would allow the creation of shorter and more agile programs, which would greatly benefit students.

Bailey et al. (2017), in a study conducted in Australia, explored the factors that influence students' decision when choosing between face-to-face or virtual classes when they have both options available to them. A key aspect of the research was the importance of listening to students, as their opinions are critical in driving innovation and improving educational quality. Factors identified include personal, logistical, teaching and learning-related aspects, academic support, environment, counseling and marketing. Of these, teaching methodologies and logistics stood out as the most relevant for students. In addition, participants stressed the importance of the role of teachers and the need for adequate resources for off-campus teaching modalities.

In line with students' opinions, Chukwuere (2020) in South Africa suggests using social networks as a tool to maintain closer contact with them and obtain their opinions on the curricula. This would provide insight into their perspectives and experiences in their academic process, which would facilitate improvements in learning conditions and outcomes. Listening to the voices of students, both their difficulties and their positive and negative evaluations, is essential to make the necessary adjustments and optimize educational processes.

In the field of didactics, one of the key elements of the didactic system is the use of media. Since technology is an essential part of both learning environments and curricula, it is essential for universities to analyze and understand, from the inside, how these resources are implemented in order to have a more accurate view of what happens in practice. A study by Coskun (2015), conducted at a university in Turkey, evaluated undergraduate programs at a digital university. Although progress has been made in technology integration, the study reveals that its application in education still needs to be more efficient, especially in content development and in shaping the learning process. In order for university curricula to adapt to today's changing needs, it is imperative that they be technologically accessible and interdisciplinary. In this sense, the use of big data and data analysis techniques can be useful in designing more effective curricula. If these plans focus on digital literacy, both academic skills and the quality of learning can be improved.

The impact of technology has intensified since the advent of COVID-19, and universities have not been slow to consider curricular transformations. In this context, Walwyn and Combrinck (2021) point out that decisions about higher education are crucial to define the type of society we want to build, and not only to prepare citizens to find employment. With the incorporation of technology, it is expected that all students will have equal opportunities for personal growth, a challenge especially relevant in distance learning environments, which many universities around the world, including Colombia, have begun to implement. The study concludes that, in order for curricula to adapt to current demands, it is essential that they be technologically accessible and designed in an interdisciplinary manner. It also stresses that curricular transformation is key to promoting innovation and inclusive development.

Juárez, Torres and Herrera-Díaz (2017) argue that technology plays a key role in the HyFlex model, which forms the basis of the hybrid and flexible approach. This model allows students to access face-to-face classes through tools such as streaming, videos and podcasts. However, the authors identify a key challenge: the need for advanced technology for recording and live streaming of both classroom sessions and lectures. This requires a robust network infrastructure, as well as a level of technological knowledge that, in many cases, exceeds the usual skills of teachers. Therefore, the authors emphasize the importance for educational institutions to promote the development of technological skills in university professors to ensure an effective implementation of these models.

Curricular innovation has been widely addressed by various authors. In their study conducted in Ecuador, Marín-Gutiérrez, Romero and Chávez (2016) highlight that environments transformed have communication higher education, introducing new scenarios such as virtuality, interactivity, multimedia and hypertextuality, which are now central to educational processes. These new forms of communication require current curricula to be updated to keep up with the rapid social changes driven by technology. Similarly, López-Peña (2017) concludes that, given that one of the objectives of higher education is to offer quality programs that respond to the needs of the social, cultural and labor environment, it is essential that curricular innovation processes be oriented towards continuous improvement and constant revision of curricula, ensuring institutional quality and relevance. Both studies emphasize the crucial role of teachers in curricular innovation, which highlights the need for further research on the roles of both teachers and students in this process within higher education.

In Australia, research by Chugh, Ledger and Shields (2017) highlights the growing number of students globally enrolling in distance education programs. In this context, the authors stress the importance of designing curricula that integrate sound educational principles, promote pedagogical engagement, and meet both institutional and industry requirements. This approach is key to ensuring that distance education adequately responds to contemporary demands and the expectations of students and employers.

In the field of curriculum, several research studies on Higher Education Institutions in Colombia have been reviewed. Giraldo (2012), in her study with a hermeneutic approach, explores the relationship between curriculum and didactics in the classroom. In her doctoral thesis, the author describes the current curriculum in many institutions as 'technocratic', focused on the transmission of knowledge. One of the main objectives of her research is to make visible the didactic innovations implemented in the Veterinary Medicine program at the University of Antioquia, with the purpose of replacing this technocratic approach with ways of thinking that better respond to current training needs in higher education. Giraldo argues that, if teaching is understood as a process of knowledge construction by the student, it is essential to move away from a purely technical vision. In this sense, it is crucial to involve both professors and students, to know their ideas and conceptions, in order to reorient the new forms of teaching. The study suggests that the curriculum should be seen as an integral system that not only incorporates knowledge, but also the key actors, teachers and students, as protagonists of the educational process.

In another study conducted in Colombia, Ojeda (2019) points out, through descriptive research, that education faces significant challenges due to changing social dynamics, which makes it necessary to adapt to the demands of new professionals entering the labor market. These professionals require a set of advanced skills and competencies according to current demands. Ojeda's study aims to critically reflect on innovation as a key tool for modifying the curriculum in order to improve pedagogical practices. The results obtained fostered a debate on the state of curricular innovation in the educational context, considering it a crucial mechanism for strengthening training in higher education institutions. Both this study and previous research underscore the need to reform curricula in the country, not only at the administrative level, but also at the didactic level, generating direct benefits for students.

In Latin America, several studies have addressed curriculum innovation in Chile. According to López-Peña (2017), one of the main objectives of curricular innovation in this country is to promote continuous improvement and foster the comprehensive training of students. In this context, curricular processes play a key role in the materialization of the great educational ideas within higher education institutions. The author points out that the incorporation of these processes not only implies a modification in the curricula, but also entails a profound change in the cultural elements that shape the university. However, the research identifies several obstacles, among them the lack of human capital specialized in curricular innovation and the work overload faced by teachers, who do not always have specific time to devote to these tasks. Finally, it stresses the importance of institutions implementing a complete cycle that encompasses both curriculum design and its proper execution.

For their part, Gonţa and Tripon (2020) in Romania emphasize that the modernization of education is today an imperative need for the development of society, given that current social challenges require the educational system to adapt in order to advance in scientific areas, respond to the demands of the labor market and adjust to new technologies. In its qualitative study, two main objectives are established: on the one hand, to investigate current pedagogical practices and, on the other, to identify proposals for improving curricular innovation in higher education. In parallel, in Australia, Jonker, März and Voogt (2018) explore curricular flexibility, defining it in terms of adaptability and accessibility, taking into account students' needs and abilities. In response to these challenges, they propose a hybrid curriculum combining face-to-face and online elements.

Area-Moreira, from Spain, conducted a study highlighting four key aspects for universities in the post-pandemic context. Firstly, she states that face-to-face teaching will not return to its pre-COVID-19 format, as going back to that model would be tantamount to returning to an era of static knowledge that does not fit the current dynamics of information in the cloud. Secondly, he stresses that the digitization of higher education is not an exclusive consequence of the healthcare crisis, but a historical demand of the 21st century. Universities, therefore, have a social and cultural responsibility to train digitally competent citizens and professionals, capable of integrating into the new digital society. Third, the confinement highlighted the importance of physical contact and interaction in the university environment, highlighting the relevance of these elements in the educational experience. Finally, it argues that it is necessary to review university policies and governance to drive the digitization of academic programs and transform pedagogical practices. This includes fostering innovation, developing projects and strategies that mitigate digital inequalities among students.

In this same semantic field, Ulloa Brenes (2021), from the State University of Costa Rica, conducted a study on educational modalities. The author concluded that didactic methods and interactions in the educational field are deeply linked both to language and to the specific historical context. From this analysis, he proposed to investigate how institutional management influences teaching mediation and learning in state-of-the-art distance education programs in higher education institutions. Similarly, Falloon (2011) studied interactions in educational modalities, analyzing the use of Adobe Connect Pro, a virtual platform, in a graduate course for teacher education at the University of Waikato, New Zealand. Her research applied concepts from Distance Theory.

Along the same lines, Ulloa Brenes (2021) of the State University of Costa Rica, carried out a study on educational modalities, concluding that didactic methods and interactions are deeply linked to language and the particular historical context. Based on his findings, he proposed to investigate how institutional management affects teacher mediation and learning in state-of-the-art distance education programs in higher education institutions. Similarly, Falloon (2011) investigated interactions in educational modalities by evaluating the use of Adobe Connect Pro, a virtual platform, in a postgraduate teacher education course at the University of Waikato, New Zealand. Applying concepts from Moore's Transactional Distance Theory, Falloon analyzed the effectiveness of virtual classrooms in fostering quality dialogue and examined the impact of structural factors, both internal and external, on student autonomy. The study highlighted the complex interplay between the components of Moore's theory and how an external structuring technology, such as the virtual classroom, can facilitate dialogue, but at the same time reduce student autonomy.

The studies reviewed so far underline the urgent need to innovate curricula in order to adapt them to current social, economic and technological demands. Higher education institutions must assume the responsibility of guaranteeing that these innovations are implemented effectively, involving all the actors of the educational system. In addition, the importance of considering and combining the different educational modalities, taking advantage of the best of each to respond to the demands of contemporary society is highlighted. This would not only improve interaction inside and outside the classroom, but also enrich the teaching and learning processes.

In the area of innovative curricula, units of analysis linked to curricular flexibility have also been identified. In this context, three key studies carried out in Mexico stand out. Esquivel (2014) proposes that flexibility in Higher Education Institutions requires a structured opening that allows the creation of different graduate profiles for the various professional branches. The participants in this study agreed on the importance of students having the freedom to select both the field of knowledge and the subjects they wish to take, in the sections where they define their professional trajectory. However, they expressed concerns about the compulsory subjects, stressing that these should be adequately aligned with the curriculum and, in particular, with the demands of future professional life.

The university population is mostly composed of young adults who, in general, do not accept or conceive the curriculum of their respective professions as a rigid and unique path designed exclusively by experts. These students demand that their voices be heard and request that content not be limited to a single disciplinary perspective - often experimentalist or positivist - which could

exclude other equally relevant approaches. This study aims to reflect on innovation as an effective tool for curricular modification, with the potential to positively impact pedagogical practices and strengthen training in higher education institutions.

In the same context in Mexico, Juárez, Torres and Herrera-Díaz (2017) point out that educational institutions benefit both in the short and long term by offering innovative programs, not only because of the associated prestige, but also because innovation contributes to improving student satisfaction, increasing their motivation and raising academic performance. This benefit is particularly relevant for those students who, for various reasons, are unable to attend in person and opt for online modalities to continue their studies without interruption.

Recently, Díaz-Barriga (2021) stresses that a flexible curriculum has become a necessity. He argues that it is up to universities to provide students with experiences that benefit both their personal and professional lives. However, he recognizes that factors such as institutional management processes, the interests of specific groups, lack of training in pedagogical innovations, limitations in teaching conditions, and deficiencies in the independent study skills of some students may hinder the potential benefits of innovative and flexible curricular models.

The conclusions drawn from these three studies are highly relevant, as they highlight the urgent need to offer varied and flexible educational options to today's students, given that not everyone has the same conditions in terms of time and space. Faced with this problem, an educational solution has been adopted in many countries for the development of courses: the HyFlex model, which combines characteristics of hybrid and flexible education, allowing a more personalized adaptation.

At the Universidad Técnica Particular de Loja (UTPL), in Ecuador, researchers Marín-Gutiérrez, Romero and Chávez (2016) validated the HyFlex model as an innovative proposal, highlighting its main characteristic: flexibility in time and space, adjusting to the learning needs of each student. In their research, they highlight both the positive aspects and those to be improved of this model, as well as the strategies needed for its implementation. Among the trends that this study suggests to accelerate the adoption of new technologies in the future are the growing presence of social networks, the integration of online, hybrid and collaborative learning modalities, the increase in databased learning and assessment, the evolution towards students who are creators rather than consumers, and the promotion of agile methods for change.

The HyFlex model is based on the competencies of both teachers and students, and is not limited to the use of predefined tools, allowing for a wide variety of technological possibilities, both in hardware and software. However, the researchers identified that one of the main obstacles to its implementation is related to teacher training. Despite the need to abandon technicist approaches in the transmission of knowledge, the role of the teacher is still essential in the educational process within Higher Education Institutions. The rapid technological evolution requires teachers to be prepared and updated to manage these new educational realities effectively.

In the same year, but in the United States, Wright (2017) described the implementation of the HyFlex model in adult education courses. He characterized this model as a blended learning modality with a flexible framework, allowing students to choose to participate face-to-face, online, or a combination of both. Wright emphasized that one of the main goals of an academic program should be to offer re-

levant and practical courses that encourage lifelong learning and the use of technology, and the HyFlex model facilitates both of these directions for students. It is important to mention that, although this model has been used in various university courses, it has not been widely integrated into curricula as a formal curricular proposal. This reinforces the idea that flexibility may be more a matter of didactic planning than solely of curricular design.

Years later, in Switzerland, Leijon and Lundgren (2019) investigated how physical and virtual spaces are connected in a HyFlex pedagogical environment, focusing on the interaction between teachers and students. In their work, they asked key questions about how learning spaces are configured and how it affects interaction in these contexts. Using the design for learning perspective, they identified several types of spaces: the physical space (the classroom), the performance space (where the teacher designs and presents the class), the interaction space (where teacher and students communicate), and the liminal space (where students can interact in new and simultaneous ways in physical and virtual environments). This study concluded that the HyFlex model requires greater didactic awareness of design for learning and advanced management of technological tools on the part of the teacher, since the combination of physical and virtual environments presents additional challenges, such as simultaneous coordination between students in the classroom and online.

In Australia, Colasante, Bevacqua and Muir (2020) investigated how universities should approach the integration of face-to-face, online or hybrid study modalities, allowing students to design their own learning pathways. The researchers stressed the importance of combining synchronous and asynchronous environments for successful learning, emphasizing that the role of the educator must adapt to these new demands. They proposed a

triad composed of pedagogy, technology and the learner to ensure that curriculum design is aligned with contemporary practices. One of the key points was the implementation of the "Study Flex" model, designed to eliminate artificial distinctions between online and face-to-face study, allowing students to better adapt to their individual circumstances. The authors noted that the challenges associated with the COVID-19 pandemic accelerated the adoption of these approaches, although they also highlighted that additional efforts in teacher training and curriculum planning are needed to maximize the potential of these flexible models.

On the other hand, in Brazil, Feldkercher and Saldanha Manara (2012) conducted a study at the University of Pelotas, focused on the training of tutors in the use of technology in distance education. Using a qualitative approach, they collected data from thirteen tutors from two universities, highlighting the fundamental role of tutors in resolving doubts, especially related to course content. The study showed that tutors use multiple technologies, such as videos, web conferences, forums and chats, to facilitate learning. However, it also revealed challenges, such as students' lack of knowledge about the use of educational technologies, which underlines the importance of training for both tutors and students.

In summary, these studies highlight the growing relevance of hybrid and flexible models in higher education, and the need to prepare both teachers and students to take full advantage of the technological tools available. Universities must adapt to these new realities, not only by integrating technologies into their curricula, but also by ensuring solid and continuous training for professors so that they can adequately guide students in these dynamic learning environments.

After conducting a hermeneutic analysis that includes the comparison, interpretation

and understanding of recent research on innovative, hybrid and flexible curricula in higher education institutions, a notable limitation in the studies conducted in Latin America, and especially in Colombia, is revealed. Nevertheless, existing studies agree on the need for universities to abandon technocratic curricula and adopt more diverse approaches, particularly with the irruption of the digital era, which has profoundly transformed social structures and rethought the role of higher education. Rather than continuing to align themselves exclusively with the industrial models of the past, universities must modernize and advance along with technological change.

Continuous curricular innovation emerges as a key mechanism to strengthen higher education institutions in the face of their social responsibility. This process involves not only pedagogical changes, but also administrative, structural and cultural transformations. It is a debate that must be carried out constantly within the university, questioning what is understood by curricular innovation and what its implications are, both within the institution and in its relationship with society.

The conclusions of some studies are of great relevance for curricular innovation and, in particular, for this research. These studies highlight the need to offer educational options that respond to the diversity of students' conditions, in terms of time and space. They also recognize that the role of the teacher has evolved beyond being a mere transmitter of knowledge; now, teachers must be guides, facilitators and designers of learning experiences, and not mere providers of information. In this sense, investigating the concept of flexible curricula, adapted to the needs and capabilities of students, becomes essential. Some authors propose the creation of mixed curricula that include face-to-face and online components, and others advocate

that students should be able to freely choose subjects according to their professional profile, which would require a greater diversity of training options.

A concept that has gained ground in recent years is that of hybrid and flexible curricula. These studies highlight that, in order to design a curriculum that responds to the current demands of students and society, it is essential to integrate traditional and distance modalities, combining synchronous and asynchronous learning environments, and optimizing the use of virtual environments. The challenges facing university education in this regard can accelerate the implementation of the flexible hybrid learning model, which is configured as a contemporary pedagogical design approach. The HyFlex model, in particular, requires greater didactic awareness of learning design, given its complexity and versatility, and places the teacher in a strategic role to manage the interactions that this modality allows.

Similarly, several studies analyzed agree that transformative teaching requires teachers to change their mindsets and practices, not only in the physical classroom, but also in cyberspace. The new technological and social dynamics open the door to interactions that are just being explored and researched, but are necessary to offer a more inclusive, relevant and quality education.

In summary, the selected research focuses on teaching and learning processes, on the new roles of teachers and students, and on the use of different media, technologies, spaces and times. In addition, they reinforce the idea that education must comply with the dimensions of affordability, accessibility, adaptability and acceptability, as highlighted by González and Duque (2021), to ensure that higher education is a fundamental right. Finally, the results of these investigations give relevance and pertinence to this study, since they emphasize that curricular changes are materialized in the classroom and, therefore, are a didactic is-

sue. Thus, the importance of proposing new didactic conceptions that, through the use of multimodalities, make curricula more flexible in higher education is highlighted.

### CONCLUSIONS

- 1. Transformation in Higher Education: Higher education institutions have undergone a radical change in their pedagogical and curricular approaches. Traditional face-to-face education, although still relevant for its ability to generate direct interaction between students and teachers, faces significant limitations in terms of flexibility. The irruption of technologies and new social and economic demands require a modernization of curricula that is inclusive and more responsive to current needs.
- 2. Need for Curricular Innovation: The research shows that universities, especially in Latin America and Colombia, must abandon technocratic approaches in their curricula. This implies designing curricula that combine face-to-face and virtual modalities, and that promote learning that is not limited by time or space. Curricular innovation is essential for universities to fulfill their social responsibility and remain aligned with rapid technological advances.
- **3. Hybrid and Flexible Models:** The adoption of models such as HyFlex has proven to be an effective solution to address the diversity of learners' conditions and needs. These models combine the flexibility of virtual environments with the benefits of face-to-face learning, allowing students to choose how, when and where they learn. This approach requires not only increased technological capacity on the part of universities, but also constant and solid training for teachers.

- 4. The Role of the Teacher in Innovation: Teachers should no longer be seen as mere transmitters of knowledge, but as facilitators, designers and guides in the learning process. This role change implies a deep reflection by teachers on their own pedagogical practices and on how technology can be used to enrich learning. The studies reviewed show that the active participation of teachers in the design of new curricula is crucial for curricular reforms to have a positive impact.
- 5. Curricular Flexibility as an Imperative: A flexible curriculum allows students to adapt their training to their personal and professional needs. This is particularly important in a globalized and interconnected world, where the skills and competencies required change rapidly. Flexible curricula not only provide options in terms of mode of study, but also allow students to select subjects and areas of knowledge that align with their interests and career goals.
- 6. Implementation Challenges: Although the benefits of flexible and hybrid curricula are clear, there are obstacles to their implementation, such as the lack of teacher training in educational technologies and resistance to change in academic institutions. In addition, it is crucial that universities have an adequate technological infrastructure to ensure that virtual and blended modalities are developed effectively.
- 7. Listening to Student Voices: Studies also underscore the importance of taking students' perspectives and opinions into account when designing and implementing innovative curricula. Their voices are critical to identifying areas for improvement and ensuring that curricular changes truly meet their educational needs.

- 8. Relevance of Studies in Latin America: Although there is a notable paucity of research on curriculum innovation in Latin America, the available studies highlight the importance of adapting curricula to the socioeconomic realities of the region. This includes not only the modernization of curricula, but also the incorporation of pedagogical approaches that promote inclusive and equitable education.
- 9. Didactic Implications: Curricular innovation has a profoundly didactic dimension. Changes in the curriculum must be materialized in classrooms, both physical and virtual, through new didactic conceptions that promote flexibility and multimodality in teaching. This requires a comprehensive approach that considers not only the design of the curriculum, but also the interaction between teachers and students, and the use of educational technologies to improve the quality of learning.
- 10. Higher education must continue its modernization process in order to align itself with current social and technological dynamics. Universities must assume a proactive role in the implementation of flexible and innovative curricula that respond to both the demands of the labor market and the personal and professional training needs of their students.

### REFERENCES

Area-Moreira, M., & Sampedro, M. T. (2009). La educación superior en línea: Revisión bibliográfica de los estudios españoles (1998-2008). Revista de Educación a Distanci, 20, 1–21.

Bailey, M., Gosper, M., Ifenthaler, D., Ware, C., & Kretzschma, M. (2017). On-campus, distance or online? Influences on student decision-making about study modes at university. *Australasian Journal of Educational Technology*, 34(5), Article 5. https://doi.org/10.14742/ajet.3781

Chugh, R., Ledger, S., & Shields, R. (2017). Curriculum Design for Distance Education in the Tertiary Sector. *Turkish Online Journal of Distance Education*, 18, 4–15. https://doi.org/10.17718/tojde.306552

Colasante, M., Bevacqua, J., & Muir, S. (2020). Flexible hybrid format in university curricula to offer students in-subject choice of study mode: An educational design research project. En *JOURNAL OF UNIVERSITY TEACHING AND LEARNING PRACTICE* (Vol. 17, Número 3). UNIV WOLLONGONG.

Coskun, Y. D. (2015). Promoting Digital Change In Higher Education: Evaluating The

Chukwuere, J. (2020). Student Voice in an Extended Curriculum Programme in the Era of Social Media: A systematic Review of Academic Literature. *International Journal of Higher Education*, 10, 147. https://doi.org/10.5430/ijhe.v10n1p147

Díaz-Barriga, Á. (2021). Repensar la universidad: La didáctica, una opción para ir más allá de la inclusión de tecnologías digitales. *Revista Iberoamericana de Educación Superior*, 3–20. https://doi.org/10.22201/iisue.20072872e.2021.34.976

Falloon, G. (2011). Making the Connection: Moore's Theory of Transactional Distance and Its Relevance to the Use of a Virtual Classroom in Postgraduate Online Teacher Education. *Journal of Research on Technology in Education*, 43(3), 187–209.

Feldkercher, N., & Manara, A. S. (2012). O Uso Das Tecnologias Na Educação À Distância Pelo Professor Tutor. *RIED-Revista Iberoamericana de Educación a Distancia*, 15(2), 31–52.

Giraldo, G. E. (2012). Didáctica universitaria: Del currículo a las prácticas de enseñanza. https://bibliotecadigital.udea.edu.co/handle/10495/6941

González, E. M., Aguirre, N. J., Grisales, L. M., Giraldo, G. E., Villabona, S. L., Uribe, E. G., & Velásquez, D. (2012). PRACCIS: Una estrategia didáctica basada en la hermenéutica para la circulación de los conocimientos o acerca del desarrollo de una prueba piloto. https://bibliotecadigital.udea.edu.co/handle/10495/4109

Gonzalez, E. M., & Duque, M. (2021). Del aula a la nube, o cómo el espacio, el tiempo y los seres son afectados por los ambientes de enseñanza y aprendizaje virtuales en la educación superior.

Gonța, I., & Tripon, C. (2020). An analysis of curricular innovation in higher education: Challenges and a possible solution. *Journal of Educational Sciences*, 42, 87–100. https://doi.org/10.35923/JES.2020.2.06

Jonker, H., März, V., & Voogt, J. (2018). Teacher educators' professional identity under construction: The transition from teaching face-to-face to a blended curriculum. *Teaching and Teacher Education*, 71, 120–133. https://doi.org/10.1016/j.tate.2017.12.016

Juárez Popoca, D., Torres Gastelú, C. A., & Herrera-Díaz, L. E. (2017). Las posibilidades educativas de la curación de contenidos: Una revisión de literatura. *Apertura*, 9(2), 116–131.

Kidane, H. H., Roebertsen, H., & Van der Vleuten, C. P. M. (2020). Students' perceptions towards self-directed learning in Ethiopian medical schools with new innovative curriculum: A mixed-method study. *BMC Medical Education*, 20(1), 7. https://doi.org/10.1186/s12909-019-1924-0

Leatemia, L. D., Susilo, A. P., & Van Berkel, H. (2016). Self-directed learning readiness of Asian students: Students perspective on a hybrid problem based learning curriculum. *International Journal of Medical Education*, *7*, 385–392. https://doi.org/10.5116/ijme.582e.021b

Leijon, M., & Lundgren, B. (2019). Connecting physical and virtual spaces in a HyFlex pedagogic model with a focus on teacher interaction. *Journal of Learning Spaces*, 8(1), Article 1. https://libjournal.uncg.edu/jls/article/view/1640

López-Peña, A. (2017). Características de los procesos de innovación curricular en las instituciones de educación superior de Chile. https://repositorio.uchile.cl/handle/2250/167725

Marín-Gutiérrez, I., Romero, H., & Chávez, N. (2016, junio 15). *HyFlex, modelo híbrido y flexible para la enseñanza universitaria. Estudio de caso: Universidad Técnica Particular de Loja- Ecuador.* https://doi.org/10.13140/RG.2.1.3376.8569

Ojeda, D. D. (2019). La innovación curricular: Un camino para la formación docente globalizada. Revista Espacios, 40(33), 24.

Ulloa Brenes, G. (2021). Reflexiones en torno a la evolución histórica del concepto de la educación a distancia. *Innovaciones Educativas*, 23(34), Article 34. https://doi.org/10.22458/ie.v23i34.3364

Walwyn, D. R., & Combrinck, C. (2021). Epistemic justice during a global pandemic: Transforming curricula and pedagogical practices to improve student experiences of innovation studies. *Industry and Higher Education*, 35(5), 598–608. https://doi.org/10.1177/0950422220987088

Woodley, X. M., & Parra, J. (2019). (Re)Framing and (Re)Designing Instruction: Transformed Teaching in Traditional and Online Classrooms. | Transformative Dialogues: Teaching & Learning Journal | EBSCOhost. *Transformative Dialogues: Teaching & Learning Journal*, 12(1), 1–11.

Wright, D. (2017). The HyFlex Course Design: A Case Study on Adult and Career Education Courses. *National Social Science Journal*, 48(2), 88–93.