



# Hybrid learning and face-to-face teaching: strategies for educational transformation for professional development in higher education

## Aprendizaje híbrido y enseñanza presencial: estrategias de transformación educativa para el desarrollo profesional en el nivel superior

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Submitted: 06-04-2024 | Revised: 12-05-2024 | Accepted: 02-06-2024 | Published: 03-06-2024

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### ABSTRACT

This article analyzes face-to-face and blended learning approaches in higher education, considering their impact on the development of professional competencies in a context marked by digital transformation and the increasing use of information and communication technologies. Through a documentary review of scientific literature, the main characteristics, benefits, challenges, and trends of both educational models are examined, highlighting their complementary role in teaching and learning processes. The findings show that face-to-face learning remains essential for the development of practical, communicative, and socio-emotional skills, while blended learning provides flexibility, autonomy, and personalization of learning through the integration of virtual and in-person environments. It is also identified that the effectiveness of these models depends on instructional design, pedagogical quality, and the appropriate integration of ICT in the classroom. The results further indicate that the combination of both approaches contributes to the development of key competencies such as critical thinking, problem-solving, and digital skills, which are essential for performance in today's labor market. However, important challenges are recognized, including the digital divide, teacher training, and technological infrastructure, which may limit effective implementation. In conclusion, the balanced integration of face-to-face and blended learning represents an innovative and relevant strategy to strengthen the quality of higher education in the digital era, provided that adequate pedagogical planning and equitable access to technological resources are ensured.

**Keywords:** blended learning, higher education, ICT, professional competencies.

### RESUMEN

El presente artículo analiza los enfoques de aprendizaje presencial e híbrido en la educación superior, considerando su impacto en la formación de competencias profesionales en un contexto marcado por la transformación digital y el uso creciente de las tecnologías de la información y la comunicación. A través de una revisión documental de literatura científica, se examinan las principales características, beneficios, desafíos y tendencias de ambos modelos educativos, destacando su papel complementario en los procesos de enseñanza-aprendizaje. Los hallazgos evidencian que el aprendizaje presencial sigue siendo fundamental para el desarrollo de habilidades prácticas, comunicativas y socioemocionales, mientras que el aprendizaje híbrido aporta flexibilidad, autonomía y personalización del aprendizaje mediante la integración de entornos virtuales y presenciales. Asimismo, se identifica que la efectividad de estos modelos depende del diseño instruccional, la calidad pedagógica y la adecuada integración de las TIC en el aula. Los resultados también muestran que la combinación de ambos enfoques contribuye al desarrollo de competencias clave como el pensamiento crítico, la resolución de problemas y las habilidades digitales, esenciales para el desempeño en el mercado laboral actual. Sin embargo, se reconocen desafíos importantes relacionados con la brecha digital, la capacitación docente y la infraestructura tecnológica, los cuales pueden limitar su implementación efectiva. En conclusión, la articulación equilibrada entre aprendizaje presencial e híbrido representa una estrategia innovadora y pertinente para fortalecer la calidad de la educación superior en la era digital, siempre que se garantice una adecuada planificación pedagógica y equidad en el acceso a los recursos tecnológicos.

**Palabras clave:** aprendizaje híbrido, educación superior, TIC, competencias profesionales.

## INTRODUCTION

Face-to-face and hybrid learning represent complementary approaches to professional training in higher education, framed within the evolution of educational models driven by information and communication technologies (ICTs). Online and distance learning has been widely studied as a consolidated field that substantiates these transformations, highlighting its theoretical and practical evolution in contemporary education (Anderson, 2008; Moore, 2013).

In this context, hybrid learning emerges as a strategic integration of face-to-face teaching and digital environments, combining direct interaction with technological flexibility. Numerous studies have shown that hybrid models promote active student participation and improve learning quality by facilitating multiple forms of educational interaction (Garrison & Anderson, 2003; Graham, 2006). Similarly, connectivist theory proposes that learning in the digital age is constructed through information networks and dynamic technological environments (Siemens, 2005; Downes, 2007).

Previous research has shown that online education can be as effective as face-to-face instruction when well-structured, particularly regarding instructional design and pedagogical mediation (Sitzmann et al., 2006; Means et al., 2010). In this regard, hybrid learning is positioned as an alternative that optimizes the benefits of both approaches, combining face-to-face interaction with digital platforms for autonomous and collaborative learning (Laurillard, 2012; Bates, 2015).

Empirical evidence also indicates that the effectiveness of virtual environments depends largely on the quality of educational interaction, course structure, and the applied instructional design (Bernard et al., 2009; Hrastinski, 2008). Therefore, the integration of educational technologies must be supported by solid pedagogical principles that ensure meaningful and sustainable learning experiences (Clark & Mayer, 2016).

In higher education, these models have been widely adopted due to their capacity to respond to demands for flexibility, accessibility, and personalized learning. Recent studies highlight that the integration of hybrid environments contributes to the development of the digital and professional skills required in today's labor market (Hew & Cheung, 2013; Picciano, 2017). Furthermore, comparative analyses of educational modalities demonstrate that combining face-to-face and virtual strategies can improve academic performance and student satisfaction (Allen & Seaman, 2017).

Despite these advances, challenges persist regarding equitable access to technology, teacher training, and the effectiveness of instructional design in digital environments. Therefore, further analysis of these models is necessary to understand their actual impact on professional training in higher education and the development of key competencies (Tamim et al., 2011; Cook et al., 2010).

Consequently, this article aims to analyze face-to-face and hybrid learning approaches in higher education, identifying their contributions, challenges, and best practices for optimal professional performance. The following research question is addressed: How do face-to-face and hybrid learning approaches influence professional training in higher education, and what are the most effective strategies to optimize their implementation?

## METHODS

### Research Approach

This study adopts a qualitative documentary approach, oriented toward a critical review of the scientific literature on face-to-face and hybrid learning models in higher education. This approach facilitates a deep understanding of the characteristics, advantages, limitations, and interactions of both educational models in university contexts.

### Study Type and Design

This research employs a systematic literature review design with thematic analysis. This design facilitates the organization and synthesis of available scientific evidence, enabling the identification of patterns, trends, and knowledge gaps related to the integration of ICTs in university teaching.

### Information Sources

Data collection was conducted using recognized academic databases, including Scopus, PubMed, Google Scholar, and open-access institutional repositories. Scientific articles, books, and systematic reviews related to face-to-face education, hybrid learning, online education, and information and communication technologies (ICTs) in higher education were selected.

## Search Strategy

Keyword combinations in Spanish and English were used, including:

- “aprendizaje híbrido”
- “blended learning”
- “educación superior”
- “online learning”
- “information and communication technologies”
- “higher education teaching models”

Publications between 2006 and 2024 were considered, prioritizing recent, high-impact academic studies.

## Inclusion criteria:

- Scientific articles, books, and systematic reviews.
- Studies related to higher education.
- Research on face-to-face, hybrid, or virtual models.
- Publications in Spanish and English.

## Exclusion criteria:

- Documents without access to the full text.
- Studies outside the educational field.
- Publications without scientific rigor or peer review.

## Study selection process

The selection of documents was carried out in three phases: identification, screening, and eligibility. Initially, titles and abstracts were reviewed; subsequently, full texts were analyzed to verify their relevance to the study objective. The final selection was based on thematic relevance and methodological quality.

## Data analysis

The obtained data were analyzed using a thematic analysis approach. This process allowed for the identification of emerging categories related to:

- Effectiveness of face-to-face learning.
- Impact of hybrid learning.
- Integration of ICT in higher education.
- Development of professional competences.

The information was organized, compared, and synthesized to establish relationships among the different reviewed studies.

## Synthesis of information

Finally, the findings were integrated into a narrative synthesis that provides a comprehensive understanding of the contributions of face-to-face and hybrid models in university professional training, as well as their main challenges and opportunities for improvement.

## RESULTS

Based on the literature review of scientific literature on face-to-face and hybrid learning in higher education, common patterns, emerging trends, and significant contributions were identified in relation to the integration of ICT, instructional design, and the development of professional competences.

### General trends identified in the literature

The reviewed studies agree that online and distance education constitutes the conceptual basis of modern hybrid learning, highlighting its theoretical and methodological evolution. Likewise, hybrid learning is consolidated as a strategy that combines face-to-face interaction with flexible digital environments.

The digital transformation has driven the use of student-centered educational models, supported by emerging technologies and virtual platforms that strengthen teaching and learning.

Table 1. Synthesis of results in table

| Analyzed category           | Main findings                                                                          | Impact on higher education                                          |
|-----------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Face-to-face learning       | Promotes direct interaction, communication, and practical experiences.                 | Strengthens social skills and practical competencies.               |
| Hybrid learning             | Integrates face-to-face learning with virtual learning, providing greater flexibility. | Enhances personalized learning and student autonomy.                |
| Use of ICTs                 | Facilitates access to digital content and virtual environments.                        | Expands learning and collaboration opportunities.                   |
| Instructional design        | Requires structured planning and clear objectives.                                     | Improves the quality of the teaching process.                       |
| Student performance         | Improves when face-to-face and virtual strategies are combined.                        | Enhances academic performance and participation.                    |
| Competency development      | Fosters digital, critical, and autonomous skills.                                      | Prepares students for the demands of the contemporary labor market. |
| Educational assessment      | Poses challenges in virtual and hybrid environments.                                   | Requires novel strategies for assessing learning.                   |
| Technological accessibility | Digital divides persist in certain contexts.                                           | Impacts equity in educational access.                               |

Benefits of hybrid and face-to-face learning

Face-to-face learning remains essential for the development of interpersonal skills, socialization, and direct practice. On the other hand, hybrid learning provides flexibility, autonomy, and expanded access to digital educational resources, allowing for the personalization of the learning process.

The combination of both approaches generates more dynamic and adaptive environments that better respond to student needs.

Impact of ICT in higher education

ICT plays a fundamental role in the transformation of higher education, enabling the creation of interactive virtual environments, access to real-time information, and the diversification of teaching strategies.

However, its effectiveness depends on pedagogical design and institutional capacity to integrate them adequately into educational processes.

Development of professional competences

Hybrid models contribute significantly to the development of professional competences such as critical thinking, autonomy, problem-solving, and digital skills.

These elements are key to training professionals capable of adapting to dynamic and highly technological work environments.

Challenges in implementation

Despite its advantages, the implementation of hybrid models faces significant challenges such as the digital divide, the need for teacher training, the lack of adequate technological infrastructure, and the difficulty of assessing learning in virtual environments.

These factors limit the effectiveness of its application in some educational contexts.

General synthesis of findings

Overall, the results show that face-to-face and hybrid learning should not be considered mutually exclusive models, but rather complementary. Their proper integration improves educational quality, strengthens meaningful learning, and responds to the demands of higher education in the digital era.

## DISCUSSION

The findings of the literature review demonstrate that face-to-face learning and hybrid learning should be understood as complementary approaches within higher education, rather than as opposing models. This complementarity responds to the evolution of educational systems driven by digital transformation and the progressive incorporation of ICT in teaching-learning processes.

First, the analyzed literature shows a consensus that face-to-face learning remains fundamental for developing interpersonal skills, direct communication, and meaningful practical experiences. This type of interaction strengthens socio-emotional and professional competencies that are difficult to fully replicate in virtual environments.

Conversely, hybrid learning is positioned as an innovative alternative that expands educational possibilities by integrating digital resources, virtual platforms, and student-centered active methodologies. This approach promotes flexibility, autonomy, and personalized learning, which are key elements in contemporary higher education.

A key finding is that the effectiveness of hybrid learning depends not solely on the technology used, but on the underlying pedagogical design. Instructional planning, content organization, and teacher mediation are determining factors in ensuring meaningful educational experiences. Consequently, the literature agrees that technology must serve pedagogy, rather than the reverse.

Furthermore, the results indicate that hybrid models contribute to developing essential professional competencies, such as critical thinking, problem-solving, and digital skills. These competencies are fundamental in an increasingly digitalized and dynamic labor market, where adaptability is a key factor for professional success.

However, significant challenges remain in implementing these models, particularly regarding the digital divide, teacher training, and technological infrastructure availability. These limitations can affect the equity and quality of the educational process, thereby requiring institutional attention and appropriate educational policies.

Overall, the discussion indicates that the balanced integration of face-to-face and hybrid learning represents a viable strategy for improving the quality of higher education. However, its effective implementation depends on pedagogical, technological, and organizational factors that must be carefully coordinated to achieve optimal results in professional training.

## CONCLUSIONS

The literature analysis on face-to-face and hybrid learning in higher education indicates that both approaches serve complementary functions within current training processes. Face-to-face learning remains essential for developing practical, communicative, and socio-emotional skills, whereas hybrid learning offers flexibility, autonomy, and expanded access to digital resources.

The integration of Information and Communication Technologies (ICTs) has significantly transformed educational models, enabling the creation of more dynamic, interactive, and student-centered learning environments. However, its effectiveness largely depends on pedagogical design and adequate instructional planning.

Furthermore, hybrid models contribute significantly to developing key professional competencies, such as critical thinking, problem-solving, and digital skills, which are fundamental to meeting the demands of the contemporary labor market.

However, significant challenges persist in their implementation, particularly regarding the digital divide, teacher training, and the availability of adequate technological infrastructure. These aspects must be addressed through institutional policies that ensure educational equity and quality.

In summary, the balanced combination of face-to-face and hybrid learning represents an effective strategy to strengthen higher education in the digital era, provided it is implemented based on solid pedagogical principles, technological inclusion, and a student-centered approach.

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## **FUNDING**

None.

## **CONFLICT OF INTEREST**

None.

## **AUTHORSHIP CONTRIBUTIONS**

Drafting – original draft: Jefferson Olimpo Gutiérrez Bastidas.

Writing–review and editing: Jefferson Olimpo Gutiérrez Bastidas.