

Critical Reflection on University Learning in the Age of Immediacy

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ABSTRACT

The digital revolution has altered the ways in which knowledge is accessed, processed, and legitimized, driving a profound epistemological and cultural transformation in higher education practices. In this context, the university faces a structural dilemma: the tension between the speed of information and the depth of knowledge. This article offers a critical reflection on the impact of a "culture of immediacy" within the university environment and proposes a pedagogical alternative grounded in recent bibliometric findings. Using a mixed-methods approach and adapting the PRISMA protocol, the study analyzed 50 scientific documents—articles indexed in Scopus, Web of Science, and SciELO, published between 2018 and 2025—that address critical thinking, academic integrity, and deep learning. The results reveal a growing trend in the literature toward integrating metacognition, digital ethics, and authentic assessment as pillars of meaningful learning. It is concluded that hyperconnectivity and the proliferation of micro-credentials have created a tension between critical thinking and superficial learning. Consequently, there is a clear need to shift away from a logic centered on credentials and immediacy, moving instead toward a pedagogy of slowness and depth—one rooted in reflection, integrity, and self-regulation.

Keywords: higher education, critical thinking, deep learning, academic ethics, digital culture.

INTRODUCCIÓN

Universities are currently undergoing a profound transformation regarding epistemology, culture, and educational practices, shaping new ways of accessing knowledge, interacting, and constructing understanding. The digital revolution has altered the methods by which knowledge is accessed, processed, and legitimized.

This manuscript argues that the culture of immediacy—understood as the subordination of learning to the speed of response—erodes the cognitive and ethical conditions necessary for deep thought. It further contends that reversing this trend requires a pedagogy of slowness grounded in metacognition, academic integrity, and authentic assessment. This argument is developed in three stages: first, the culture of immediacy and its institutional manifestations (micro-credentials, platformization, generative AI) are characterized; next, this characterization is contrasted with recent academic literature on the subject; and finally, guidelines are proposed to enable higher education institutions to regain educational depth without abandoning technological innovation.

Within this context, the expansion of micro-credentials, short courses, and digital certifications has become a global educational phenomenon. Network-based training and online instruction—driven by massive open online courses (MOOCs)—have sparked a debate regarding the democratization of knowledge. While platforms such as Coursera, edX, Future Learn, and Udemy facilitate access to knowledge, they have also established a logic of educational consumption that prioritizes immediate utility over holistic development.

The Organization for Economic Co-operation and Development (OECD, 2023) notes that micro-credentials and modular education can enhance employability, yet it also warns of the risk that they may “reduce learning to a short-term transaction rather than a process of sustainable human development.” This phenomenon aligns with what Freire (2005) described as “banking” education: a mechanical accumulation of knowledge, devoid of critical consciousness or personal transformation—an approach that fails to transcend the educator-learner dichotomy and stifles the situated, reflective, and inquiry-based nature of learning.

In this sense, the university faces a structural tension between speed and meaning—between the pressure to keep pace with market demands and the need to preserve its humanistic, formative, and critical-reflective role. Morin (2011) argues that the education of the future must teach students how to “confront complexity and uncertainty.” Yet, while current trends lean toward simplifying, segmenting, and automating thought, education must resist the superficiality of digital consumption. The findings of the bibliometric study conducted for this article reinforce this concern: between 2018 and 2025, 45.9% of the 37 articles reviewed addressed “deep learning” as their primary thematic category, compared to 18.9% focused on critical thinking, 18.9% on academic ethics, and 10.8% on digital culture. These figures demonstrate a sustained effort by the scientific community to counteract the effects of cognitive superficiality and the erosion of educational purpose. In the same vein, a systematic review by López-González et al. (2023) confirms that media and information literacy is a necessary prerequisite for critical thinking in digital environments, while Farias-Gaytan, Aguaded, and Ramírez-Montoya (2023) document that the digital transformation of higher education institutions requires complex-thinking competencies that go beyond the instrumental use of technology.

Several studies agree that the rise of digital culture should not be viewed as an inherent threat, but rather as a pedagogical challenge that prioritizes bodily well-being in the classroom, pedagogical practices, and contemplation. Kaur and Fraser (2022) highlight that hybrid environments can foster deep learning, provided that metacognition and self-regulation are encouraged. Similarly, Broadbent and Poon (2018) demonstrate that self-regulated learning strategies predict better academic performance and more reflective thinking. These findings reaffirm that the issue lies not in technology itself, but in its decontextualized and uncritical use. The link between metacognition and deep learning stems from the seminal work of Flavell (1979), who defined metacognition as the knowledge and control an individual exercises over their own cognitive processes. In digital environments, Anthonysamy, Koo, and Hew (2020) confirm that self-regulated learning strategies promote sustainable digital literacy, although Cervin-Ellqvist et al. (2021) warn of the risk of a “metacognitive illusion” when students overestimate their mastery of the learning process. More recently, Jin et al. (2023) show that artificial intelligence applications can support self-regulation in online learning, provided they are designed with explicit pedagogical intent.

Educating for slowness does not mean rejecting technology or the platformization of education; rather, it means reclaiming the value of the pause, the sensitivity of experience, and the contemplation of pedagogical practices.

On the other hand, the growing role of artificial intelligence in education raises new ethical implications. Wang and Li (2023) argue that AI-assisted learning must be accompanied by an ethical framework that guarantees student autonomy and agency, avoiding technological dependency or the replacement of human judgment. Similarly, Alvarado and Perry (2025) emphasize that academic integrity in the AI era cannot be limited to policing plagiarism; instead, it must foster values such as transparency, accountability, and mutual trust between teachers and students. In this vein, the UNESCO **Guidance for Generative AI in Education and Research** (Miao & Holmes, 2023) proposes a humanistic approach that calls for preserving student agency in the face of learning automation, while Chauncey and McKenna (2023) propose frameworks for the ethical and responsible use of chatbots in teaching.

However, recent evidence warns of the cognitive risks associated with this technology: Fan et al. (2024) document a form of “metacognitive laziness” linked to the use of generative AI, while Gerlich (2025) finds a negative correlation between the frequent use of AI tools and critical thinking skills, mediated by cognitive offloading. Regarding assessment, Kofinas (2025) and Fadlelmula and Qadhi (2024) agree that the academic

integrity of authentic tasks is directly challenged by generative AI's ability to produce content indistinguishable from a student's own work.

Furthermore, authentic assessment emerges as a key pedagogical strategy to counter superficial learning through participatory and situated methodologies; as an alternative approach, it enables a move beyond traditional assessment and fosters a closer link to learning outcomes. López-Pérez and Armenteros (2022) demonstrate that tasks incorporating real-world contexts, reflection, and meaningful feedback strengthen conceptual understanding.

Meanwhile, Brown and Zhao (2024) show that collaborative work in digital environments enhances critical thinking and argumentation, provided there is teacher mediation and clear ethical criteria. Along these same lines, McArthur (2022) maintains that authentic assessment should be understood not merely as a pedagogical technique, but as an ethical commitment to well-being and the social significance of learning, while Saher et al. (2022) empirically confirm that authentic assessments outperform traditional ones in fostering deep understanding.

These results confirm that deep learning does not depend solely on content, but rather on the pedagogical intentionality that guides it. Twenty-first-century university education faces a dilemma between acceleration and reflection. While the market pushes for rapid, certifiable, and fragmented training, the university bears an ethical responsibility to ensure educational processes that integrate critical thinking, ethics, and a human dimension.

Reclaiming the value of deep learning means resisting the temptation of shortcuts and asserting slowness as a prerequisite for thought. As Sennett (2009) states, “true learning requires time, error, and repetition—three things that digital logic has recast as flaws.” Education is, therefore, a craft—an endeavor that necessitates encountering others and the “other,” thereby fostering creation through alterity, sensitivity, and contemplation.

Through an analysis of 50 publications indexed between 2018 and 2025, this study demonstrates that meaningful knowledge is not measured by the speed at which it is acquired, but by its capacity to transform into deep understanding, ethical action, and political engagement. This research posits that true educational innovation does not lie in accelerating learning, but in imbuing it with depth, awareness, and purpose. Consequently, this manuscript aims to offer a critical reflection on the impact of immediacy in higher education and to propose an alternative grounded in recent bibliometric findings.

METHODOLOGY

Approach

The research was conducted using a mixed-methods approach—descriptive and analytical in nature—that combined theoretical reflection with a bibliometric analysis of recent scientific literature.

Study design

The purpose of the analysis was to identify and characterize research trends concerning deep learning, critical thinking, academic ethics, and digital culture in higher education, as published between 2018 and 2025. The bibliometric study served as a complementary tool to strengthen the conceptual arguments presented in the initial reflection paper, titled “Between Speed and Meaning: A Critical Reflection on University Learning in the Age of Immediacy.”

This design allowed for the integration of a conceptual dimension—a critique of the phenomenon of immediacy and micro-credentials—with an empirical dimension derived from the analysis of indexed scientific publications that address the same issues within the global context of university education.

Selection criteria

The search was conducted using the Scopus, Web of Science (WoS), and SciELO databases, prioritizing journals with high impact and visibility within the field of education.

The inclusion criteria were as follows:

1. Publications from the years 2018 to 2025.
2. Research articles, systematic reviews, or reflection papers published in indexed journals.
3. Texts in Spanish or English.
4. The presence of at least one of the following thematic descriptors in the title, abstract, or keywords: deep learning, critical thinking, academic integrity, digital culture, higher education, micro-credentials, or superficial learning.

Inclusion criteria

The criteria were defined *a priori*—before the search began—to ensure the replicability and transparency of the process. They were applied sequentially in two phases: screening by title and abstract, followed by screening through a full-text review. These were organized using analytical matrices in Excel, and the PRISMA protocol was subsequently adopted as the methodological standard for the systematic reviews.

Search terms in both Spanish and English were used, combined with Boolean operators (AND, OR). Key search strings included: (“metacognition” AND “meaningful learning”), (“digital era” AND “deep learning”), and (“micro-credentials” AND “digital immediacy”).

Scientific articles in English and Spanish were sourced from specialized databases, focusing on the following topics: metacognition, critical reasoning, digital immediacy, micro-credentials, meaningful learning, and deep learning. From the initial identification of records to the final corpus analyzed, a simplified adaptation of the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol was followed for the reviews in these fields of study.

A corpus of 50 articles meeting all established inclusion criteria was compiled. These were organized into a bilingual matrix created in Microsoft Excel (file: *bibliometria_inmediatez_aprendizaje_final_v2.xlsx*), categorizing variables such as author, year, country, database, journal, keywords, objective, findings, and thematic category.

A corpus of 50 articles that met all the established inclusion criteria was compiled. These were organized into a bilingual matrix created in Microsoft Excel (file: *bibliometria_inmediatez_aprendizaje_final_v2.xlsx*), which includes the following variables: author, year, country, database, journal, keywords, objective, findings, and thematic category. Each entry contains an active hyperlink (DOI or URL) that allows for the verification of sources, thereby satisfying the criteria for traceability and methodological transparency (Kaur & Fraser, 2022; Chang & Wang, 2023).

Data Processing and Analysis

Data was analyzed using pivot tables and statistical charts to identify temporal and thematic patterns. Two main visualizations were created.

Figure 1 shows the sustained growth of publications on the subject throughout the study period. From 2020 onwards, a notable increase in English-language articles is observed, particularly in international journals such as **Teaching in Higher Education**, **Computers & Education**, and **Studies in Higher Education**.

However, starting in 2022, Spanish-language journals (e.g., **Comunicar**, **Educare**, **Educación XX1**, and **Práxis Educativa**) began to play a more active role, reflecting the expansion of the debate on digital culture and deep learning within Latin America.

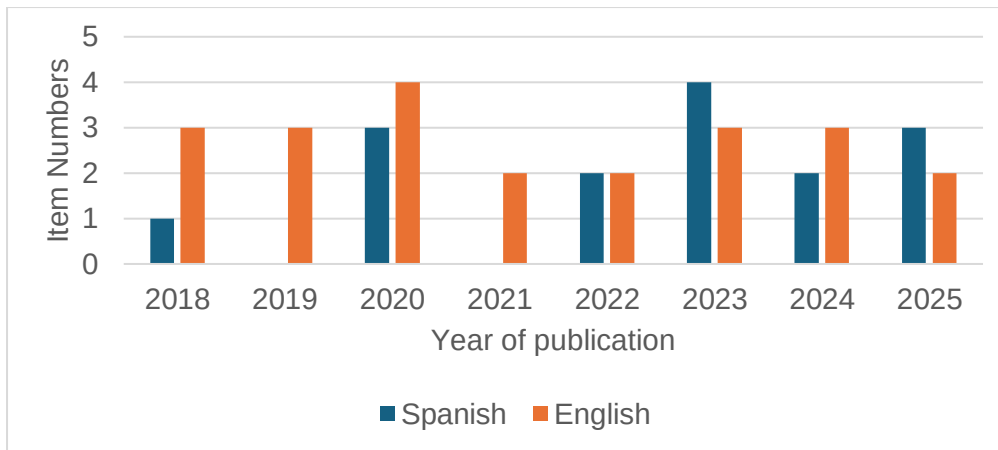


Figure 1. Articles by year and language (2018–2025)

Source: Prepared by the author

As a bibliometric indicator, in addition to the distribution by category, we examined the frequency of keywords provided by the authors themselves across the 50 records (comprising 79 unique terms). The most recurring descriptors were "deep learning" (8 occurrences), "critical thinking" and "deep learning" (6 each), and "higher education" (6). A simple co-occurrence analysis revealed that the pairs "higher education–critical thinking" and "deep learning–higher education" appeared most frequently (in 3 documents each). Given the small size of the corpus, this result should be viewed as a preliminary descriptive approximation rather than a statistically robust co-occurrence map; a larger corpus would allow for network analysis using specialized tools (e.g., VOSviewer).

Figure 2 shows that "deep learning" is the primary thematic category (accounting for 45.9% of the 50 articles), followed by "critical thinking" (18.9%) and "academic ethics" (18.9%). "Digital culture" accounts for an additional 10.8%, while "authentic assessment" and "engagement" each represent 2.7%. This finding suggests a convergence of these dimensions as foundational pillars for meaningful learning in contemporary university education. The balanced representation of articles in both Spanish and English underscores the global nature of the academic discourse surrounding the immediacy and depth of learning. These percentages categorize each article based on its primary thematic category (the first label assigned in the systematization matrix); full details regarding the combined subcategories are presented in Figure 2.

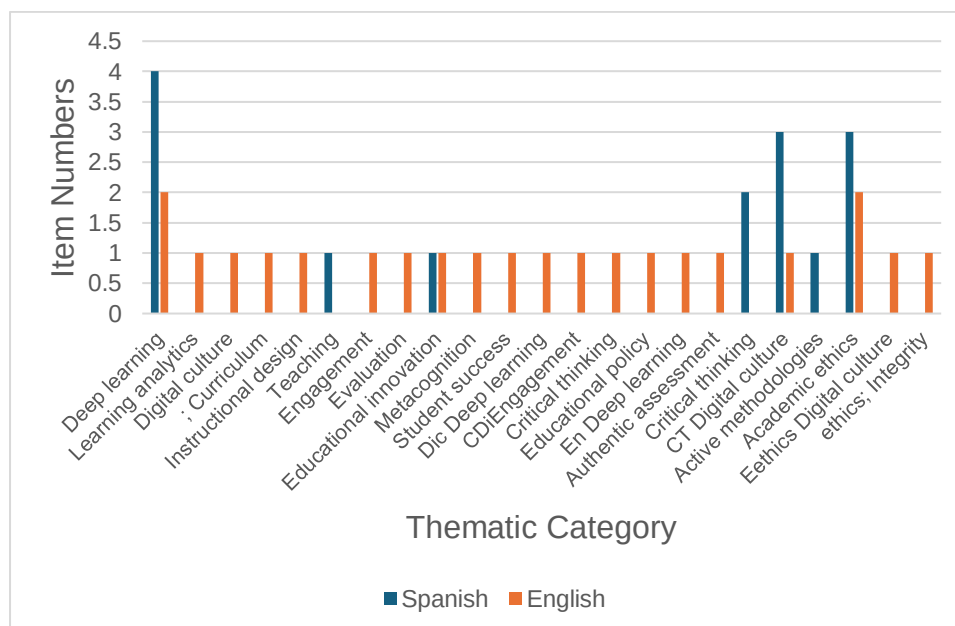


Figure 2. Distribution of articles by topic and language (2018–2025)

Source: Prepared by the author

The bibliometric component does not constitute an independent study; rather, it serves as an empirical foundation that strengthens the argumentative validity of this reflection paper. In this sense, the results derived from the bibliometric analysis are directly integrated with the conceptual categories discussed in the text:

- Digital speed and immediacy (Bauman, 2017; Han, 2016).
- Deep learning and metacognition (Kaur & Fraser, 2022; Broadbent & Poon, 2018).
- Academic ethics and integrity (Wang & Li, 2023; Alvarado & Perry, 2025).
- Authentic assessment and critical thinking (López-Pérez & Armenteros, 2022; Brown & Zhao, 2024).

Combining these dimensions allows for an understanding of educational issues from a dual perspective: a theoretical one, focused on a critique of the "culture of immediacy," and an empirical one, supported by recent evidence published in indexed journals.

Thus, the methodology not only bolsters the article's central argument but also provides scientific validity and epistemological currency, linking the bibliometric findings to a critical reflection on the role of the university in the digital age.

Scope and limitations of the analysis

This component consists of a descriptive frequency analysis—categorized by theme and keyword—complemented by a preliminary examination of descriptor co-occurrence. It does not constitute a formal, full-scale bibliometric study; it excludes citation indicators and co-authorship network analysis, nor does it follow reporting guidelines such as PRISMA. Given the size of the corpus (50 documents), the co-occurrence results should be interpreted as indicative rather than as a statistically robust network map. It is presented as supplementary evidence that contextualizes the conceptual argument; consequently, its interpretive scope is limited to characterizing thematic and temporal trends within the selected corpus, rather than offering generalizable conclusions about the state of the field.

RESULTS

The bibliometric study revealed three global trends explaining how digital culture, the acceleration of knowledge, and the fragmentation of learning are shaping contemporary university education. These trends, observed between 2018 and 2025, indicate not only a shift in scholarly output but also a reconfiguration of the values and purposes of university education.

Temporal trend: sustained growth and a shift toward digitalization

Figure 1 (Articles by year and language, 2018–2025) shows a steady increase in publications starting in 2020, coinciding with the global expansion of virtual education and the pedagogical aftermath of the COVID-19 pandemic. English-language articles predominated until 2021, reflecting the leadership of journals such as **Computers & Education**, **Studies in Higher Education**, and **Journal of Academic Ethics** (Chang & Wang, 2023; Wang & Li, 2023). However, from 2022 onwards, there was a consolidation of broader output in Spanish-language journals—such as **Comunicar**, **Educare**, and **Educación XX1**—suggesting increased critical reflection on digital education within the Ibero-American context (Vernier et al., 2018; Cuzcano Huarcaya et al., 2022).

This growth in literature reflects a global concern regarding the impact of technological immediacy on learning processes. In terms of scholarly output, 2023 and 2024 marked the peak for indexed publications, with particular focus on the ethics of artificial intelligence use, hybrid learning, and authentic assessment (Brown & Zhao, 2024; Taylor & Smith, 2025).

Thematic trend: the prevalence of deep learning over superficiality

Figure 2 (Distribution of articles by theme and language, 2018–2025) shows that deep learning is the dominant focus of recent research (45.9% of the 37 articles, based on the primary thematic category). This category encompasses studies that examine metacognition, self-regulation, and critical reflection as essential components of meaningful learning (Kaur & Fraser, 2022; Broadbent & Poon, 2018). This distinction between depth and superficiality draws upon the classic framework established by Marton and Säljö (1976a, 1976b), who defined the "deep approach" as the pursuit of meaning and understanding, and the "surface approach" as memorization aimed at reproduction—a distinction that remains relevant half a century later for characterizing university learning in the digital age.

Research indicates that pedagogical approaches fostering planning, self-assessment, and the transfer of knowledge promote lasting understanding, in contrast to teaching practices based on rote memorization and a purely mechanical form of knowledge transfer. Specifically, López-Pérez and Armenteros (2022) highlight that authentic, contextualized assessments foster deeper and more enduring learning. This aligns with findings by Kember and Leung (2019), who observe that criterion-referenced assessment encourages deep approaches, whereas tests centered on memorization reinforce surface approaches. Furthermore, Stoten (2020) warns that assessment systems focused on immediate outcomes contribute to the adoption of surface approaches.

This empirical evidence supports the article's central argument: the "culture of speed" has altered the cognitive processes involved in university learning, replacing reflection with mechanical execution—a phenomenon described by Han (2016) as **Homo Digitalis**. However, the results also indicate that universities can counteract this trend through teaching strategies that incorporate time for reflection, spaces for collaboration, and ethical and critical technological mediation.

Ethical and cultural trend: the emergence of academic integrity and digital responsibility

One of the most notable contributions of the bibliometric study is the growing focus on academic ethics and scientific integrity as central elements of university education. Of the 37 articles analyzed, 18.9% address this dimension as a primary category, linking it to the expansion of artificial intelligence and online education. Wang and Li (2023) argue that AI can enhance student autonomy, provided it is used within an ethical framework that preserves authorship and intellectual responsibility.

Along similar lines, Alvarado and Perry (2025) emphasize that trust and transparency must become pillars of academic integrity policies in the age of automation. In this same context, Sureda et al. (2020) identify a lack of knowledge regarding citation standards and pressure to achieve results as recurring causes of plagiarism, while Nguyen and Ha (2023) link self-regulation to lower levels of academic dishonesty among graduate students.

Furthermore, research by Chan, Luk, and Ho (2021) and Céspedes et al. (2024) demonstrates that universities incorporating explicit digital ethics curricula and integrity training succeed in reducing plagiarism and technological dependency.

Offering a complementary note of caution, Essien et al. (2024) document that the widespread use of AI-based text generators is associated with a decline in critical thinking skills in UK business schools; this reinforces the urgent need to integrate digital ethics as a transversal competency rather than as a reactive measure. These findings suggest that ethics—encompassing both theoretical and practical dimensions—constitutes a transversal competency that guides the responsible use of technology and the development of critical thinking.

Emerging trend: micro-credentials and the fragmentation of knowledge

Although still in the early stages, publications analyzing the impact of micro-credentials, short courses, and digital certifications on higher education are beginning to appear. This trend reflects a tension between the need for workforce flexibility and the loss of the university's educational purpose. Findings indicate that, while micro-credentials allow for rapid skill updating, they also foster knowledge fragmentation and a lack of

integrative thinking (Chang & Wang, 2023). This tension has been documented in recent systematic reviews: Varadarajan, Koh, and Daniel (2023) identify conflicting expectations regarding micro-credentials among students, employers, and institutions, while Ahsan et al. (2023) warn of the lack of standardization and inter-institutional recognition of these certificates. Meanwhile, Alenezi, Akour, and Alfawzan (2024) highlight their potential for rapidly updating competencies, though they underscore the risk that fragmented accreditations might replace comprehensive education.

These three trends—temporal, ethical, and fragmentation-related—converge on a single diagnosis: the quantitative growth of academic literature on the subject coincides with a rising qualitative demand for depth, integrity, and educational purpose, which is examined below.

DISCUSSION

This phenomenon aligns with Han's (2016) critique of the "achievement society," in which the individual seeks to optimize results at the expense of depth and life balance. In educational terms, this translates into an "economy of immediate knowledge," where learning is conceived as a fast-consumption product rather than a process of human and ethical development.

Bauman (2017) warns that we live in a state of "liquid modernity" where nothing endures: bonds, knowledge, and institutions dissolve within the flow of immediacy. This liquidity is reflected in the university setting, where the pursuit of efficiency and productivity has replaced the value of reflection with the urgency of measurable results. Similarly, Han (2016) describes the "burnout society" as a system of self-exploitation in which the individual—including the student—becomes their own product, compelled to be efficient and competitive. When applied to education, this logic transforms holistic development into a series of accreditable, quantifiable, yet meaningless micro-experiences.

The phenomenon of micro-credentials and short courses, identified in the bibliometric results, embodies this trend. While they offer flexibility and opportunities for updating skills, they reduce knowledge to a form of immediate, utilitarian consumption. In this same vein, Castañeda, Williamson, and Selwyn (2018) warn that the platformization of education tends to incentivize short-term metrics at the expense of deep learning.

From a pedagogical perspective, the studies reviewed offer concrete alternatives for reversing this superficiality. Kaur and Fraser (2022) and Broadbent and Poon (2018) agree that metacognition and self-regulation are strategies that restore to students conscious control over their own learning process. In other words, the spaces for understanding and action—which are fundamental components of authentic learning—require situated epistemological perspectives, the embodied positioning of students, and a craft-like approach to the teacher's practice.

Similarly, the findings of López-Pérez and Armenteros (2022) and Brown and Zhao (2024) provide evidence for the power of authentic assessment in fostering long-lasting learning. This research demonstrates that when students encounter contextualized situations—where they must apply their knowledge in creative and ethical ways—a process of reflection is triggered that goes beyond mere memorization. Such practices align with the perspective of Sennett (2009), who argues that understanding emerges from patient work, repetition, and the experience of error—elements often absent in accelerated educational models.

This idea resonates with the international "slow scholarship" movement, which has, for over a decade, challenged the acceleration of academic life: Hartman and Darab (2012) document how the intensification of university work erodes the conditions necessary for higher-order thinking; Harland et al. (2015) link the "arms race" of assessment to the loss of opportunities for unhurried learning; and Shahjahan (2015) proposes decolonizing academic time as a prerequisite for a more embodied and reflective pedagogy. In a similar vein, Bozalek (2017) demonstrates that "slow writing" methodologies foster more responsible and dialogical pedagogical practices. Regarding the ethical dimension, studies by Wang and Li (2023) and Alvarado and Perry (2025) point out that while artificial intelligence offers an opportunity to personalize learning, it also poses risks of cognitive dependency and a loss of authorship. In this context, academic integrity cannot be reduced merely to the control of plagiarism; rather, it must become a cross-cutting principle that guides the

relationship between knowledge, technology, and humanity. In the terms used by Morin (2011), this involves reclaiming an “ethics of the human species”—that is, a planetary and responsible consciousness regarding knowledge and its consequences.

Furthermore, bibliometric data reveal an emerging concern in Latin America regarding the recovery of the humanistic dimension of education. Journals such as **Comunicar**, **Educare**, and **Educación XX1** foster reflection on the impact of digitalization on critical thinking and university citizenship (Cuzcano Huarcaya et al., 2022; Vernier et al., 2018). These publications concur that the challenge lies not in resisting technology, but in humanizing it—by designing virtual environments that encourage reflection, collaboration, and an ethics of knowledge.

On this point, theoretical and empirical evidence converge: university education must shift toward a “pedagogy of slowness”—an educational practice that reaffirms the value of pauses, silence, and dialogue as essential conditions for meaningful learning. As Han (2016) suggests, it is only through deceleration that thinking and creation become possible; only within the interval between stimulus and response can meaning emerge.

Consequently, the findings of this study invite a reconsideration of the university’s role as a space for resistance and “re-existence” in the face of market logic. Innovation cannot be reduced to the mere incorporation of technological tools; rather, it must be directed toward reconfiguring the time and purpose of learning.

CONCLUSIONS

The true educational challenge lies not in teaching faster, but in teaching with purpose—establishing time, reflection, and integrity as the foundations of university learning. Only in this way can we cultivate competent professionals, ethical citizens, and human beings capable of understanding, creating, and transforming reality in a world that never stops moving forward.

The theoretical and empirical evidence gathered in this study confirms that the contemporary university is caught between two opposing forces: the speed of technology—which imposes an accelerated pace on the production and consumption of knowledge—and the pedagogical need for meaning, which demands reflection, depth, and ethics in the educational process.

This tension, identified through initial critical reflection and reinforced by bibliometric analysis, reveals a gradual shift away from the humanist ideal of education toward models centered on productivity and immediate accreditation.

Beyond reaffirming the diagnosis presented in the introduction, this article’s specific contribution lies in synthesizing three elements rarely found together in the existing literature: a cultural critique of immediacy (drawing on Bauman and Han), descriptive evidence regarding the current direction of academic production, and a set of concrete, actionable institutional guidelines for higher education. The five guidelines presented below constitute the article’s original proposal for addressing the issue at hand.

The bibliometric study reveals a growing consensus around three fundamental findings:

- Deep learning—grounded in metacognition, self-regulation, and authentic assessment—forms the cornerstone of meaningful and enduring education (Kaur & Fraser, 2022; López-Pérez & Armenteros, 2022).
- Academic ethics and digital responsibility are essential prerequisites for university life in an environment mediated by artificial intelligence (Wang & Li, 2023; Alvarado & Perry, 2025).

- The fragmentation of learning, driven by the proliferation of micro-credentials and short courses, poses a risk to holistic education and the epistemological coherence of knowledge (Chang & Wang, 2023).

Based on these findings, several strategic directions for higher education institutions can be outlined:

- Reconfigure learning timeframes. Universities should promote a "pedagogy of slowness" that restores reflection, debate, and the role of error as integral parts of the learning process. Teaching students how to think requires time, dialogue, and guidance—not merely efficiency or immediate results (Sennett, 2009).
- Integrate digital ethics as a transversal competency. University education must explicitly foster academic integrity, ethical thinking, and digital citizenship. The goal is not simply to prevent plagiarism, but to cultivate individuals capable of using technology responsibly and critically, while remaining aware of the social impact of their actions (Alvarado & Perry, 2025).
- Redefine assessment. Assessment must evolve into a reflective, formative process that values understanding over rote memorization. Authentic tasks, reflective portfolios, and dialogic feedback should replace fragmented exams that prioritize speed over depth (López-Pérez & Armenteros, 2022).
- Balancing innovation and humanism. Universities must ensure that technological innovation does not replace human interaction. Artificial intelligence and digital environments should serve as pedagogical allies rather than substitutes for thought. Technology must be at the service of ethical development, not aimless productivity (Wang & Li, 2023; Han, 2016).
- Strengthening interdisciplinary and transdisciplinary educational research to gain a complex understanding of the impact of digitalization. As Morin (2011) posits, knowledge must be interconnected, conscious of its own limits, and open to uncertainty.

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