

EFL Teachers' Perceptions of Digitalization in Algerian Higher Education: a Case Study at Badji Mokhtar University

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Abstract:

This article examines the perceptions of English as Foreign Language (EFL) teachers regarding the integration of digitalization within Algerian higher education, with a particular focus on Badji Mokhtar University in Annaba. The study is motivated by the increasing national and global emphasis on digital education, especially following the COVID-19 pandemic, and the challenges faced in aligning Algerian higher education with international standards. Using a qualitative approach based exclusively on structured interviews with five EFL teachers, the research investigates their digital competence, their use of digital platforms, and the perceived benefits and barriers of integrating technology in the classroom. The findings highlight that while teachers value digitalization for its flexibility, access to resources, and ability to foster learner autonomy, they remain hindered by infrastructure limitations, insufficient institutional support, and low levels of student engagement. The study emphasizes the urgency of strengthening training and institutional policy, and it recommends the adoption of blended learning models as a sustainable path forward for Algerian universities.

Keywords: Digitalization, higher education, EFL teaching, Algeria, teacher perceptions

1. Introduction

The global higher education landscape is undergoing a profound transformation due to digitalization, which has redefined the ways teaching, learning, and assessment are conducted. While developed countries have invested heavily in online learning platforms and digital infrastructure, developing countries such as Algeria continue to

face persistent challenges in achieving a smooth transition (Ziani, 2021). The COVID-19 pandemic accelerated the urgency of digitalization, exposing both the potential and the fragility of Algerian universities' readiness for online education (Bozkurt et al., 2020).

EFL teaching occupies a central role in this context, as the subject is closely tied to communication, interaction, and authentic exposure to the language; dimensions that digitalization can both facilitate and hinder. In Algerian universities, EFL teachers became frontline actors of digitalization, experimenting with platforms such as Moodle, Zoom, and WhatsApp to maintain continuity of instruction (Ziani, 2021). However, their experiences remain underexplored in academic research.

The problem addressed by this study is the gap between Algeria's policy-level ambitions for digitalization and the classroom realities faced by EFL teachers. Despite official directives and the introduction of online platforms, teachers often struggle with poor internet connectivity, a lack of institutional training, and inadequate support for assessment and student engagement.

This study aims to investigate how EFL teachers at Badji Mokhtar University perceive digitalization, focusing on their attitudes, practices, and the challenges they encounter. Three research questions guide the study:

1. How do EFL teachers at Badji Mokhtar University perceive the value and role of digitalization in their teaching practices?
2. What digital tools and platforms are most frequently used by teachers, and how are they integrated into instruction?
3. What challenges and barriers limit the effectiveness of digitalization in Algerian higher education?

Based on the literature and the Algerian context, the study formulated the following hypotheses:

- H1: EFL teachers perceive digitalization as a beneficial but under-supported innovation.
- H2: Teachers adopt a pragmatic approach, relying on both institutional platforms and informal tools to meet student needs.
- H3: The effectiveness of digitalization is constrained primarily by infrastructural and institutional barriers rather than teachers' willingness to adapt.

2. Theoretical Background

2.1 Digitalization in Higher Education

Digitalization is widely understood as the process of integrating digital technologies into educational systems to transform teaching and learning (Aliu, Krasniqi, & Zeneli, 2023). It is not simply a matter of digitizing traditional content but involves a deeper reconfiguration of pedagogical practices, curriculum design, and institutional policy (João, Silva, & Almeida, 2020). In higher education, this transformation includes the adoption of Learning Management Systems (LMS), online assessments, virtual classrooms, and digital communication platforms.

In Algeria, the discourse on digitalization has been shaped by governmental reforms aimed at modernizing universities, yet implementation remains inconsistent. According to Ziani (2021), Algerian universities face structural limitations, including outdated equipment, limited internet coverage, and a lack of training opportunities for faculty. These systemic issues create a disconnect between the potential of digitalization and its practical outcomes.

2.2 Digitalization and EFL Pedagogy

EFL instruction stands at the forefront of disciplines impacted by digitalization due to the inherently communicative and interactive nature of language learning. CALL (Computer-Assisted Language Learning) and later MALL (Mobile-Assisted Language Learning) have demonstrated the capacity of digital tools to enhance learner autonomy, motivation, and exposure to authentic input (Mayora, 2006). Harmer (2015) emphasizes that technology allows teachers to diversify classroom activities with multimedia resources, online quizzes, and virtual discussions, which help create a more engaging learning environment.

Moreover, research has shown that digital environments can lower the affective filter for students, providing opportunities for participation that are less intimidating than face-to-face contexts (Ilter, 2009). Platforms such as forums and online chats allow shy students to contribute at their own pace, enhancing inclusivity. For Algerian students, often accustomed to traditional teacher-centered classrooms, digitalization offers an important shift toward more learner-centered practices.

2.3 Teachers' Digital Competence and Attitudes

The success of digitalization depends heavily on teachers' competencies and attitudes. Baran, Correia, and Thompson (2011) argue that teachers must move beyond technical skills to develop new roles as facilitators, motivators, and instructional designers. Mishra and Koehler's (2006) TPACK model highlights the integration of technological, pedagogical, and content knowledge as essential for effective digital teaching.

However, studies reveal that teachers in developing contexts often face difficulties acquiring digital competences due to limited institutional support and a lack of professional development (Osika, Johnson, & Buteau, 2009). In Algeria, many instructors were forced to adapt through trial and error during the pandemic, relying on personal initiative rather than structured training (Ziani, 2021). Their perceptions are therefore shaped not only by their pedagogical goals but also by the frustrations of working within an under-resourced system.

2.4 Barriers to Digitalization in Algerian Universities

The barriers to digitalization in Algeria are diverse. First, infrastructure limitations, including weak internet connectivity, power outages, and limited access to computers, hinder smooth digital instruction (OECD, 2021). Second, institutional gaps such as the lack of administrative support and absence of coherent digital policies undermine sustainability (Parviainen et al., 2017). Third, assessment challenges persist, as teachers struggle with ensuring fairness and integrity in online examinations. Finally, student engagement emerges as a persistent issue, with teachers reporting that many students are passive or disengaged in online environments.

These challenges demonstrate that digitalization in Algeria is not simply a matter of technology adoption but requires systemic reform and investment. Teachers' perceptions provide crucial insights into these dynamics, making them an essential focus of inquiry.

3. Methodology

This study adopted a qualitative case study design, which is particularly suitable for exploring teachers' perceptions in depth and in context. Through a case study approach, researchers are able to concentrate on a clearly defined context, in this case, EFL teaching at Badji Mokhtar University, and generate rich and varied insights into the lived experiences of participants. Unlike quantitative approaches,

which often aim to generalize findings across large populations, the qualitative case study seeks to provide a detailed, contextually grounded understanding of a phenomenon (Braun & Clarke, 2006).

The research site was the Department of English at Badji Mokhtar University in Annaba, a major Algerian institution with a large population of EFL students and faculty. The choice of this site was motivated by its representativeness: it is both a flagship university in eastern Algeria and one that has faced the systemic challenges typical of the national higher education system, particularly during and after the COVID-19 pandemic.

The participants were five EFL teachers with diverse profiles in terms of age, teaching experience, and digital familiarity. Some had long-established careers that predated the introduction of digital platforms, while others were relatively younger lecturers who had been more exposed to digital technologies during their training. This diversity allowed the study to capture a spectrum of perspectives, ranging from hesitant adoption to enthusiastic integration of digital tools. The participants were selected through purposive sampling, as they all had direct experience with online or digitally mediated teaching in the last three academic years.

The data collection instrument consisted of a structured interview guide. Questions were designed to elicit teachers' reflections on four main themes:

- Their perceptions of the role and value of digitalization in higher education.
- The digital tools and platforms they used and how they integrated them into their teaching practices.
- The pedagogical benefits they observed for students.
- The challenges and institutional barriers they encountered.

Each interview lasted approximately 30 to 45 minutes. Given constraints of time and availability, three interviews were conducted face-to-face at the university, while two were conducted online via Google Meet. All interviews were audio-recorded with informed consent from the participants, and later transcribed verbatim to ensure accuracy.

The data analysis was carried out using Braun and Clarke's (2006) six-step thematic analysis approach: (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. This method was appropriate as it enabled the researcher to

move from descriptive summaries of teachers' statements to more interpretive insights into their perceptions and experiences. Codes were first developed inductively from the interview transcripts and then grouped into broader themes that directly related to the research questions.

4. Results

The interviews revealed three broad areas of findings: teachers' perceptions of digitalization, their use of digital tools and platforms, and the challenges they encountered in integrating technology into their teaching practices. Each theme is presented below with illustrative details and interpretive commentary.

4.1 Teachers' Perceptions of Digitalization

Across the five interviews, a generally positive perception of digitalization emerged. Teachers consistently described digitalization as a valuable innovation that reshaped how they approached teaching and interacted with their students. One participant explained: "Digital tools give me flexibility in reaching my students. Even outside the classroom, they can consult the material I upload, and they no longer depend only on the two hours of lectures per week." This quote highlights how teachers valued the continuity of learning that digital platforms provided.

Another teacher emphasized that digitalization allowed him to "extend the classroom into students' homes," stressing that in contexts where students struggle with transportation or conflicting schedules, online access mitigated traditional barriers.

However, the enthusiasm was tempered by caution. Some teachers described digitalization as "a double-edged sword." While it empowered motivated students to work independently, it also enabled less engaged students to disengage completely. One teacher lamented: "For my most motivated students, digitalization is wonderful. They watch videos, take notes, and even ask questions online. But for others, it is an excuse to disappear. I can no longer monitor them in the same way."

This ambivalence reflects a broader concern: teachers perceived digitalization as a tool with enormous potential, but one whose effectiveness depended heavily on student motivation, cultural attitudes, and institutional support.

4.2 Digital Tools and Platforms Used

When asked about the tools they used, all participants mentioned Moodle, the official platform mandated by the Ministry of Higher Education. Yet their accounts revealed serious limitations.

Teachers frequently described Moodle as “unreliable,” “difficult to navigate,” and “rarely checked by students.” One teacher noted: “I upload my lectures on Moodle, but very few students actually download them. They prefer that I send the same file on WhatsApp.” This highlights the mismatch between institutional platforms and student preferences.

To overcome these limitations, teachers turned to informal tools. WhatsApp emerged as the most frequently used platform, largely because it was already part of students’ daily communication habits. Teachers used WhatsApp groups to share reminders, distribute documents, and respond quickly to student queries. One teacher admitted: “Honestly, I feel like WhatsApp is more effective than Moodle. It’s immediate, and the students are there all the time. It is not academic, but it works.”

For synchronous sessions, Zoom and Google Meet were mentioned. These platforms enabled face-to-face interaction during the pandemic, but participants emphasized that they were often disrupted by poor connectivity. Teachers also integrated YouTube videos to illustrate authentic English usage, PowerPoint slides to structure lessons, and online quizzes for formative assessment. The variety of tools demonstrates teachers’ pragmatic and creative adaptation. Instead of relying exclusively on institutional directives, they assembled an eclectic toolbox of resources tailored to students’ needs and the technological realities of Algerian classrooms.

4.3 Challenges and Barriers

Although teachers valued digitalization, they repeatedly underlined the challenges that undermined its effectiveness. The most persistent barrier was unstable internet connectivity. Participants described frequent disconnections during live sessions and slow downloads that frustrated both teachers and students. One participant recounted: “Sometimes I spend more time trying to reconnect than actually teaching. I prepare my lesson, but the connection cuts, and the students disappear. It is very discouraging.” This infrastructural weakness reduced confidence in digital teaching and made synchronous lessons difficult to sustain.

A second challenge was the lack of institutional training and support. Teachers reported that they were expected to digitalize their courses without adequate preparation. They received little guidance on how to design online activities, assess students fairly, or use advanced features of Moodle. As one teacher put it: “We were told to put our lessons online, but nobody showed us how. We learned by ourselves, through trial and error.” This lack of structured training left teachers relying on personal initiative, further widening the gap between enthusiastic adopters and hesitant users.

Assessment posed another critical problem. Teachers worried about ensuring fairness and preventing plagiarism in online examinations. Some attempted to design open-book assessments, while others asked students to submit projects, but the sense of vulnerability remained. One participant confessed: “When I give online tests, I am never sure who is really answering. It is easy to cheat, and we don’t have the tools to monitor them.”

Finally, teachers drew attention to student disengagement. While some students thrived in digital environments, many treated online lessons as optional. Teachers reported absenteeism, lack of participation in forums, and minimal effort in assignments. This contrasted with the high expectations teachers had for digital learning, reinforcing the perception that technology alone could not solve deep-rooted motivational issues.

5. Discussion

The purpose of this study was to investigate EFL teachers’ perceptions of digitalization in Algerian higher education, with a particular focus on their experiences at Badji Mokhtar University.

The findings confirm the three previously formulated hypotheses and enrich the literature on educational digitalization in developing contexts. Below, the discussion situates these findings within the broader scholarly debate and highlights both convergences and divergences with prior research.

5.1 Teachers’ Perceptions of Digitalization: Balancing Optimism and Caution

The results showed that teachers generally perceived digitalization as an opportunity to enhance teaching flexibility, student autonomy, and instructional diversity. This aligns with global findings in the literature, where digital platforms have been praised for their ability to support self-paced learning, increase access to resources, and break down temporal and spatial barriers (Harmer, 2015; Bozkurt et

al., 2020). Teachers in this study highlighted the ways digitalization extended their classrooms “beyond the two hours of lectures per week,” demonstrating recognition of its transformative potential.

However, this optimism was tempered by caution. Several participants described digitalization as “a double-edged sword,” acknowledging that while motivated students flourished, less engaged learners disengaged completely. This ambivalence parallels Ilter’s (2009) findings on the motivational role of technology in EFL contexts: while technology can act as a motivator for some, it can equally lead to distraction and passivity if students lack the internal drive to participate. Thus, teachers in the Algerian context recognized digitalization as a promising but not universally effective solution, dependent on student responsibility and institutional scaffolding.

This tension reflects the broader critique raised by João, Silva, and Almeida (2020), who cautioned that digitalization carries both risks and opportunities. In the Algerian case, the risks appear particularly severe due to persistent structural challenges such as limited connectivity, underdeveloped training systems, and weak monitoring of student engagement. These findings emphasize that teachers’ attitudes toward digitalization cannot be fully understood without situating them within the infrastructural and cultural realities of Algerian higher education.

5.2 Pragmatic Adoption of Tools: Between Official Platforms and Informal Practices

A striking finding was the gap between the official institutional platform, Moodle, and the tools that teachers actually used. While Moodle was mandated by the Ministry of Higher Education, teachers often found it unreliable and ineffective, reporting that students rarely accessed it. Instead, they relied heavily on WhatsApp for communication and on Zoom, Google Meet, YouTube, and PowerPoint to deliver lessons.

This pragmatic approach supports the second hypothesis and resonates with Osika, Johnson, and Buteau’s (2009) argument that faculty members often choose tools that are accessible, familiar, and widely adopted by students rather than those officially prescribed. The Algerian teachers’ reliance on WhatsApp illustrates this vividly. Although not designed as an educational platform, WhatsApp functioned as an effective bridge, enabling immediate interaction and greater student responsiveness.

Interestingly, this improvisational use of informal tools also echoes Mayora's (2006) study in Colombia, which highlighted the potential of integrating CALL informally into EFL classrooms. Teachers in both contexts demonstrated flexibility and creativity, adapting available technologies to meet their pedagogical needs. The Algerian case adds complexity by showing how informal tools became not just supplementary but central to digital teaching practices, reflecting institutional shortcomings in platform usability and student digital culture.

This result carries important implications for digital policy. It suggests that top-down imposition of platforms may fail if students do not perceive them as user-friendly or relevant. Instead, institutions should consult both teachers and students when selecting platforms and provide continuous training to ensure alignment between official systems and real classroom practices.

5.3 Systemic Barriers: Infrastructure, Training, Assessment, and Engagement

The third major theme concerned the challenges and barriers teachers faced. The findings confirmed that these barriers were overwhelmingly structural rather than attitudinal, reinforcing the third hypothesis. Teachers consistently mentioned unstable internet connectivity as the most pressing issue, describing how frequent disconnections disrupted synchronous classes and discouraged both students and instructors. This finding echoes Ziani's (2021) conclusion that poor infrastructure remains the critical weakness of online learning in Algerian universities.

Another barrier was the lack of institutional training and support. Teachers reported that they were expected to digitalize their courses without sufficient guidance, relying instead on self-directed learning and peer support. This contrasts with the recommendations of Baran, Correia, and Thompson (2011), who argued that teachers need structured professional development to develop the competencies required for effective digital instruction. The absence of such support in Algeria reflects a gap between policy rhetoric and practical implementation.

Assessment challenges further complicated the adoption of digitalization. Teachers doubted the fairness and reliability of online examinations, voicing concerns about plagiarism and academic dishonesty. Similar worries have been reported in global literature, with OECD (2021) noting that ensuring academic integrity remains

one of the greatest challenges of digital education. Algerian teachers responded with pragmatic adaptations, such as assigning projects or open-book assessments, but these solutions were described as temporary and unsatisfactory.

Finally, student disengagement was highlighted as a critical issue. Teachers observed that while a minority of students thrived in digital settings, many others treated online lessons as optional. This resonates with Aliu, Krasniqi, and Zeneli's (2023) observation that digitalization requires a cultural shift in learning attitudes, one that is often slow to develop in systems accustomed to traditional, teacher-centered approaches.

5.4 Situating Algerian Findings within Global Debates

Overall, the findings of this study align with global research on digitalization in higher education, but they also highlight the specificity of the Algerian context. While teachers shared the enthusiasm and concerns found in international studies, their experiences were shaped by the unique challenges of underdeveloped infrastructure, limited institutional training, and cultural attitudes toward learning.

The teachers' preference for blended learning as the most sustainable model is particularly significant. This preference aligns with João, Silva, and Almeida (2020), who argued that digitalization should be integrated gradually and pragmatically, rather than replacing face-to-face instruction outright. In Algeria, the consensus among teachers was that while digital tools enriched their teaching, they could not replicate the immediacy and interpersonal dimensions of in-person classrooms. This reflects Harmer's (2015) emphasis on the importance of real-time interaction, especially in language learning, where non-verbal cues, spontaneous feedback, and social presence are integral to communicative competence.

Thus, this study contributes to the literature by demonstrating how global discourses on digitalization intersect with local realities. Algerian teachers are not resistant to change; rather, they are constrained by systemic limitations. Their creative reliance on informal tools shows agency, but also highlights the urgent need for institutional reforms.

6. Recommendations

The findings of this study point to several urgent recommendations for policymakers, higher education administrators, and EFL practitioners in Algeria. These recommendations are designed to bridge the gap between the potential of digitalization and its actual practice in Algerian universities.

6.1 Strengthening Infrastructure and Connectivity

The most immediate priority for policymakers is the improvement of digital infrastructure. Teachers repeatedly emphasized that unreliable internet connections disrupted their lessons and demotivated students. Without stable connectivity, even the most innovative pedagogical designs collapse in practice. Policymakers should therefore prioritize investments in high-speed internet access, both on campus and in student residences. This could include partnerships with telecommunications companies to expand coverage, as well as government subsidies to make internet packages more affordable for students and faculty. Comparable initiatives in other contexts have shown that infrastructure development is a prerequisite for sustainable digitalization (Aliu et al., 2023). Unless these structural issues are addressed, digitalization in Algerian higher education will remain fragile and inconsistent.

6.2 Providing Comprehensive Teacher Training and Professional Development

A second priority is structured training for teachers. The findings revealed that teachers were expected to digitalize their courses with little to no institutional support, learning instead through trial and error. This not only increases teacher workload but also produces uneven adoption of digital practices across departments. Algerian universities should establish ongoing professional development programs that train faculty in designing online lessons, integrating multimedia, facilitating digital interaction, and assessing students fairly in digital contexts. Such programs should not be limited to one-off workshops but should be sustained, scaffolded, and adapted to teachers' varying levels of digital competence (Baran et al., 2011; Mishra & Koehler, 2006). Furthermore, incentives such as certification or recognition for teachers who complete training could encourage broader participation and signal institutional commitment to digital transformation.

6.3 Enhancing the Usability of Institutional Platforms

The gap between the mandated use of Moodle and teachers' actual reliance on informal tools like WhatsApp reveals a serious misalignment between institutional policy and classroom practice. To resolve this, universities must make their official platforms more user-friendly and responsive to the needs of both teachers and students. This may involve redesigning the interface, ensuring mobile accessibility, and providing technical support. Institutions should also consult teachers and students in the decision-making process regarding platform choice and upgrades, ensuring that official tools align with actual classroom realities. By making institutional platforms genuinely effective, universities can reduce dependence on informal tools and enhance the professionalism and integrity of digital teaching.

6.4 Developing Clear Guidelines for Assessment and Academic Integrity

Teachers' concerns about online assessment point to the need for clear institutional guidelines and technological tools to ensure fairness and academic integrity. Universities should explore the adoption of secure online testing platforms, plagiarism detection software, and proctoring tools where appropriate. At the same time, assessment strategies should be diversified beyond traditional examinations, incorporating project-based assignments, portfolios, and collaborative tasks that reduce opportunities for dishonesty (OECD, 2021). Providing teachers with training on assessment design will further empower them to create fair and transparent evaluation systems.

6.5 Promoting Student Engagement and Digital Culture

The issue of student disengagement highlights the necessity of fostering a stronger digital learning culture among students. Universities should provide orientation sessions to help students adapt to online learning environments, emphasizing the importance of participation, time management, and digital etiquette. Moreover, embedding digital literacy into the curriculum could empower students to become more responsible and autonomous learners. Teachers can support this by designing interactive activities, such as discussion forums, group projects, and peer reviews, that encourage active engagement rather than passive reception of content. As

Harmer (2015) noted, language learning thrives on interaction, and digitalization must replicate this interactivity to be effective.

7. Conclusion

The purpose of this study was to explore the perceptions of EFL teachers regarding the integration of digitalization into higher education at Badji Mokhtar University in Annaba. Through in-depth interviews with five teachers, the study provided a comprehensive portrait of how digital transformation is experienced at the classroom level in an Algerian university context. The results highlight both the promise and the limitations of digitalization in a system marked by structural constraints, limited institutional support, and uneven student engagement.

The findings revealed that teachers view digitalization as an important opportunity to enrich their teaching practices, enhance flexibility, and expand access to learning resources. They recognized its potential to promote student autonomy and provide continuity beyond traditional lecture hours. These perspectives align with global research that emphasizes the transformative potential of digital technologies in language education (Harmer, 2015; Bozkurt et al., 2020). At the same time, teachers expressed ambivalence, cautioning that digitalization is a “double-edged sword” that can both empower and disengage students, depending on their motivation and cultural attitudes toward learning.

Another important finding concerned teachers’ pragmatic adaptation of tools. While Moodle, the official platform, was used to some extent, teachers relied more heavily on informal tools such as WhatsApp, Zoom, Google Meet, and YouTube. This reliance on non-institutional tools highlights both teacher agency and institutional inadequacies. It shows that teachers are resourceful in overcoming obstacles, but also emphasizes the gap between policy mandates and classroom realities. As other studies have suggested (Mayora, 2006; Osika et al., 2009), technology adoption is often shaped more by accessibility and usability than by official prescriptions.

The challenges teachers faced were overwhelming and systemic. Poor internet connectivity, lack of structured training, difficulties with assessment, and student disengagement all emerged as recurring themes. These barriers confirm earlier observations about the fragility of digitalization in Algerian universities (Ziani, 2021) and resonate with global concerns about the risks of inequity and academic dishonesty in digital environments (OECD, 2021). Yet, what is striking in the Algerian case is not teacher resistance but rather their

willingness to adapt and experiment despite inadequate institutional conditions.

The implications of this study are significant for policy and practice. It demonstrates that Algerian teachers are ready to engage with digitalization, but their efforts remain constrained by external factors. Strengthening infrastructure, improving the usability of institutional platforms, and providing continuous professional development are therefore essential steps if digitalization is to fulfill its promise. Without these measures, the burden of adaptation will continue to fall disproportionately on teachers, resulting in uneven outcomes for students.

This research also contributes to the broader scholarly conversation by situating the Algerian experience within global debates on digitalization. It shows that while many challenges are shared internationally, others are deeply contextual. For example, the heavy reliance on WhatsApp as a pedagogical tool is uniquely reflective of local realities, where affordability, accessibility, and familiarity often outweigh formality and institutional endorsement. Such findings remind us that digitalization cannot be understood solely as a technological shift but must also be analyzed as a cultural and systemic transformation.

Finally, the study is not without limitations. The small sample size, limited to five teachers in one university, means the findings cannot be generalized to all Algerian institutions. Future research could expand the sample to include multiple universities, compare urban and rural contexts, or integrate student perspectives to provide a more holistic picture of digitalization. Longitudinal studies could also examine how teacher attitudes evolve as infrastructure improves and institutional support increases.

In conclusion, digitalization in Algerian higher education represents both a challenge and an opportunity. Teachers at Badji Mokhtar University embody the paradox of enthusiasm and frustration: they embrace digital tools and innovate with available resources, yet remain constrained by systemic obstacles. The future of digital education in Algeria will depend not on teachers' willingness, which is evident, but on the ability of institutions and policymakers to provide the infrastructure, training, and cultural shift necessary to sustain meaningful change.

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