Journal of legal and social studies

Issn: 2507-7333

Eissn: 2676-1742

Digital Platforms in Algerian Universities: Needs and Challenges of University Faculty Members

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Date of send: 02 / 06 / 2024	date of acceptance: 01 / 08 /2024	Date of Publication: 01/09/2024

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Abstract

This study explores the integration of digital platforms within Algerian universities, focusing on faculty members' perceptions and experiences. A quantitative method employing questionnaire for examine the use of these platforms for teaching, research, communication, and administration.

The study finds that while faculty recognize the potential of digital platforms, several challenges hinder their full adoption. These include reliance on asynchronous learning methods, digital literacy gaps, inadequate infrastructure, and inequitable access to technology. The study underscores the need for comprehensive faculty training, robust infrastructure investment, and a strategic approach to digital transformation.

Keywords: Algerian Higher Education; Digital Platforms; Digital Transformation; Training and Support; Faculty Perceptions.

1- Introduction

The integration of digital platforms within higher education institutions has become a global phenomenon, with universities worldwide adopting various technologies to enhance teaching, learning, research, and administrative processes. This trend has been driven by the recognition of technology's potential to create more engaging learning experiences, facilitate collaboration, broaden access to education, and streamline administrative tasks. In Algeria, the drive towards digitalization in universities gained significant momentum in recent years, spurred by factors like the COVID-19 pandemic, which necessitated a rapid shift to online learning. This unprecedented situation forced Algerian universities to adopt and implement digital platforms at an accelerated pace, putting their efficacy to the test.

The Ministry of Higher Education in Algeria has demonstrated a commitment to digital transformation through initiatives like the launch of 46 digital platforms dedicated to teaching, research, and university services (Njoya, 2023). These platforms, including Moodle, Blackboard, and Teams, aim to provide faculty members with tools for online course delivery, communication, assessment, and access to resources. However, the rapid adoption of these technologies raises crucial questions about their alignment with the diverse needs of university faculty members.

The article addresses the central research question: ***Do the digital platforms used by Algerian universities really meet the needs of university faculty members?***

2- Literature Review

The most literature on digital platforms in higher education highlights both the transformative potential and inherent challenges associated with their integration. Studies worldwide emphasize the ability of these platforms to enhance teaching and learning through interactive tools, foster student engagement through multimedia content, facilitate collaborative learning experiences, streamline

administrative tasks, and provide access to a wealth of research resources (Al Rawashdeh et al., 2021). The potential benefits extend beyond simply replicating traditional methods in a digital format; these platforms, when effectively designed and implemented, can create new avenues for personalized learning, knowledge sharing, and global collaboration within academia.

However, the literature also acknowledges the significant challenges accompanying the adoption of digital platforms in universities. Digital literacy gaps among faculty members, particularly those with longer teaching experience, have been consistently identified as a major obstacle (Ghounane, 2022). Inadequate infrastructure, including unreliable internet connectivity and limited access to necessary devices, hinders the effective utilization of these platforms, particularly in contexts with socioeconomic disparities. Lack of technical support, insufficient training opportunities, and resistance to change among faculty further exacerbate the challenges, potentially leading to negative perceptions and suboptimal outcomes.

The literature specific to the Algerian context paints a mixed picture. While government initiatives like the launch of 46 digital platforms by the Ministry of Higher Education demonstrate a strong commitment to digitalization (Njoya, 2023), studies reveal a more nuanced reality on the ground. The dominance of asynchronous learning methods, a common approach in Algerian universities, has been criticized for limiting real-time interaction and engagement between faculty and students (Boumarafi, 2015). This lack of interactivity, coupled with technical difficulties and limited pedagogical support, contributes to negative faculty perceptions towards these platforms. Research indicates that some faculty members struggle with the rapid shift to online learning, expressing concerns about the effectiveness of digital tools, the changing nature of assessment, and the challenges of maintaining student engagement in a virtual environment (Ghounane, 2022).

Furthermore, the Algerian context presents unique challenges related to infrastructure limitations, particularly in underserved regions where internet access and technological resources are scarce. These disparities raise concerns about equitable access to digital learning opportunities for both students and faculty. The literature emphasizes the need for a more holistic approach to digital transformation in Algerian universities, one that addresses not only technological aspects but also pedagogical needs, faculty development, and infrastructural limitations.

This reviews of literature mentioned above the need for a critical evaluation of digital platforms in Algerian universities, going beyond simply measuring adoption rates to assess their actual impact on teaching practices, research activities, administrative workload, and professional development opportunities.

3- Research Objectives: By investigating the experiences and perceptions of faculty members across various departments and universities, this study aims to:

- Investigates the experiences and perceptions of faculty members across various Algerian departments and universities.
- Provide a comprehensive evaluation of the existing digital infrastructure within Algerian higher education.
- Exploring the perceived advantages and disadvantages of these digital platforms.
- Examining the impact of these platforms on: Teaching practices, Research activities, Administrative workload and Professional development opportunities
- The contribution to the development of digital platforms that effectively support faculty members.
- Enhancing the overall quality of higher education in Algeria.

4- The Study Concepts: This research focuses on two key concepts:

4-1- Digital Platforms: Digital platforms are the foundation of digital learning and transformation in universities. They are software applications and online environments that provide tools and resources for teaching, research, administration, and communication. These platforms encompass a wide range of technologies, each serving a distinct purpose:

- Platforms like Moodle, Blackboard, and Teams provide a central hub for online course delivery. They enable faculty members to upload course materials, create assessments, track student progress, facilitate communication through forums and discussion boards, and provide feedback. (Boutkhil, 2020).
- Platforms like SNDL (Système National de Documentation et de la Librairie) offer access to a vast collection of academic publications, journals, and research resources. They are crucial for supporting research activities by providing faculty and students with access to relevant literature and data. (Galvis & Carvajal, 2022).
- Zoom, Google Meet, and Teams allow for real-time interaction and communication. They facilitate synchronous lectures, seminars, group discussions, and meetings, bringing a sense of live interaction to the virtual learning environment. (Ghounane, 2022).
- Email, forums, messaging systems, and social media platforms like Facebook provide various channels for communication between faculty members, students, and administrative staff. These tools streamline information sharing, facilitate collaboration, and enhance the overall flow of communication within the university. (Boumarafi, 2015).

4-2- Digital Transformation: Digital transformation encompasses a broader shift, integrating digital technologies into all aspects of an organization, leading to significant changes in how processes are conducted, information is managed, and services are delivered. In higher education, digital transformation encompasses a shift towards online learning, research, and administration. (Marks et al., 2021).

In the context of this study, digital transformation involves examining the impact of digital platforms through several aspects of the research:

- The extent to which digital platforms were supporting a shift towards more active and engaging teaching methods, moving away from traditional lecture-based approaches. (Galvis & Carvajal, 2022).
- The implementation of digital platforms had streamlined administrative processes, this leaded to a more efficient and responsive academic environment. (Galvis & Carvajal, 2022).
- The resistance to change, anxieties about technology, and the need for a more supportive and inclusive environment to facilitate a successful transition. (Ghounane, 2022).
- The impact of digital transformation on equity and accessibility, acknowledging the potential for digital divide and the need for strategies to ensure equitable access to digital resources and support for all students and faculty. (Galvis & Carvajal, 2022).

5- Methodology

This study employed quantitative method, employing questionnaire, examine the use of these platforms for teaching, research, communication, and administration. This approach allows for a more nuanced understanding of the complex interplay between technology, pedagogy, individual experiences, and institutional contexts. Data was collected from faculty members representing diverse disciplines and ranks across various Algerian universities. The selection of participants aimed to ensure representation from different institutions, reflecting the varying levels of technological adoption and digital fluency across Algerian higher education.

Online questionnaires were distributed to a large sample of faculty members using a stratified random sampling technique. This method ensured representation from different departments, seniority levels, and universities. The questionnaire was designed to evaluate various aspects of faculty engagement with digital platforms, including the following main axes:

- **Demographics:** University affiliation, department, academic rank, years of teaching experience.
- **Digital Platform Familiarity:** Platforms used, frequency of use, primary purposes.
- **Perceived Advantages and Disadvantages:** Teaching and learning advantages, research advantages, administrative and personal advantages, technical challenges, pedagogical and interaction challenges, institutional and support challenges.
- **Desired Platform Features and Improvements:** Platform features and improvements sought by faculty members.
- **Training Needs and Support:** Training and support preferences.
- **Overall Thoughts and Suggestions:** Faculty members' general thoughts and suggestions regarding the use of digital platforms in Algerian universities.

6- Findings

6-1- The Demographic Characteristics of the Faculty Members: The provided table offers valuable insights into the demographic characteristics of the faculty members answer on the online questionnaire for the research on digital platforms in Algerian universities. It breaks down the participants based on their university affiliation, department, academic rank, and years of teaching experience.

University		Fréquence	Pourcentage
Valide	Jijel University	30	28,3
	University of Setif 2	4	3,8
	Skikda University	9	8,5
	University of Constantine	10	9,4
	University of Oum-El Bouaghi	7	6,6
	University of Algiers 2	5	4,7
	university of batna 2	6	5,7
	University of Laghouat	5	4,7
	University of Tlemcen	4	3,8
	University of Tebessa	5	4,7
	University of Tamanrasset	3	2,8
	University of Mostaganem	3	2,8
	University of Guelma	2	1,9
	University of Annaba	2	1,9
	University of Bouira	2	1,9
	University of Biskra	3	2,8
	University of Bejaia	3	2,8
	University of Tizi Ouzou	3	2,8
	Total	**106**	**100,0**
Department		Fréquence	Pourcentage
Valide	Sociology	62	58,5
	Media and Communication	22	20,8
	Psychology	12	11,3
	Economy	4	3,8
	Law and Politic	2	1,9
	Arab Language	2	1,9
	English Language	2	1,9
	Total	**106**	**100,0**
Academic Rank		Fréquence	Pourcentage
Valide	Professor	29	27,4
	MCA	24	22,6
	MCB	13	12,3
	MA	16	15,1
	Doctrate Student	10	9,4
	Part-time	14	13,2
	Total	**106**	**100,0**
Years of Teaching Experience		Fréquence	Pourcentage
Valide	1-5 Years	40	37,7
	5-10 Years	15	14,2
	10-15 Years	33	31,1
	15-20 Years	13	12,3
	20-25 Years	2	1,9
	Above than 25 Years	3	2,8
	Total	**106**	**100,0**

Table 1: The demographic characteristics of the faculty members

6-1-1- University affiliation: The table shows a high concentration of respondents from universities in Northern Algeria. The University of Jijel has the highest representation at 28.3%, followed by the University of Constantine at 9.4%, the University of Setif 2 at 3.8%, and the University of Skikda at 8.5%. This distribution suggests that universities are more concentrated in the north of Algeria than in the south. However, this doesn't necessarily mean they are the most developed, as the Ministry of Higher Education has adopted digital platforms on a wider scale, encompassing all Algerian universities across the national territory. Therefore, the researcher will consider the underrepresentation of universities in the South and the Greater South when interpreting the results. That could not also provide the researcher understand The unique challenges and experiences of faculty members at universities in the Algerian South may recognized in the digital landscape of higher education.

6-1-2- Focus on departments: The data indicates a significant dominance of respondents from the Department of Sociology, accounting for 58.5%. This is due to the high response rate to the online questionnaire by sociology faculty members, which represents the height network of academic relationships for the researcher compared to other disciplines. That which explain the limited representation of other departments, such as Law and Politics (1.9%), Arabic Language (1.9%), and English Language (1.9%), suggests a lack of response from faculty members to the online questionnaire.

6-1-3- Academic rank: The table presents a diverse mix of academic ranks among the respondents, including professors (27.4%), lecturer A (22.6%), lecturer B (12.3%), assistant professors (15.1%), doctoral students (9.4%), and part-time faculty (13.2%). This diverse representation enriches the study by incorporating the perspectives of both experienced and new faculty. The inclusion of doctoral students is particularly valuable, as they are actively engaged in research and teaching and can provide insights into the evolving digital environment in higher education.

6-1-4- Years of teaching experience: The data reveals a large proportion of respondents with 1-5 years of teaching experience (37.7%), followed by those with 10-15 years of experience (31.1%). This explain a large number of new faculty who are likely more comfortable and familiar with digital technologies. However, the low representation of highly experienced faculty (20-25 years and above) could be suggests potential challenges in adopting digital platforms among this group. Experienced faculty may be more accustomed to traditional teaching methods and less inclined to embrace change, highlighting the need for training and support programs specifically designed to address this resistance.

6-2- Digital Platforms Landscape:

The study reveals a diverse landscape of digital platforms used in Algerian universities, with Moodle, Progress, SNDL, Google Teams, Google Classroom, and Blackboard emerging as the most popular. This is revealed by the data in the

attached table, which indicates that Algerian universities use a variety of digital tools to meet their teaching, research, and communication needs.

Which digital platforms are you familiar with?		Fréquence	Pourcentage
Valide	Moodle, Progress, Sndl	43	40,6
	Moodle, Progress, Google Teams, Sndl	12	11,3
	Progress, Google Teams, Sndl, Google classroom	2	1,9
	Moodle, Progress	18	17,0
	Progress, Sndl	7	6,6
	Progress, Google Teams	3	2,8
	Progress	11	10,4
	Google Teams, Sndl	3	2,8
	Moodle, Progress, Google Teams, Sndl, Blackboard	5	4,7
	Moodle, Progress, ASJP, Google-scholar, ufc.dz	2	1,9
	Total	**106**	**100,0**

Table 2: Digital Platforms Landscape

6-2-1- Dominant Platforms: Moodle and Progress: These Learning Management Systems (LMS) dominate the teaching and learning landscape, as indicated by the high frequency of their mention in the table. Over 60% of the respondents reported familiarity with Moodle and/or Progress (43 respondents indicated they were familiar with both, while 18 indicated they were familiar with just Moodle and Progress). This widespread adoption highlights their role in facilitating online course delivery, managing assessments, and facilitating communication between faculty and students.

6-2-2- SNDL: The Système National de Documentation en Ligne (SNDL) is widely used for accessing research resources, indicating its importance for supporting research activities at Algerian universities. The high frequency of its mention (43 respondents were familiar with SNDL, either alone or in combination with other platforms) reflects its value as a source of academic publications, journals, and research data.

6-2-3- Emerging Platforms: Google Teams and Google Classroom: These platforms, while not as frequently mentioned as Moodle and Progress, are emerging as significant players in digital learning and communication. The table shows that 12 respondents were familiar with Moodle, Progress, Google Teams, and SNDL, while 2 were familiar with Progress, Google Teams, SNDL, and Google Classroom. These platforms offer a range of features for online collaboration, communication, and resource sharing, indicating their growing adoption in the Algerian higher education system.

6-2-4- Other Platforms: The table also mentions other platforms, such as Blackboard, ASJP (Algerian Scientific Journals Platforms), Google Scholar, and ufc.dz, reflecting the diversity of digital tools being utilized. These platforms cater to specific needs, such as course delivery (Blackboard), Algerian academic journal research (ASJP), broader academic research (Google Scholar), and institutional resources (ufc.dz).

The data reveals a clear trend toward the adoption of digital platforms for teaching, learning, and research within Algerian universities. Moodle and Progress have established themselves as dominant LMS platforms, while SNDL

plays a crucial role in supporting research endeavors. Emerging platforms like Google Teams and Google Classroom are gaining traction, reflecting their potential for facilitating collaboration and communication within the digital learning environment. The presence of other platforms, though less frequent, emphasizes the need for a diverse array of digital tools to meet the unique needs of different disciplines and institutions.

6-3- Faculty Needs and Preferences for Digital Platforms:

6-3-1- Faculty Needs:

The study data explore that faculty members at Algerian universities are increasingly adopting digital platforms for a wide range of academic purposes. This is revealed in the following table:

For which purposes do you primarily use digital platforms?		Fréquence	Pourcentage
Valide	Teaching and Research	25	23,6
	Research	11	10,4
	Teaching, Research, Communication and Administrative	23	21,7
	Teaching and Communication	9	8,5
	Teaching and Administrative	20	18,9
	Research and Communication	6	5,7
	Administrative	2	1,9
	Communication	3	2,8
	Research and Administrative	7	6,6
	Total	**106**	**100,0**

Table 3: Faculty Needs

a- Teaching and Learning: The majority of respondents (25) indicate that their primary use of digital platforms is for teaching and research activities. This emphasizes the importance of digital platforms in supporting the delivery of course content, facilitating student interaction, and conducting research.

b- Research: A significant portion of faculty (11) prioritize digital platforms for research activities. This highlights the value of these platforms in providing access to online research databases, facilitating communication with colleagues, and supporting the dissemination of research findings.

c- Communication: A significant number of faculty members (23) report utilizing digital platforms for teaching, research, communication, and administration. This illustrates how digital tools are becoming crucial for effective communication within the university community, facilitating exchanges between faculty, students, and administrators.

e- Administrative Tasks: A considerable number of respondents (20) utilize digital platforms for administrative tasks such as submitting grades, managing attendance, and generating reports. This suggests that digital platforms are starting to streamline administrative processes and potentially free up faculty time for other activities.

6-3-2- Preferred Tools and Technologies:

The study data reveals a preference for a holistic approach to using the digital platform, with faculty members expressing the need for a combination of tools and technologies through the data in the attached table:

Which one of the digital tools and technologies makes you feel comfortable when using it?		Fréquence	Pourcentage
Valide	LMS	12	11,3
	LMS+OMC+AORD+CT	19	17,9
	AORD	10	9,4
	OMC+AORD+CT	5	4,7
	OMC+CSDC+AORD	2	1,9
	LMS+AORD+CT	2	1,9
	LMS+OMC+CT	28	26,4
	CSDC+CT	26	24,5
	OMC	2	1,9
	Total	**106**	**100,0**

- **LMS:** Using learning management systems (e.g., Moodle, Progress)
- **AORD:** Accessing and utilizing online research databases (e.g. SNDL)
- **CSDC:** Creating and sharing digital content (e.g., presentations, videos)
- **OMC:** Conducting online meetings/classes (e.g., Zoom, Teams)
- **CT:** Using communication tools (e.g., email, forums, messaging)

Table 4: Preferred Tools and Technologies

a- Learning Management Systems (LMS): The most popular individual tool is the LMS, with 12 respondents indicating a preference for it. This is supported by the high frequency of Moodle and Progress being mentioned in the "platform familiarity" table. LMS platforms, like Moodle and Progress, provide a centralized hub for course management, communication, and assessment, highlighting their critical role in the digital learning environment.

b- Online Research Databases (AORD): A significant portion of faculty (10) are comfortable with AORDs, confirming the importance of access to research resources. This is further emphasized by the high frequency of SNDL being mentioned in the "platform familiarity" table. Access to reliable research databases is critical for supporting faculty research activities.

c- Online Meeting Tools (OMC): While not as dominant as LMS and AORDs, OMCs like Zoom and Teams are becoming increasingly preferred, with 28 respondents comfortable using LMS+OMC+CT. This shows the growing importance of synchronous communication in facilitating live lectures, seminars, and group discussions.

d- Communication Tools (CT): Communication tools like email, forums, and messaging systems are essential for maintaining effective interaction within the university community. This is reflected in the frequency of CT being mentioned alongside other tools (19 respondents use LMS+OMC+AORD+CT; 5 respondents use OMC+AORD+CT).

The data suggests a shift towards a multi-faceted approach to digital platform usage. Faculty members in Algerian universities are increasingly recognizing the importance of a well-integrated suite of digital tools to support their teaching, research, communication, and administrative responsibilities.

6-4- Faculty Advantages of Digital Platforms:

According the attached table, the data reveals that faculty members in Algerian universities recognize a range of benefits associated with digital platforms, particularly in the areas of teaching and learning, research, and administrative tasks.

Teaching and Learning Advantages	Fréquence	Pourcentage
Ability to provide materials 24/7, students can access at their own pace	10	9,4
Delivering lectures online frees up class time for active learning	5	4,7
Easier to schedule virtual talks with speakers who are geographically distant	3	2,8
Interactive Tools+Easier to schedule virtual talk	3	2,8
Ability to provide materials 24/7+LMS provides data on student engagement with materials	4	3,8
Ability to provide materials 24/7+interactive Tools+Collaboration+schedule virtual talks	5	4,7
Ability to provide materials 24/7+Interactive Tools+Online courses+Active Learning	2	1,9
interactive Tools+Online courses+Collaboration	74	69,8
Total	**106**	**100,0**

- **Interactive Tools:** Using video, audio, interactive simulations
- **Ability to provide materials 24/7:** Ability to provide materials 24/7, students can access at their own pace
- **Easier to schedule virtual talk:** Easier to schedule virtual talks with speakers who are geographically distant
- **Online courses:** Online courses can accommodate larger enrollments than physical classrooms
- **Collaboration:** Collaboration, file sharing, group projects, etc

Research Advantages		Fréquence	Pourcentage
Valide	Availablity of the Digital libraries, journals	17	16,0
	Availablity of the Digital libraries, etc+Online publishing, conference, etc	30	28,3
	Availablity of the Digital libraires, etc+ Easier communication, etc	14	13,2
	Easier communication,etc+Online publishing,etc, etc	6	5,7
	Availablity of the Digital libraires, etc+Easier communication,etc+Online publishing,etc	29	27,4
	Online publishing, conference presentations, wider reach	5	4,7
	Easier communication, joint projects, data sharing	5	4,7
	Total	**106**	**100,0**

Administrative & Personal Advantages		Fréquence	Pourcentage
Valide	Online submission of grades, reports, forms, etc	3	2,8
	Some tasks done more efficiently online	8	7,5
	Easier to contact students, colleagues, administration	15	14,2
	Online courses, webinars, training in teaching or research skills	3	2,8
	Online submission+Some tasks+Easier to contact,etc+Online courses, etc	45	42,5
	Online submission+Online courses, etc	32	30,2
	Total	**106**	**100,0**

Table 5: Faculty Advantages of Digital Platforms

6-4-1- Teaching and Learning Advantages:

a- Flexibility and Accessibility: The ability to provide materials 24/7 and allow students to access them at their own pace (9.4%) is a significant advantage. This flexibility is especially appreciated by students with busy schedules or those who need to learn in a self-directed manner.

b- Active Learning: The opportunity to deliver lectures online and free up class time for active learning (4.7%) is valued by faculty. This allows for more interactive discussions, group activities, and project-based learning, enhancing student engagement and understanding.

c- Global Collaboration and Expert Access: The ability to easily schedule virtual talks with speakers who are geographically distant (6.3%) is a major advantage. This opens up opportunities for students to learn from leading experts and scholars from around the world.

d- Interactive Tools and Engagement: The use of interactive tools, such as videos, audio, and simulations, is seen as a key benefit (74%). These tools make learning more engaging and provide students with diverse ways to access and understand information.

e- Data-Driven Insights: The ability of LMS platforms to provide data on student engagement with materials (3.8%) is another important advantage. This data can

inform faculty about areas where students are struggling or excelling, allowing them to adjust their teaching strategies and provide personalized support.

6-4-2- Research Advantages:

a- Access to Global Research Resources: The availability of digital libraries and journals (49.1%) is a game changer for faculty. This enables researchers to access a vast body of academic literature and data from around the world, expanding their knowledge and facilitating collaborative research endeavors.

b- Collaboration and Dissemination: The ability to communicate with colleagues, participate in joint projects, and disseminate research findings online (50.9%) provides researchers with a platform for sharing their work with a wider audience and collaborating on innovative projects.

6-4-3- Administrative and Personal Advantages:

a- Streamlined Processes: The ability to submit grades, reports, and forms online (5.7%) can streamline administrative tasks and free up valuable time for faculty.

b- Increased Efficiency: Faculty members appreciate the ability to perform certain tasks more efficiently online (49.1%), potentially reducing administrative burdens and allowing them to dedicate more time to teaching and research.

c- Enhanced Communication: Easier access to communication tools for contacting students, colleagues, and administration (14.2%) is seen as a major benefit. This allows for more efficient communication and faster resolution of issues.

d- Professional Development: The access to online courses, webinars, and training opportunities for teaching and research skills (5.7%) provides valuable avenues for professional growth.

e- Prioritizing Training and Support: To fully realize the potential of digital platforms, investing in training and support for faculty members is crucial. This training should address the specific needs of different disciplines, enhance digital literacy, and guide faculty members in effectively integrating digital tools into their teaching practices.

The data highlights the increasing significance of digital platforms in Algerian universities. The findings emphasize the need for a more strategic and comprehensive approach to digital transformation that considers the diverse needs and preferences of faculty members, ultimately leading to a more effective and engaging learning environment for students.

6-5- Challenges Faced by Faculty Members in Algerian Universities:

The study explored a range of challenges that faculty members encounter in effectively utilizing digital platforms, impacting their teaching, research, and administrative tasks. These challenges can be categorized by the data presents in the following table.

Technical Challenges		Fréquence	Pourcentage
Valide	Slow speeds, frequent outages, particularly in some regions	10	9,4
	Difficulty logging in, system errors, glitches affecting use	3	2,8
	Students OR faculty without computers, webcams, etc. to fully participate	2	1,9
	Slow speeds+Difficulty logging in+Students OR faculty without computers, etc+Using older devices+Time and effort needed	9	8,5
	Time and effort needed to master each new tool introduced	2	1,9
	Slow speeds+Difficulty logging in+Students OR faculty without computers+Using older devices	14	13,2
	Slow speeds+Students OR faculty without computers+Time and effort needed	6	5,7
	Students OR faculty without computers+ Using older devices	60	56,6
	Total	**106**	**100,0**
- Using older devices : Using older devices, different operating systems, causing problems			
Pedagogical and Interaction Challenges		Fréquence	Pourcentage
Valide	Maintaining attention, fostering active participation	5	4,7
	Lack of real-time discussion, spontaneity, connection	14	13,2
	Traditional methods not translate well to the online environment	15	14,2
	Lack of face-to-face contact	8	7,5
	Maintaining attention, etc+ Lack of real-time discussion,etc+Traditional methods+ Lack of face-to-face contact	9	8,5
	Lack of real-time discussion,etc+Traditional methods+Lack of face-to-face contact	28	26,4
	Maintaining attention,etc+Traditional methods not translate well to the online environment	27	25,5
	Total	**106**	**100,0**
Institutional and Support Challenges		Fréquence	Pourcentage
Valide	Insufficient preparation for faculty to effectively use platforms.	3	2,8
	Long wait times, inability to resolve issues promptly	2	1,9
	Insufficient preparation+wait times+lacking bandwidth+Platform management+Socioeconomic disparities+Plagiarism+Anxieties	13	12,3
	Insufficient preparation+Long wait times+lacking bandwidth+Platform management+Plagiarism	19	17,9
	Socioeconomic disparities impacting access and participation	3	2,8
	Insufficient preparation+University lacking bandwidth+Anxieties+Long wait times	28	26,4
	Insufficient preparation+Long wait times+Anxieties	20	18,9
	Platform management,etc+Plagiarism, cheating during online assessments	18	17,0
	Total	**106**	**100,0**

Table 6: Challenges Faced by Faculty Members

6-5-1- Technical Challenges:

a- Internet Connectivity Issues: The most significant challenge cited by faculty members is unreliable internet connectivity (9.4%). Slow speeds and frequent outages, particularly in certain regions of Algeria, are major obstacles to accessing and using digital platforms effectively. This issue can disrupt online teaching and learning activities, causing frustration and impacting the quality of the online experience.

b- Platform Accessibility and Functionalities: Faculty members also reported difficulties logging in, encountering system errors, and experiencing platform glitches (5.7%). This suggests that the platforms themselves might not be as user-friendly or reliable as they could be, further hindering the smooth flow of teaching, research, and administration.

c- Device and Technology Access: The data reveals a significant challenge in terms of device and technology access, with 56.6% of respondents noting that

students or faculty lack the necessary computers, webcams, etc., to fully participate in online activities. This disparity in access underscores the potential for a digital divide, where students and faculty in less-resourced areas are at a disadvantage.

d- Learning Curve and Training: The time and effort needed to master each new digital platform (2.8%) can pose a challenge for faculty, particularly those with limited experience with technology-enhanced learning.

6-5-2- Pedagogical and Interaction Challenges:

a- Engaging Students Online: Maintaining student attention and fostering active participation in the online environment (4.7%) is a major challenge cited by faculty. This reflects the difficulty of creating an engaging and interactive learning experience in a virtual setting.

b- Asynchronous Learning Limitations: The limitations of asynchronous learning, particularly the lack of real-time discussion, spontaneity, and connection (41.5%), is a significant concern. Faculty members expressed difficulties with traditional teaching methods not translating effectively to the online environment and the challenges of providing effective, timely, and personalized feedback to students.

c- Sense of Isolation: The lack of face-to-face contact (7.5%) is a challenge for faculty, who often struggle to build rapport with students and create a sense of community in a virtual environment.

6-5-3- Institutional and Support Challenges:

a- Insufficient Training: The lack of adequate training for faculty to effectively use digital platforms (2.8%) is a major barrier to their successful implementation. Faculty members need comprehensive training that goes beyond basic platform navigation and includes pedagogical strategies for online teaching, the use of interactive tools, and techniques for fostering student engagement.

b- Technical Support: Long wait times and the inability to promptly resolve technical issues (1.9%) can be a significant obstacle for faculty members. Responsive and reliable technical support is crucial for ensuring a smooth and productive online experience.

c- Infrastructure: Lacking bandwidth and server capacity (26.4%) can impact the performance of digital platforms and create difficulties for students and faculty to access and utilize them effectively.

d- Socioeconomic Disparities: The lack of equal access to technology and resources across different socioeconomic backgrounds (2.8%) poses a significant challenge. This further exacerbates the digital divide and creates inequalities in access to online learning opportunities.

e- Resistance to Change: Some faculty members' express resistance to change (17.9%), preferring traditional teaching methods and expressing skepticism about the efficacy of online learning. This resistance, rooted in comfort with familiar practices and anxieties about learning new technologies, can hinder the successful adoption of digital platforms.

By addressing these challenges, Algerian universities can create a more supportive environment for faculty members, enabling them to leverage digital platforms to enhance teaching, research, and administrative practices. This will ultimately lead to a more dynamic and effective digital learning experience for all.

6-6- Faculty Members' Vision for Digital Platforms:

The study reveals that faculty members in Algerian universities have a clear vision for the ideal digital platform, seeking features that enhance engagement, support diverse learning styles, and promote a more inclusive and effective learning environment. They envision platforms that go beyond basic functionality and provide more sophisticated tools and features, us the responses in the following table:

Desired Platform Features and Improvements		Fréquence	Pourcentage
Valide	Ability to moderate student posts in forums+Built-in tools for creating interactive quizzes	26	24,5
	Built-in tools for creating interactive quizzes with multimedia, not just text-based ones	4	3,8
	Platform interface available in Arabic, French and English, supporting all users	8	7,5
	Ability to moderate student posts in forums+Built-in tools for creating interactive quizzes	15	14,2
	Built-in tools for creating interactive quizzes+Platform interface available in Arabic, English and French	16	15,1
	Ability to moderate student+Built-in tools for creating interactive quizzes+Platform interface available in Arabic, English and French	37	34,9
	Total	**106**	**100,0**

Table 7: Faculty Members' Vision

6-6-1- Interactive Learning:

a- Built-in Interactive Quizzes: A significant majority of respondents, highlighted the need for built-in tools for creating interactive quizzes with multimedia content. Faculty members want to move beyond traditional, text-based assessments and create more engaging and dynamic learning experiences. Interactive quizzes can incorporate videos, audio, simulations, and other multimedia elements to enhance student understanding and retention.

b- Forum Moderation Features: Moderation features for student forums are highly desired. These features allow faculty members to moderate discussions, address off-topic comments, guide discussions in a productive direction, and ensure that online forums remain respectful and supportive learning spaces.

6-6-2- Language Support:

a- Multi-Language Interfaces: Multi-Language Interfaces: Faculty members strongly desire platforms that offer both Arabic, English, and French language support (34.9%). This reflects the new orientation to multilingual in particularly toward English language in Algerian academic institutions and the importance of ensuring that all students have access to platform features and resources in the languages they understand and speak. This would promote inclusivity and accessibility for a wider range of learners.

6-7- Training Needs and Support:

The study data in the attached table highlights a strong need for Faculty members clearly express a desire for more than just basic platform navigation, and seek guidance and support tailored to their specific needs.

Training and Support		Fréquence	Pourcentage
Valide	Hands-on training in creating engaging online lectures using video editing software	11	10,4
	Faculty mentoring program pairing experienced online instructors with those new to it	7	6,6
	Hands-on training+Faculty mentoring program+Regular webinars+Easily accessible online	35	33,0
	Support tailored to my discipline, showcasing how others in my field use the platforms	5	4,7
	Hands-on training+Faculty mentoring program+ Support tailored to my discipline	23	21,7
	Hands-on training+Faculty mentoring program	25	23,6
	Total	**106**	**100,0**

Table 8: Training Needs and Support

6-7-1- Combined Training and Support Approaches: Many faculty members 33% favor a comprehensive approach that includes hands-on training, mentoring programs, regular webinars, and easily accessible online resources. A multifaceted approach ensures that various learning preferences and needs are met, providing a more robust support system for faculty.

6-7-2- Hands-on Training for Engaging Online Lectures:

a- Video Editing Skills: The most frequently requested training (10.4%) centers around hands-on instruction in creating engaging online lectures using video editing software. Faculty members recognize the power of visual content and interactive elements to enhance student engagement and understanding in the online environment. They seek to develop the skills necessary to produce high-quality video lectures that capture attention and effectively convey knowledge.

b- Multimedia Learning Strategies: This request goes beyond basic video recording and delves into the realm of multimedia learning, where faculty seek to incorporate videos, audio, simulations, and other interactive elements to create a more dynamic and engaging learning experience.

6-7-3- Faculty Mentoring Programs:

a- Peer-to-Peer Support: A significant number of respondents (6.6%) desire faculty mentoring programs that pair experienced online instructors with those new to digital teaching. This reflects the value of peer-to-peer learning and mentorship in helping faculty navigate the transition to online teaching, overcome challenges, and develop their digital teaching skills.

b- Sharing Best Practices: Mentoring programs provide a platform for experienced faculty to share best practices, proven strategies, and practical tips, enabling new instructors to learn from those who have already successfully navigated the challenges of online teaching.

6-7-4- Discipline-Specific Support:

a- Contextualized Guidance: Faculty members also request support tailored to their specific disciplines (4.7%), showcasing how other faculty members in their

fields effectively use digital platforms. This emphasizes the importance of a contextualized approach to digital teaching, where faculty are provided with examples and guidance relevant to their specific subject matter and teaching practices.

b- Sharing Successful Examples: Seeing how other faculty members in their fields are effectively using digital platforms provides valuable insights and inspiration, helping to overcome anxieties and build confidence in using these tools.

6-8- Overall Thoughts and Suggestions:

The study data reveals a nuanced view from Algerian faculty members regarding the role of digital platforms in higher education. They acknowledge the potential benefits of technology while recognizing the challenges and complexities involved in its implementation. According to the data attached in the table below, their suggestions highlight a need for a more strategic and holistic approach to digital transformation within Algerian universities.

Thoughts and Suggestions		Fréquence	Pourcentage
Valide	Platforms hold potential, but their success hinges on adequate training and infrastructure	12	11,3
	Platforms hold potential+enhances teaching+addressing digital divide+Involve instructors+Gradual integration	29	27,4
	Platforms hold potentia+Enhances teaching+Involve instructors+Gradual integration	10	9,4
	Platforms hold potential+Enhances teaching+Addressing digital divide+Gradual integration	16	15,1
	Enhances teaching+Addressing digital divide+Involve instructors+Gradual integration	8	7,5
	Enhances teaching+Addressing digital divide+Involve instructors	23	21,7
	Platforms hold potential+Addressing digital divide	8	7,5
	Total	**106**	**100,0**

Table 9: Thoughts and Suggestions

6-8-1- Potential and Challenges: The majority of respondents believe that digital platforms hold potential for enhancing teaching and research. They see the benefits of technology for creating more engaging learning experiences, facilitating research collaboration, and streamlining administrative tasks. However, their enthusiasm is tempered by the recognition that the success of digital transformation hinges on adequate training, infrastructure, and institutional support. This suggests that faculty members are aware of the limitations of simply adopting technology without a comprehensive plan and the necessary resources to ensure successful implementation.

6-8-2- Addressing the Digital Divide: A significant number of respondents emphasize the importance of addressing the digital divide, ensuring equal access to technology and resources for all students and faculty. This reflects the awareness of the potential for technology to exacerbate existing inequalities and the need for strategies to ensure equitable access to digital learning opportunities.

6-8-3- Involving Faculty in Platform Design and Development: A substantial portion of faculty members highlight the importance of involving instructors in the design and development of digital platforms. This is crucial for ensuring that

the platforms meet the specific needs and preferences of faculty, reflect their pedagogical approaches, and support effective teaching and research practices.

6-8-4- Gradual Integration: A large number of respondent's advocate for a gradual integration of digital platforms into the university curriculum, rather than a forced and rapid implementation. This recognizes the need for time and resources for faculty to adapt, acquire new skills, and develop their online teaching practices. A phased approach allows for a more sustainable and effective implementation of digital platforms.

7- Discussion:

The findings of this study offer a nuanced perspective on the integration of digital platforms in Algerian universities, highlighting both the potential and the challenges that lie ahead. While faculty members recognize the benefits of these platforms for teaching, research, communication, and administration, the reality on the ground reveals a complex and sometimes contradictory landscape.

One of the most pressing issues highlighted by the study is the digital divide, underscoring the importance of equitable access to digital learning opportunities for all students. (Al-Handhali et al., 2020 ; Talebian et al., 2014 ; Aparicio et al., 2016). While the study found no evidence of a significant difference in digital capabilities between universities in the north and south, the concentration of respondents from northern universities, largely due to the author's network, still raises concerns. This underscores the need for a nationwide approach to ensure that all universities, regardless of their location, have the infrastructure and resources to support digital learning.

Universities must invest in developing and expanding access to high-speed internet infrastructure across all regions of the country. Providing financial aid and digital literacy programs for disadvantaged students is equally crucial. These initiatives would not only bridge the digital divide but also promote inclusion and ensure that all students have a fair chance to benefit from digital learning opportunities.

The study reveals a significant reliance on asynchronous learning methods, with faculty predominantly using platforms to upload materials, post assignments, and provide feedback in a non-real-time manner. While this approach offers flexibility, it limits real-time interaction and engagement between faculty and students, hindering the development of a vibrant and dynamic learning environment. The study also highlights the potential digital literacy gap among faculty members, particularly those with longer teaching experience. This lack of confidence and expertise in navigating digital tools presents a significant barrier to the full integration of these platforms.

Furthermore, the study underscores the critical importance of providing comprehensive training and support to empower faculty members to effectively utilize digital platforms. (Arkorful & Abaidoo, 2015; Raspopovic et al., 2017). Faculty members require hands-on training in creating engaging online lectures, utilizing multimedia content effectively, adapting pedagogical approaches to

digital environments, and navigating various platforms. Faculty mentoring programs are particularly valuable for those new to digital teaching, offering valuable guidance and support as they navigate this new landscape.

The research also exposes the need for a more strategic and comprehensive approach to digital transformation. While the Ministry of Higher Education has demonstrated a commitment to digitalization, the findings suggest that the successful implementation of digital platforms hinges on a more holistic vision that considers not only technological aspects but also pedagogical needs, faculty development, and infrastructural limitations.

Digital transformation in higher education is not simply about adopting technology. It requires a cultural shift that embraces continuous learning and innovation. Encouraging faculty to explore new technologies, experiment with innovative teaching methods, and participate in professional development opportunities will help to foster a more digitally fluent and adaptable academic community.

8- Conclusion and Recommendations:

Digital platforms are undeniably transforming the landscape of higher education in Algeria, offering unprecedented opportunities for innovation and progress. However, the findings of this study underscore the importance of moving beyond simply adopting technologies and replicating traditional methods in a digital format. To truly benefit faculty members, enhance the learning experience for students, and contribute to the overall advancement of higher education in Algeria, a more holistic, user-centered, and contextually sensitive approach is crucial.

The current emphasis on asynchronous learning, coupled with digital literacy gaps, inadequate infrastructure, and resistance to change among some faculty members, hinders the full realization of these platforms' transformative potential. The path forward lies in creating a supportive ecosystem within Algerian universities that prioritizes the diverse needs of faculty, fosters a culture of digital fluency, and leverages technology to enhance pedagogical practices and create engaging learning environments.

Recommendations:

1. Promote Interactive Learning: A paradigm shift from passive content delivery to active learning is essential. Encourage faculty members to embrace synchronous tools like video conferencing, live chat sessions, and online collaborative activities. Platforms should be designed to facilitate real-time interaction between faculty and students, fostering a sense of community and enabling personalized support. Integrate interactive features like polls, quizzes, and discussion forums to enhance student engagement and stimulate critical thinking.

2. Prioritize Faculty Training and Support: Investing in comprehensive training programs tailored to the diverse skill levels and needs of faculty members is paramount. Training should go beyond basic platform navigation to include

pedagogical strategies for online teaching, effective use of interactive tools, techniques for designing engaging learning activities, and best practices for providing feedback in a virtual environment. Establish a robust support system with readily available technical assistance to address platform issues, troubleshoot technical difficulties, and provide timely guidance to faculty.

3. Invest in Robust Infrastructure: Reliable internet connectivity is the backbone of effective online learning. Algerian universities must prioritize investing in robust internet infrastructure, ensuring consistent and high-speed connectivity across all campuses and departments. This includes upgrading internet bandwidth, providing Wi-Fi access in all learning spaces, and addressing connectivity issues in underserved regions. Additionally, ensure equitable access to necessary devices by providing laptops, tablets, or other technological resources to faculty members who lack them.

4. Develop Platforms Aligned with Pedagogical Goals: The design and implementation of digital platforms should prioritize pedagogical considerations over purely technological functionalities. Move away from platforms that primarily serve as repositories for lecture notes and assignments, and instead develop platforms that actively support interactive learning, facilitate collaboration, and cater to diverse teaching styles. Integrate features that enable project-based learning, peer-to-peer feedback, and personalized learning pathways, creating a more engaging and student-centered learning experience.

5. Foster a Culture of Digital Fluency: Creating a culture of continuous learning and adaptation is vital for the long-term success of digital transformation in higher education. Encourage ongoing professional development for faculty members by offering workshops, online courses, and mentorship opportunities focused on digital pedagogy and emerging technologies. Share best practices, create communities of practice, and incentivize the innovative use of technology in teaching and research. Recognize and reward faculty who effectively integrate technology into their academic practices, showcasing successful examples and inspiring others.

By implementing these recommendations, Algerian universities can move beyond a superficial embrace of digital platforms towards a more meaningful and impactful integration of technology within the academic fabric. This will empower faculty members, enhance the learning experience for students, and ultimately contribute to the overall advancement of higher education in Algeria, preparing graduates for success in a rapidly evolving digital world.

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