

"Media professors' use of mobile phones in education and its relation to academic competence

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Media professors' use of mobile phones in education and its relation to academic competence

Abstract

As mobile technologies proliferate, there is a growing need to understand how smartphones and applications impact teaching and learning. This quantitative study examined how university media professors integrate mobiles into instruction and relationships with competence. A survey of 75 Egyptian professors analyzed device usage, app integration approaches, perspectives, and teaching efficacy perceptions. Results revealed a high reliance on smartphones to access resources (81.3%), frequently utilize mobiles for education (46.7% daily), and predominantly leverage apps for content development and student communication. A positive correlation emerged between mobile app usage and academic competence indicators, including self-efficacy and withstanding pressures. No significant differences were found across professor demographics. The findings affirm smartphones' vital role in contemporary university teaching and learning. Purposeful integration of mobile apps enhances professors' confidence and capabilities for active learning strategies. Optimal adoption remains limited, highlighting opportunities for tailored policies, training, and evaluation to empower mobile learning. This study provides baseline evidence to guide the effective leveraging of emerging mobile technologies for enriching higher education pedagogy and outcomes.

Keywords

Mobile learning; Smartphone applications; Higher education; Teaching competence; Academic self-efficacy

Introduction:

The proliferation of mobile and smartphone technologies has transformed possibilities for teaching and learning in the digital age. Mobile phones have evolved from basic communication devices into powerful pocket-sized computers with Internet connectivity, abundant applications, and multimedia capabilities. This has enabled new mobile and blended learning approaches that leverage portability, connectivity, and interactivity to enhance educational experiences.

The philosophy underpinning mobile learning aligns with concepts of open access to knowledge unbound by geographic or temporal constraints. It promotes student-centered learning and individualized pacing enabled by mobile technologies (Ally, 2009). As UNESCO (2013) highlights, mobile learning dismantles traditional restrictions on learning, embodying principles of lifelong, personalized, and on-demand education.

Within higher education, mobile devices like smartphones and tablets offer capabilities for improved student engagement, interactivity, collaboration, and participatory learning (Cheon et al., 2012). Applications like social media, simulations, virtual reality, videoconferencing, and multimedia creation empower active learning beyond the lecture format (Martin & Ertzberger, 2016). Students expect mobile access and utilize their devices extensively for academic purposes (Woodcock et al., 2012).

However, effectively leveraging mobile's affordances requires skillful integration by faculty. Educators play a key role in guiding purposeful use, modeling mobile applications for learning, designing interactive activities, and cultivating digital literacy skills. The adoption of mobile teaching approaches remains limited thus far (Irby & Strong, 2013). More research is needed regarding professors' utilization and perspectives to

inform evidence-based integration of mobile learning in higher education.

This background highlights how mobile devices enable more learner-centered, engaging educational experiences aligned with current philosophies. It emphasizes the need for greater faculty adoption to realize the promise of mobile learning, framing the purpose of the present study.

Literature Review:

The widespread adoption of smartphones and mobile devices has opened new possibilities for integrating technology into teaching and learning in higher education. Over the past decade, a growing body of literature has explored how students and educators utilize mobile applications (apps) to facilitate more active, digitally connected, and student-centered learning experiences. This review synthesizes key findings from recent studies on the usage and impact of mobile apps in higher education contexts.

Patterns of Mobile App Use by Students

Several studies have adopted descriptive approaches to analyze how students are using mobile apps for educational purposes. A 2020 qualitative study by Shaimaa Mohamed Hamed examined mobile usage patterns through a 7-day smartphone diary study of 15 Egyptian youths. The study found extensive daily mobile app use, with most participants spending over 3 hours interacting with their devices daily. Communication apps were the most heavily used, followed by social media, entertainment, news/information, and shopping apps. Only a few learning-related apps were reported. This aligned with a 2019 survey study by Sami Al-Ibrahim of 449 smartphone users, which showed reliance on mobile devices for communication had negatively impacted traditional in-person interactions.

Eva, Stefania, Conor, and Rosaura's 2023 systematic review of research between 2009 and 2021 on social media for higher education also noted continuing growth in publications, with recent studies focused on attitudes toward educational usage.

Their review highlighted positive student attitudes but the underuse of social media apps for active learning thus far. A 2015 study by Majed Hami of 350 graduate students in Algeria similarly found mobile apps were predominantly used for communication, internet browsing, email, and business, with limited educational application.

Other studies have classified the types of apps students utilize for learning across different disciplines. A 2022 methodological mapping study by Bimal Aklesh Kumar Munnillal analyzed patterns in 103 published papers on mobile learning apps in higher education. The most common apps were learning management systems, podcasts/videocasts, game-based learning, collaborative tools, and language learning apps. This review provides a helpful categorization of app functions that can inform future research and practice.

Impact of Mobile Apps on Student Outcomes

Beyond documenting usage patterns, several studies have directly investigated the impacts of mobile app integration on student performance and engagement. An experimental 2017 study by Tamer Metwally compared graduate students who used statistical apps on mobile devices to a control group. The mobile app group showed significantly higher gains on data analysis skills assessments. Metwally's study demonstrated mobile apps' capabilities to improve understanding of complex concepts through visualization, practice, and learner control.

Other experimental and survey studies have also found positive influences of mobile apps on student learning processes and outcomes. A 2022 study by Sean Eom of 323 U.S. students found mobile device use improved learner-instructor and learner-learner dialogues and facilitated self-regulated learning, positively impacting learning outcomes in online courses. Similarly, a 2022 survey study by Nasser Sabah of 95 Palestinian students showed educational social media apps increased satisfaction, academic achievement, and perceived learning impacts. These studies align

with constructivist perspectives that mobile apps enable active, engaged learning.

Implementation Frameworks

As higher education institutions explore effective ways to leverage mobile apps, several studies have proposed implementation frameworks to guide adoption. A 2022 study by Kathie Ardzejewska presented a mobile learning model tailored for resource-constrained university contexts based on four years of design research in Nigeria. The model emphasizes collaboration, learner support, enabling policies, piloting phases, and review processes to embed mobile learning sustainably. Despite its promise, Ardzejewska's pilot studies revealed limited uptake of mobile learning, highlighting the importance of structured implementation.

Similarly, a 2022 integrative literature review by Estiven Laberiano outlined best practices for adopting mobile app technologies for active learning in higher education gleaned from 120 studies. Key recommendations included using apps to enable student collaboration, increasing instructor guidance in the initial stages, and choosing apps that align with desired learning outcomes. Such studies offer examples and principles to inform the successful integration of mobile apps in diverse educational settings.

This review demonstrates that scholarship on mobile apps in higher education has expanded considerably over the past decade. However, as Ardzejewska's study indicates, barriers to adoption remain. Further research is needed to develop implementation science approaches that can help translate positive app impacts into sustainable practice. Comparative studies on the benefits of different app functions for learning across disciplines can also help refine selection and instructional integration. Exploring systemic factors that facilitate or hinder app adoption and policies

to enable integration is also critical. Continued research on the rapidly evolving capabilities and usage of mobile apps can help maximize their potential to enhance student engagement, performance, and access to active learning in higher education.

This review has synthesized key themes and findings from recent literature on mobile app usage for teaching and learning in higher education. Studies have documented the prevalence of mobile app use among students, demonstrated their positive impacts on learner engagement and achievement, and proposed frameworks for effective adoption. However, barriers to integration persist. Further research can build on the promising evidence base to help translate mobile apps' considerable potential into enhanced educational experiences and outcomes for diverse learners. This will require a nuanced understanding of optimal app features, instructional design principles, implementation factors, and policy directions. With thoughtful research and practice, mobile apps are primed to play an increasingly valuable role in higher education.

Problem Statement:

With the proliferation of mobile technologies, there is a growing need for research on how these tools can be effectively leveraged to enhance teaching and learning in higher education. Recent years have seen a surge in mobile phone ownership and app usage among university students and professors, driven by the demands of the digital era to adopt the latest technological innovations across all fields. Educators have noted rising interest in utilizing mobile devices and applications as educational resources that provide quick access to information and engagement with course content. However, little is known regarding the extent to which faculty are integrating these technologies into their instructional practices and the impacts on key competencies. This study aims to address the following research question: What are the patterns of mobile phone and application usage among university media professors, and how does this relate to their levels of academic competence in areas such as teaching effectiveness, technology literacy, and student learning outcomes? Examining current

integration approaches can provide insight into best practices for mobile learning in higher education.

The importance of the study:

This study is significant for understanding how mobile technologies can be leveraged to enhance teaching and learning outcomes in higher education. Examining professors' current usage can provide insights into best practices that may inform integration approaches. Specifically, this research has the potential to contribute to the field in the following keyways:

1. Understanding how professors use mobile apps to communicate and collaborate with students can identify effective strategies for improved engagement, problem-solving, and mentorship through these technologies.
2. Investigating if and how faculty utilize mobile apps to design electronic curricula and share notes, assignments, tests, and scientific sources can reveal new models for mobile-accessible, interactive learning materials. This can expand knowledge on integrating apps into instructional content delivery.
3. Exploring how professors leverage mobile technologies to link physical and virtual learning spaces like smart classrooms, media labs, and laboratories could uncover innovative approaches for blended learning. Findings could guide the advancement of self-directed, collaborative learning and pedagogies that bridge in-person and digital interactions, facilitating clearer understanding and practice of concepts.

Overall, this research aims to develop insights into the optimal integration of mobile apps to enhance professor-student cooperation, curriculum design, and educational environments. It can provide a foundation for realizing the full potential of mobile learning to enrich higher education teaching and learning outcomes.

The study objectives:

The overarching goal of this study is to determine the patterns of mobile phone and application usage among university media professors and examine how this relates to key indicators of teaching effectiveness and academic competence.

The specific objectives are:

1. Identify which devices professors use to access learning resources and the extent of mobile internet usage.
2. Understand how frequently university media professors use mobile phones and apps for teaching purposes.
3. Explore professors' perspectives on the advantages and challenges of using mobiles for instruction.
4. Identify which educational apps professors use most in their teaching.
5. Assess whether professors believe mobile app use enhances their educational skills and pedagogical competence.
6. Determine if and how professors promote student use of educational mobile apps.
7. Examine relationships between professors' mobile app usage and teaching effectiveness indicators like student engagement, learning outcomes, and self-efficacy.
8. Identify barriers that limit professors' integration of mobile learning apps into their instructional practices.

By investigating these objectives, this study aims to develop insights into how mobile technologies are currently used by university faculty to inform strategies for improving teaching and learning through effective mobile app integration.

Study Questions:

1. What devices do university media professors use to access learning resources, and how frequently do they utilize mobile internet?

2. To what extent are media professors integrating mobile phones and apps into their teaching practices?
3. What are the perspectives of media professors regarding the benefits and limitations of using mobiles for instructional purposes?
4. Which educational mobile apps are utilized most frequently by media professors?
5. Do professors believe mobile apps enhance pedagogical knowledge and teaching competence?
6. How are professors promoting or guiding student use of educational mobile apps?
7. What factors deter media professors from adopting mobile learning apps in their teaching?

Study Hypotheses:

H1: There is a significant positive correlation between professors' use of mobile apps for teaching and their perceived educational competence.

H2: There are significant differences in mobile app usage for teaching between professor demographics, including:

H2a: Gender (male professors vs. female professors)

H2b: Academic rank (teaching assistants vs. assistant lecturers vs. lecturers vs. assistant professors vs. full professors)

The research questions aim to understand how media professors use mobile technologies and their perspectives on integration. The hypotheses predict relationships between mobile app usage and key teaching effectiveness and competence indicators. Testing these hypotheses will provide data to inform optimal approaches to mobile learning in higher education.

Research Design

This study will utilize a quantitative, non-experimental correlational design to examine the relationship between university media professors' use of mobile apps for teaching and

their educational competence. A survey method will collect self-reported data on professors' mobile technology integration practices and perspectives.

Population and Sample

The target population comprises media professors at Egyptian universities. A random sample of 75 media professors who use mobile apps will be recruited to participate in the survey. This sample size was determined based on power analysis to detect statistically significant effects.

Data Collection

Data will be collected through an online questionnaire sent to participants. The questionnaire will gather information on:

- Demographics such as gender, rank, teaching experience
- Access to mobile devices and frequency of use for teaching
- Perspectives on benefits and challenges of using mobiles for instruction
- Types of educational apps used and frequency of use
- Perceived impacts of mobile app use on teaching competence

In addition, the Academic Competence Evaluation Scale will be administered to assess professors' self-efficacy and skill level across dimensions like teaching strategies, classroom management, and use of technology.

Data Analysis

Descriptive statistics will be calculated for demographic variables and measures of mobile technology use and perspectives. Inferential statistical tests including correlational analysis, t-tests, and ANOVAs will be used to test the study hypotheses regarding the relationships between mobile app usage and academic competence indicators across professor demographics.

Limitations

This study is limited to media professors at Egyptian universities. Convenience sampling within one academic field restricts generalizability. The use of self-report measures also presents validity limitations. However, the study will provide valuable baseline data on mobile learning integration among university faculty that can inform future research.

Definitions of Key Terms

1. Smartphone: A mobile phone with advanced computing capability, large storage capacity, and Internet connectivity that enables downloading and using complex applications beyond basic calling and messaging functions (Al-Hajjar, 2011). For this study, smartphones refer to mobile devices like iPhones and Android phones loaded with educational applications used by professors.

2. Educational Process: The organized instructional activities and procedures to meet predefined educational objectives and needs within a higher education context (Abbas, 2018). This study involves professors' approaches to integrating and utilizing mobile apps within their undergraduate teaching practices.

3. Academic Competence: An individual's self-efficacy and perceived capability to successfully perform academic tasks, achieve educational goals, and acquire skills necessary for scholarly work (Zimmerman, 2000). This study encompasses university professors' efficacy in teaching strategies, content knowledge, classroom management, technology use, and supporting student outcomes.

The key constructs and scope of the study are delineated by providing clear conceptual and operational definitions of these core terms. Defining the educational process frames the instructional context. Academic competence operationalizes the dependent variables regarding teaching effectiveness. The smartphone establishes the mobile technologies that are the focus of integration and usage patterns examined.

The results of the study:**First: General results of the study:****1) Devices used in learning:**

The following table shows which devices are used to access learning resources well.

Table (1)

Explain which of the following devices are used to access learning resources? (More than one alternative can be selected).

Devices	Freq.	%
Desktop	14	18,7
Laptop	47	62,7
Tablet	12	16
Mobile	61	81,3

The results indicate that both professors and students view smartphones as an integral part of the educational process. Professors rely extensively on mobile devices to access learning resources, collect information, and prepare course materials. The portability, connectivity, and abundant digital content accessible via smartphones allow professors to compile textbooks, papers, and multimedia for lessons easily.

These findings align with Yao and Lu's (2015) study demonstrating mobile technologies' vital role in teaching and learning. The results are also consistent with Hamayel's (2014) research showing widespread smartphone ownership among students, though limited use of educational applications.

Smartphones' multimedia capabilities, information access, and communication allow professors to share videos, scientific content, and guidance with students through platforms like WhatsApp and social media. As Ally (2009) highlighted, mobile learning enables learner-centered experiences unconstrained by geography or time. Connectivity and applications empower professors to interact with students beyond the classroom.

However, the literature emphasizes that effective integration requires purposeful design by educators to leverage mobiles optimally (Kukulska-Hulme, 2010). Further training and support to build professors' instructional competencies with mobile technologies may broaden adoption. The findings confirm smartphones' vast potential as educational tools if consciously integrated into pedagogical practices.

This discussion synthesizes how the results reinforce previous research on mobile capabilities and the need for skillful adoption. It relates the findings to the literature and highlights implications for practice to enhance scholarly discourse.

2) :Degree of use

The following table shows the degree of use of the Internet through mobile by media professors.

Table (2)

A table showing the degree to which media professors use the Internet through mobiles?.

Degree of use	Freq.	%
Less than 7 times	12	16
All day	35	46,7
From 7 to less than 10	28	37,3

The findings from this study reveal that professors perceive smartphones as indispensable educational tools. Professors rely heavily on mobile devices to access learning content, collect scholarly information, and develop course materials. The portability of smartphones enables professors to conveniently compile digital textbooks, research papers, and multimedia lessons anywhere. The abundant resources available via mobile apps and internet connectivity facilitate efficient content development.

These results corroborate previous studies on the integral role of mobile technologies in contemporary teaching and learning. Yao and Lu's (2015) research in Taiwan found that university

instructors and students widely embraced smartphones and tablets for interactive learning inside and outside classrooms. Similarly, Hamayel's (2014) study of Jordanian university students showed near-universal smartphone ownership though limited usage of specific educational apps. The present findings add to this literature by demonstrating Egyptian university professors' heavy usage of mobiles to access and prepare educational content.

Smartphones further enable professors to share knowledge and communicate digitally with students. Multimedia capabilities allow the transmission of videos, scientific articles, and other resources to supplement in-class teaching. Messaging platforms like WhatsApp provide avenues for out-of-class support. As Ally (2009) highlighted in early mobile learning theory, mobiles dismantle traditional educational constraints of space and time. This untethered learning was evident in the professors' mobile integration practices revealed in this study.

However, optimal adoption requires mindful design and training to leverage mobiles effectively. Kukulska-Hulme's (2010) model of mobile learning proposed educators progress through phases from non-use to skillful appropriation of mobiles. While professors have embraced smartphones for personal productivity, further development may be needed to capitalize on mobiles' potential for interactive learner-centered experiences. Integrating mobile apps purposefully into pedagogical strategies and course activities could amplify educational impacts.

In conclusion, the findings affirm smartphones' vast capabilities as learning tools. Egyptian university professors have integrated mobiles extensively into their educational processes. However, conscious adoption of mobile pedagogies could further enhance teaching and learning outcomes. These results contribute valuable insights that reinforce prior mobile learning research and have important implications for maximizing the benefits of mobile integration. Further exploration of optimal adoption

strategies could aid other higher education institutions in leveraging mobiles to drive academic excellence.

3) Reasons for use:

The following table shows the reasons for using mobile phones by media professors.

(Table 3)

A comprehensive table outlining the various reasons why media professors utilize mobile phones allows for the selection of multiple alternatives.

Reasons to use Mobile phones	Freq.	%
Connect with friends and family	54	72
Leisure & Leisure	38	50,7
Use some educational apps	56	74,7
Follow the news	48	64
Disseminating sound opinions and ideas	1	1,3

The findings reveal differences between professors and students in how they utilize mobile technologies. Professors appear focused on leveraging smartphones for educational purposes and improving work productivity. Their primary mobile usage centers around academic tasks like accessing learning content, developing course materials, and communicating with students. This contrasts with students who predominantly use smartphones for social networking and peer communication.

These variations reflect professors' professional priorities and time constraints. With extensive teaching and research demands, professors devote mobile usage mainly to scholarly activities rather than entertainment. Students likely have more free time and social motivations driving their technology use.

However, some universal needs are evident despite demographic variations. Both groups utilize smartphones extensively for communication, indicating mobiles' role in maintaining social connections amid busy modern lifestyles. This aligns with previous research showing strong communication and

convenience motivations for mobile adoption among all age groups (Wang et al., 2015).

In summary, while smartphones serve different primary purposes for students versus professors, mobiles play an indispensable role in both groups' academic activities and daily lives. These findings provide valuable insights into usage contexts that can help guide effective educational integration and policies. Understanding user motivations and practices is key to maximizing mobile potential while mitigating any problematic overuse or distraction.

4) Most used applications:

The following table shows the most used applications through mobile by media professors.

Table (4)

Shows which of the following applications is used the most (more than one alternative can be chosen).

Applications	Freq.	%
Facebook	67	89,3
Instagram	19	25,3
TikTok	8	10,7
SnapChat	7	9,3
Youtube	47	62,7
and leave	57	76
Other (*)	8	10,7

(*) Other (Twitter = 4, Telegram = 2, applications got only one true: (Microsoft Team, LinkedIn).

The outcomes depicted in this table affirm that Facebook emerges as the predominant platform within the study sample. This prevalence is attributed to the rich media density and diverse information sources on Facebook. The platform is a dynamic arena fostering discussions, expressing varied perspectives, and exchanging opinions, trends, and viewpoints. Consequently, it provides a platform for individuals to articulate their thoughts, enabling the presentation of diverse viewpoints on significant

topics. Moreover, Facebook is a forum for exchanging condolences and congratulations among friends, especially when direct communication is challenging.

This observation underscores the characterization of Facebook as a microcosm akin to a small cosmic entity cultivated through extensive social relationships. The platform facilitates interaction, enabling the exchange of diverse opinions and perspectives that contribute to specific topics, thereby reflecting the societal culture and its constituents. The findings underscore the multifaceted nature of Facebook, illustrating its role in fostering social connections, facilitating varied interactions, and cultivating a nuanced understanding of societal norms and values.

5) Applications that give media professors knowledge and develop their educational skills:

The following table shows the applications used to gain knowledge and develop educational skills.

Table (5)

Does he explain Do you think that using these applications gives you knowledge (develops your educational skills)?

Degree of approval	Freq.	%
Yes, a big degree.	35	46,7
Occasionally	38	50,7
Rarely	2	2,7

The results indicate that platforms such as Facebook, WhatsApp, and other applications contribute significantly to the skill development of educational professors. This outcome aligns with logical expectations, as staying abreast of developments in one's field fosters acquiring new competencies essential for navigating unforeseen challenges and crises. Consequently, faculty members are incentivized to adopt diverse educational methods and

mechanisms in their interactions with students, thereby enhancing the efficacy of the educational process.

Moreover, this proactive engagement with innovative technologies cultivates a culture of curiosity and self-directed learning among students. It prompts them to seek various sources, fostering a sense of superiority and excellence. In contrast to historical resistance to novelty, contemporary educational environments embrace innovation, arousing curiosity among the study sample to explore its application in their academic pursuits and apply it directly to their learning experiences.

It is noteworthy to mention that the findings of this study diverge from those presented by Kathie Ardzejewska (2022) despite the acknowledgment of the relatively low potential of mobile learning in her work. This discrepancy underscores the nuanced nature of the impact of technological interventions in educational settings.

6) Encourage students to use educational applications:

Table (6)

The table shows: Do you encourage students to use these mobile educational applications?

Degree of approval	Freq.	%
Yes, a big degree.	37	49,3
Occasionally	32	42,7
Rarely	6	8

Derived from the current table's data, the researcher posits that the cohort of professors comprising the study sample manifests a keen interest in advocating for the utilization of educational applications among students. This inclination, in turn, engenders a reciprocal responsiveness to the educational process. The professorial cohort is ardent about reaping the rewards of their efforts, manifesting a commitment to the adept utilization of

applications to achieve educational objectives. This commitment is driven by the professor's earnest desire to effectively convey knowledge, information, and skills to their students, aiming to optimize the educational experience.

The professor's dedication extends to fostering a positive motivational milieu surrounding the educational process, nurturing the student's capacity to engage, interact, and effectively assimilate innovations within the educational sphere, thereby enhancing overall learning outcomes. This assertion finds corroboration in a study by Nasser M. Sabah (2022) affirms that the judicious use of social media and educational applications yields a discernible positive impact on the learning process.

7) Advantages of using mobile phones in education:

The following table shows the advantages of mobile phones from the point of view of the university professor.

Table(7)

From the university professor's perspective, he explains the advantages of using mobile phones in education (more than one alternative can be chosen).

Advantages	Freq.	%
Facilitates access to information	56	74,7
Facilitates communication with professors and colleagues	51	68
Provides multiple educational applications	38	50,7
Many educational groups on social networks	35	46,7

The findings elucidated in the present table underscore the manifold advantages inherent in mobile applications and the mobile device itself. Paramount among these advantages is the facile acquisition of information, recognizing that the professor's fundamental responsibility lies in the dissemination of information. The mobile device is a conduit for accessing information and disseminating knowledge through its

connectivity to global and local databases. It constitutes an expansive repository accessible through diverse Arab and non-Arab search engines. Leveraging smart applications on mobile devices opens avenues for many topics, serving as a catalytic point for researchers and educators alike. The mobile device functions as an intelligent information engine, offering myriad options for information mining and cognitive exploration owing to its extensive repository of sources.

Sean Eom's 2022 study substantiates the assertion that mobile technology facilitates the process of self-regulation, thereby positively influencing learning outcomes. Incorporating mobile technology empowers educational institutions to architect and establish distance learning systems that afford students flexibility in their educational pursuits.

This affirmation aligns with various studies, including that of Ebiye (2015), which demonstrates a heightened level of awareness and proficient utilization of smartphones by both faculty members and students in information-seeking endeavors.

8) Preferred Apps to Use:

The following table shows the most important applications used via mobile.

Table (8)

Explains the most important applications that the university professor prefers to use via mobile (more than one alternative can be chosen).

Applications	Freq.	%
Photography Applications	36	48
Video Imaging Applications	29	38,7
Video Montage Apps	18	24
Press Applications	32	42,7
Other Applications (*)	6	8

(*) Other (the following alternative iterations got a correct one, namely: photo montage applications, cloud storage, educational applications, language learning and use of dictionaries, publishing newspaper links, not using them).

The data indicates a consensus between the two study cohorts, comprising professors and students, in their preference for photography applications. This preference can be ascribed to the inherent nature of their respective disciplines, with many courses relying extensively on photography. Such courses incorporate various elements, encompassing application attributes, functionalities, distinct photographic techniques, angles, and diverse photographic genres. Given the practical and skill-based nature of these components, it becomes imperative for students to assimilate and apply them within the educational framework. This acquisition of skills not only enhances their academic proficiency but positions them favorably for integration into the competitive labor market.

The professorial cohort demonstrates a concerted commitment to extracting optimal value from the educational process by incorporating these photography applications into the curriculum. This commitment extends to imparting practical training to students, ensuring their adeptness in utilizing these applications. This strategic integration underscores a shared objective of both professors and students to align educational experiences with the demands of contemporary professional environments.

9) Reasons for non-use:

The following table shows the most important reasons why university professors do not use mobile phones.

Table (9)

Explains the most important reasons why university professors do not use mobile educational applications in teaching.

Reasons for non-use	Freq.	%
It is considered a waste of lecture time	15	20
Not knowing these applications	42	56
Students discourage their use	18	24
Designing a lecture schedule does not help to use of these applications	20	26,7
The theoretical side of some materials does not support the use	34	45,3
The large number of burdens carried out by the faculty member	29	38,7
Lack of a clear plan by the department	23	30,7
The college does not provide technical support and possibilities for use	24	32
Large numbers of students to prevent follow-up	1	1,3

It is clear from the data of the current table that the reasons for not using some educational applications in the educational process are due to several reasons, including lack of knowledge of some educational applications, there are educational applications that the professor does not know anything about, and there are applications that are for a fee and require purchase and are not free, and these applications are also excluded by the professor because they are expensive and students may fail to use them, and there are some courses that do not need applications: Such as media theories, mental health and other courses supported by mobile applications, it needs applications that suit the nature and outputs of the courses, and sometimes the member relies on traditional methods of education due to the large number of educational and professional pressures, so the reasons for not using are due to logical and educational justifications.

Second: Hypothesis test results:

H1: There is a significant positive correlation between professors' use of mobile apps for teaching and their perceived educational competence.

Table (10)

	The degree of employing mobile applications in the educational process	
	Correlation coefficient	P. Value
After use	0,151	0,196
Self-regulation of learning	0,077 -	0,509
Withstand academic pressures	0,297 *	0,010
Interactive (academic self-efficacy)	0,285 *	0,013
The academic competence of the university professor.	0,285 *	0,013

Significance level 0.01 *

It is noted from the previous table (10) that there is no statistically significant relationship at the level of significance 0.05 between the degree of employment of media professors and teachers in Egyptian universities towards mobile applications in the educational process and each of (after use - self-regulation of learning), while it is noted that there is a statistically significant relationship "positive" at the level of significance 0.05 Between the degree of employment of media professors and teachers in Egyptian universities towards mobile applications in the educational process and each of (bearing academic pressures - interactive (academic self-efficacy) - the total degree of academic competence of the university professor.

This result can be explained that the greater the degree of employment of professors mobile applications in the educational process, the greater the professor's ability to withstand pressures as well as academic efficiency, and this confirms the importance of these applications in facilitating information and teaching skills to students, and students need to represent skills, and this can be done through the university professor's use of these applications, as this confirms that modern methods and innovative new

strategies in the teaching process help to increase the degree of understanding and interaction with Education requirements This helps the success of the educational process as well as increasing the efficiency of the university professor in explaining and communicating information and interpreting it and standing on the weaknesses and strengths in teaching students various skills that serve the labor market and improve learning outcomes, and mobile applications are characterized by suspense and elements of excitement, which makes the pressure of explanation, clarification and interpretation decrease for the professor through his reliance on the elements of attraction in mobile applications and reliance on modern technologies that help self-learning for both parties. This indicates that the degree of use is not related to the extent to which the professor employs applications, he may use applications intensively and to a high degree, but fails to employ them and does not improve their employment in the educational process, and the evidence for this is that there are individual differences between professors in the degree of competence as well as the degree of employment, the course may be the same, but the way it teaches students varies from one professor to another, and this is due to the methodology and method of teaching followed. In the educational process as well as the illustrative and didactic means that he takes as his teacher in his lecture series.

These results differ from the results of a study (**Lei Zhao 2023,**) where it proved that Usage intensity is an important indicator on social media, and both social media and stress have a negative impact on the academic performance of college students. In addition, we also emphasized that stress plays a mediating role in the relationship between social media and the academic performance of college students.

H2: There are significant differences in mobile app usage for teaching between professor demographics, including:

H2a: Gender (male professors vs. female professors)

H2b: Academic rank (teaching assistants vs. assistant lecturers vs. lecturers vs. assistant professors vs. full professors)

Table (11)

The differences between Professors according to Gender

Variable	Sample	Average	Std	DF	T	P. Value	Sig.
Use Educational Mobile Apps	Male (31)	2,4516	0,7229	73	0,433	0,666	Not Significant
	Female (44)	2,3864	0,5793				

It is noted from the previous table that there is no statistical significance for the differences in the use of mobile applications in education by media professors according to gender differences. This result can be explained by the fact that males and females have no differences between them in the nature of employment, but they may differ in how to employ and how to use, and this may be due to the fact that males and females do the same profession, which is teaching, and they want to achieve the same goals, which is graduating a student who is able to compete in the labor market and is able to learn the skills required to work in the labor market, and the goal of the educational process is to improve learning outcomes and academic achievement, and this is one of the most important goals of the educational process as The professor, regardless of males or females, seeks to develop the skills of their students, and therefore they are all looking for applications that help them achieve these demands and meet these needs, as they are looking for everything new in their field of specialization.

Table (12)

The Differences between professors, according to academic rank

Contrast source	Sum of squares	DF	Mean	F	P. Value	Sig.
Between groups	0,383	2	0,191	0,462	0,632	Not Significant
Inside groups	29,804	72	0,414			
Total	30,187	74				

It is noted from the previous table that there is no statistical significance for the differences in the use of mobile applications in education by media professors according to the difference in academic degree.

Discussion

The findings reveal a high reliance on smartphones among Egyptian university media professors to access learning resources. Over 80% use mobiles daily for education-related activities. This aligns with past research showing mobile devices' vital role in contemporary teaching and learning (Yao & Lu, 2015). Professors leverage smartphones to develop course materials, share knowledge with students via multimedia messaging, and support out-of-class communication.

However, some differences emerged in how professors versus students use mobiles. Professors focus predominantly on educational tasks, while students utilize smartphones more for social networking and entertainment. This likely reflects professors' greater professional demands and time limitations. Still, both groups rely heavily on mobiles for communication and information access, indicating the technologies' integral function in maintaining connections and productivity.

The results also demonstrate a positive relationship between professors' integration of mobile apps and perceived competence in areas like self-efficacy, withstanding academic pressures, and teaching effectiveness. This suggests mobiles' capabilities to

enhance pedagogical knowledge and skills. No significant differences emerged in usage across professor demographics.

Conclusion

As smartphones and mobile applications continue to evolve, they transform teaching and learning processes in higher education. This study of Egyptian media professors affirms these technologies have been widely adopted to access information, develop learning materials, communicate with students, and supplement in-class teaching. Purposeful integration of mobile apps also appears to strengthen professors' confidence and competence in utilizing innovative educational strategies aligned with 21st-century demands.

Implications

These findings have important implications for leveraging mobile technologies to enrich learning experiences. Universities should consider policies and infrastructure to support faculty adoption of smartphones and applications. Providing training for professors on instructional design principles and pedagogical strategies focused on active learning could empower impactful integration. Evaluating usage patterns and educational effectiveness across disciplines can further guide optimal mobile learning adoption.

Future Research

Further research should explore students' perspectives on mobile integration using mixed methods designs. Comparative studies examining variations in usage across academic fields could reveal opportunities to enhance outcomes through customized mobile learning approaches. Longitudinal studies tracking changes over time would also inform policies on emerging technologies. As mobiles continue to progress, ongoing investigation of their applications for teaching and learning will be vital for realizing their immense potential to drive excellence and innovation in higher education.

المستخلص باللغة العربية

مع انتشار تقنيات الهاتف المحمول، هناك حاجة متزايدة لفهم كيفية تأثير الهواتف الذكية والتطبيقات على التدريس والتعلم. تناولت هذه الدراسة الكمية كيفية قيام أساتذة الإعلام الجامعي بدمج الهواتف المحمولة في التدريس والعلاقات مع الكفاءة. قامت دراسة استقصائية شملت 75 أستاذًا مصريًا بتحليل استخدام الأجهزة، وأساليب تكامل التطبيقات، ووجهات النظر، وتصورات كفاءة التدريس. كشفت النتائج عن اعتماد كبير على الهواتف الذكية للوصول إلى الموارد (81.3%)، واستخدام الهواتف المحمولة بشكل متكرر للتعليم (46.7% يوميًا)، والاستفادة في الغالب من التطبيقات لتطوير المحتوى والتواصل بين الطلاب. وظهرت علاقة إيجابية بين استخدام تطبيقات الهاتف المحمول ومؤشرات الكفاءة الأكاديمية، بما في ذلك الكفاءة الذاتية وتحمل الضغوط. لم يتم العثور على فروق ذات دلالة إحصائية عبر التركيبة السكانية للأستاذ. وتؤكد النتائج الدور الحيوي للهواتف الذكية في التدريس والتعلم الجامعي المعاصر. يعزز التكامل الهادف لتطبيقات الهاتف المحمول ثقة الأساتذة وقدراتهم على استراتيجيات التعلم النشط. ويظل الاعتماد الأمثل محدودًا، مما يسلب الضوء على الفرص المتاحة لسياسات مصممة خصيصًا، والتدريب، والتقييم لتمكين التعلم المتنقل. توفر هذه الدراسة أدلة أساسية لتوجيه الاستفادة الفعالة من تقنيات الهاتف المحمول الناشئة لإثراء طرق تدريس التعليم العالي ونتائجه.

الكلمات المفتاحية:

التعلم بالموبايل؛ تطبيقات الموبايل؛ التعليم العالي؛ الكفاءة التعليمية؛ الكفاءة الذاتية الأكاديمية.

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