The Impact of WhatsApp-based Mobile Learning on Academic Achievement among BSN Students at Isra University, Hyderabad

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ARTICLE INFO	ABSTRACT

WhatsApp as an application for messages is integrated into the academic processes, particularly necessary in the nursing educational process, where effective communication and cooperation play an important role. However, the influence of WhatsApp on students' performance and accomplishment in their assignments is still under-researched. This study aimed to assess the impact of WhatsApp-based mobile learning on academic achievement among BSN students at Isra University, Hyderabad. This was a cross-sectional study done between July and September 2024 involving 80 BSN students in a specified university selected by stratified random sampling. Participants completed a validated questionnaire which included questions related to their socio-demographic profile as well as their perceptions of how WhatsApp has impacted their performance. The data was analyzed using IBM version 23 software and descriptive statistics. According to the findings, 45% of participants reported that their communication on WhatsApp had negative effect on the academic life. 53.8% of the students responded that they have a challenge in balancing between using WhatsApp and studying, Although 62.5% of participants indicated that WhatsApp discussion improved their performance, 50% of them used the platform to share study material. Still, there were some benefits: 42.5% of the students admitted using WhatsApp as the main source of academic information. Moreover, concerning the impact of the use of WhatsApp to personal lives, 41.3% of the respondents observed negative influence. The study concluded that WhatsApp can help with collaborative learning but the group messaging service can also be a source of distraction and that learners rely on social media for content related to their courses. WhatsApp utilization at learning institutions should be done cautiously; special attention should be paid to time and information sources.

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Introduction

WhatsApp is a free-to-use application for sending instant messages and it is compatible with iPhone and Android mobile phones this application is very familiar to undergraduate students to share multimedia messages such as photos, voice, video, etc., in addition to normal text messages(Fazil et al., 2024). Out of all the social media tools, the most popular mobile instant messaging application is WhatsApp through the sharing of messages, information, and discussions in different settings. In recent years, the WhatsApp application has increasingly transformed into a social tool that is actively used in academic settings (Abdelhay et al., 2024). WhatsApp has particularly grown popular within the higher education settings, especially with regards to the improvement of the communication between students, and their lecturers (Samala et al., 2024). Qualitative research identified that WhatsApp is integrated into academic situations and is mainly utilized in advancing academic discourse, exchange of knowledge, and synchronous collaboration. This application used in the teaching and learning process is very effective and unique in bridging students and their instructors hence a very efficient tool in modern learning (Ajani & Khoalenyane, 2023).

WhatsApp has become a versatile nursing tool that allows group discussions, sharing of resources, and promoting the principles of engagement and active participation for the student (Nuuyoma et al., 2020). According to Chickering and Gamson (1987), activity refers to discussions and interactions that lead to involvement with course content. Several academic studies have indicated that academic performance and engagement levels improve in institutions that adopt interactive learning, like WhatsApp-Based Mobile Learning (Gui et al., 2023). Mobile learning particularly the application of smartphones and what's application is efficient in augmenting learning where learners are not confined in the classroom (Dahdal, 2020). Specializing in the cross-platform in-app, WhatsApp affords a significant chance to fuel cooperation between Nursing students and their tutors beyond the regular lesson. It is a platform for academics that helps students seek explanations, share materials and work on assignments together. However, its effectiveness has not yet been investigated mostly about performance with a focus on specialty areas of learning such as nursing education where efficient and effective communication is a key determinant for success (Al-Osaimi, 2024). Since WhatsApp enhances cooperative learning, peer interactions, and the immediacy of feedback, it is deemed relevant to find out the impact it has on students' academic performance (OLAREWAJU et al., 2023). Thus, the purpose of this study is to determine the effectiveness of WhatsApp 'Mobile Learning' on the academic performance of the students studying BSN at Isra University, Hyderabad. The findings of the study will identify if the use of WhatsApp in the learning environment improves the experiences of the students, communication with the instructors, and performance is improved. The following research is highly relevant as learning through modes such as WhatsApp provides a convenient way to support working nursing students, and any other students, that may not be physically in class due to one reason or the other. Concerning the impressions of students about the use of WhatsApp in an academic context and based on an assessment of its utility in encouraging students to learn effectively, this study intends to bring new evidence regarding the implementation of mobile technology in nursing education.

Objective of the study

To assess the impact of WhatsApp-based mobile learning on the academic achievement among BSN nursing students at Isra University, Hyderabad

Literature Review

The use of mobile technology and especially the applications of social networks in the teaching and learning processes has attracted increased interest in the last few years owing to the perceived ability to facilitate learning. As one of the most popular social messaging applications globally, WhatsApp has risen to the challenge as a good tool for mobile learning in learning institutions. Mobile learning (m-learning) is a process that involves the use of personal mobile devices including smartphones and tablets in the delivery of learning to students in a flexible manner(Hashimova et al., 2020). Some research indicates that mobile learning has several benefits, which include; it promotes anytime anywhere learning, it enhances collaborative learning, and it acts as a medium for incidental learning. Given the fact that mobile learning is flexible by nature and permits the user to study resources, post comments, and perform tasks based on his or her own choice, its effect on academic success is likely to be positive (Demir & Akpinar, 2018). Several research studies have indicated that in general, mobile technology increases students' performance and specifically the use of WhatsApp enhances their performance. WhatsApp is an application used in mobile phones that allows users to send text messages, voice notes, pictures and videos, voice calls, or video calls. Recently, WhatsApp has been used commonly to facilitate academic communication so that students as well as trainers can get connected in a more effective manner (Ajani & Khoalenyane, 2023; Mabaso et al., 2023). Yalcin Alp & Gulbahar (2010) also noted that students commonly utilize WhatsApp to exchange course-related information, discuss academic content, and interact with other students and teachers (Almogheerah, 2021).

Note that, active learning on the other hand is a teaching strategy in which the student participates in the teaching-learning process through asking questions, solving problems, and discussing with other students. Active learning facilitates student participation in the course leading to comprehension and retention of the information delivered in class. Through the use of WhatsApp, nursing students can participate in an ongoing conversation, pose questions, and in return receive immediate responses from fellow students and instructors (Dahdal, 2020; Holly et al., 2023). WhatsApp groups as a platform for encouraging active learning in nursing education have revealed that it is feasible. Another advantage is the informal communication environment of the application When using WhatsApp, individuals who are introverted or don't dominate in spoken communication might become more active in group discussions. This is especially relevant in nursing education where technology-supported communication is important for students' achievement in theoretical classes as well as in clinical practice (Nazir et al., 2023). In addition, Mobile learning through WhatsApp in clinical education revealed that students and faculties benefit in the way that they can communicate with their colleagues thus sharing clinical practice experiences and getting feedback from the respective faculty members (Dahri et al., 2023). WhatsApp has the following advantages as a learning tool: its adoption for learning likewise has the following

difficulties. The primary advantages include improved communication, work productivity and improved access to learning resources (Ajani & Khoalenyane, 2023; Mujayanah et al., 2023). A particularly important factor for the effective use and impact of WhatsApp as a learning aid is students' perception of the benefits of this learning application. When used by nursing students in their study, Ahmed et al. (2018) pointed out that WhatsApp's overall positive orientation referred to the effectiveness of the application in communication, information access, and communication with peers and instructors. Nonetheless, some of the interviewed students mentioned the possible misuse/abuse and/or excessive use of the system which in turn would be counterproductive to their performance (Aebersold & Gonzalez, 2023).

Research Methodology

Study Design: A cross-sectional and was conducted from July to September 2024.

Study Setting: The research was conducted in the Isra School of Nursing, Isra University Hyderabad.

Study Population: The target population of the researchers comprised 161 BSN students, both male and female from the BSN program.

Sample Size: The sample size for the study was estimated by employing the formula based on 95% confidence level and 5% margin of error. The sample size calculated from this population was 80 students.

Inclusion Criteria:

> ➢ All BSN students (male and female).
> ➢ Students who were willing to participate in the study.
> ➢ Students who were present during data collection.

Exclusion Criteria:

> ➢ Students who were not willing to participate.
> ➢ Students who were absent during data collection.

Sampling Technique: A Stratified Random Sampling technique was used.

Research Tool: A validated questionnaire was adapted for this study, consisting of two sections:

Section A: Socio-demographic information (gender, age, GPA, year of study).

Section B: 12 questions on the impact of WhatsApp-based mobile learning on academic achievement among BSN students.

Data Collection Process: The study was approved by the Principal, of Isra School of Nursing School. Participants provided written and verbal consent after being briefed on the study's objectives. Questionnaires were distributed and collected during regular class sessions and study groups.

Data Analysis: Data were analyzed using IBM SPSS version 23. Descriptive statistics (frequencies and percentages) were used.

Ethical Considerations:

➤ Written informed consent was obtained from each participant.
➤ Permission was granted from Principal, Isra School of Nursing.
➤ Confidentiality of each participant was upheld.

Results

Table 1: Demographic Characteristic of Participants

Demographic Variable	Category	Frequency (n)	Percent (%)
Total Participants		**80**	**100%**
Age in Years	18-20	43	53.8%
	22-24	27	33.8%
	Above 25	10	12.5%
	18-20	43	53.8%
Gender	Male	10	12.5%
	Female	70	87.5%
Year of Study	First Year	20	25%
	Second Year	20	25%
	Third Year	20	25%
	Final Year	20	25%

From Table 1, the age distribution of the participants, 43 of them (53.8%) are aged 18-20, 27 participants (33.8%) are between the ages of 22-24, and the remaining 10 participants (12.5%) are above the age of 25. Analysis of gender reveals that participants were predominantly females; 70 females (31.25%) while 10 males (31.25%). Further, the participants are distributed equally among the four years of the BSN program, the First Year, Second Year, Third Year, and Final Year, with 20 participants (25%) from each group.

Table 2 summarizes participants' views on the impact of WhatsApp on their academic life. A majority of students (45%) agreed that excessive use of WhatsApp negatively affects their studies, with a mean score of 1.81. Similarly, 42.5% found WhatsApp distracting (mean: 2.30), and 53.8% struggled with time management between WhatsApp and studying (mean: 2.18). Furthermore, 36.3% felt their academic performance had been impacted (mean: 2.21).

On the positive side, 62.5% believed academic discussions on WhatsApp improved their performance (mean: 1.75), and 50% used it for sharing resources. Additionally, 63.8%

reported improved grades from using WhatsApp for academic purposes (mean: 1.78). While 42.5% relied on WhatsApp for study information, 41.3% acknowledged it impacted their overall lifestyle (mean: 2.17). Some students spent over 3 hours daily on WhatsApp (mean: 2.56), with 48.8% using it primarily for academic discussions (mean: 1.90).

Table 2: Knowledge and Perceptions of Participants Regarding Whatsapp Use for Academic Purposes

STATEMENTS		SD	A	D	SD	Mean	St.D.
Excessive use of WhatsApp for academic purposes affects my academic life?	Freq	30	36	13	1.1	1.81	.747
	%	37.5	45.0	16.3	1.3		
Whatsapp is distracting me from my studies?	Freq	18	24	34	4	2.30	.877
	%	22.5	30.0	42.5	5.0		
I find it challenging to balance the time spent on WhatsApp with my study time?	Freq	12	43	23	2.5	2.18	.713
	%	15.0	53.8	28.8	2.5		
My academic performance has been affected by my use of WhatsApp for studying?	Freq	18	29	31	2	2.21	.822
	%	22.5	36.3	38.8	2.5		
Participating in academic discussions on WhatsApp has improved my academic performance?	Freq	25	50	5	-	1.75	.562
	%	31.3	62.5	6.3	1		
I use WhatsApp to share knowledge and academic resources with my classmates?	Freq	36	40	3	1	1.61	.626
	%	45.0	50.0	3.8	1.3		
I rely on information from WhatsApp for my studies without consulting other sources?	Freq	21	34	25	-	2.05	.761
	%	26.3	42.5	31.3			
Using WhatsApp for academic purposes affects my overall lifestyle?	Freq	17	33	29	1	2.17	.775
	%	21.3	41.3	36.3	1.3		
Using WhatsApp for academic purposes has helped improve my grades?	Freq	23	51	6	-	1.78	.566
	%	28.8	63.8	7.5			
I would perform differently academically if I stopped using WhatsApp for learning?	Freq	18	35	22	5	2.17	.853
	%	22.5	42.8	27.5	6.3		
How hours do you spend each day no WhatsApp?	Freq	13	29	18	20	2.56	1.041
	%	16.3	36.3	22.5	25.0		
What is your primary use of WhatsApp for academic purposes?	Freq	21	39	8	3	1.90	.739
	%	26.3	48.8	10.0	3.8		

Discussion

The findings of this study indicate both the positive and negative impacts of WhatsApp on the academic lives of BSN students at Isra University. A large proportion of students (45%) agreed that excessive use of WhatsApp affects their academic life, with a mean score of 1.81, highlighting concerns about time management and distraction. This aligns with previous research (Shater et al., 2024) which found that excessive social media use, including

WhatsApp, can lead to distractions and decreased academic focus. Furthermore, over half of the participants (53.8%) reported challenges in balancing WhatsApp use with their study time. This resonates with findings by (Pérez-Juárez et al., 2023) who noted that the constant notifications and social interactions on WhatsApp can detract from study time and impact academic performance.

However, WhatsApp was also seen as a valuable learning tool. A majority of students (62.5%) agreed that participating in academic discussions on WhatsApp improved their academic performance. This finding is consistent with (HAN, 2024) , who reported that WhatsApp promotes active learning and engagement among students. Moreover, 50% of the students reported using WhatsApp to share academic resources and knowledge with their peers, further supporting its role as a collaborative learning tool. Similarly, research found that WhatsApp enables easy sharing of educational materials, fostering collaborative learning environments. Despite the positive aspects, concerns about over-reliance on WhatsApp for academic information were raised, with 42.5% of participants relying on WhatsApp for their studies without consulting other sources(Sahito et al., 2023). This could be problematic, as WhatsApp may not always provide reliable or accurate academic resources. Warning against depending on social media platforms for educational content due to the potential spread of misinformation. The study also highlighted that WhatsApp usage impacts students' overall lifestyle, with 41.3% agreeing that it affects their personal life(Asad et al., 2024). This disruption in work-life balance is consistent with study(Sun, 2023; Zhang et al., 2023) that found that excessive social media use can lead to stress and anxiety, affecting students' well-being. Additionally, the study found significant variability in the amount of time students spend on WhatsApp each day, with some students spending more time on the platform than others. This finding mirrors (Odekeye et al., 2023) who noted that excessive WhatsApp use can lead to procrastination and lower academic productivity.

Conclusion

The findings show that while WhatsApp can enhance academic collaboration and resource sharing, it also leads to distractions, time management issues, and over-reliance on the platform for academic information. This negatively affects students' performance and personal well-being. To maximize its benefits, institutions should establish clear usage guidelines, offer time management workshops, and promote focused use for academic purposes. Encouraging students to reflect on their WhatsApp usage can help balance its educational value with minimizing distractions.

References

1. Abdelhay, S., Draz, A., Tharwat, W., & Marie, A. (2024). The impact of using WhatsApp on the team's communication, employee performance and data confidentiality. *International Journal of Data and Network Science*, *8*(2), 1307-1318.
2. Aebersold, M., & Gonzalez, L. (2023). Advances in Technology Mediated Nursing Education| OJIN: The Online Journal of Issues in Nursing. *Online Journal of Issues in Nursing*, *28*(2).

3. Ajani, O. A., & Khoalenyane, N. B. (2023). Using WhatsApp as a tool of learning: A systemic literature review of prospects and challenges. *International Journal of Innovative Technologies in Social Science*(3 (39).

4. Al-Osaimi, D. N. (2024). The impact of digital learning on Saudi nursing students' engagement: A qualitative study. *Nursing Open*, *11*(8), e2188.

5. Almogheerah, A. (2021). Exploring the effect of using whatsapp on Saudi female EFL students' idiom-learning. *Arab World English Journal (AWEJ) Volume*, *11*.

6. Asad, M. M., Shah, S. S., & Churi, P. (2024). Impact of mobile learning technologies for interactive learning and wellbeing of construction management trainees in Pakistan: challenges and opportunities in post-pandemic paradigm. *Industrial and Commercial Training*.

7. Dahdal, S. (2020). Using the WhatsApp social media application for active learning. *Journal of Educational Technology Systems*, *49*(2), 239-249.

8. Dahri, N. A., Al-Rahmi, W. M., Almogren, A. S., Yahaya, N., Vighio, M. S., Al-maatuok, Q.,…Al-Adwan, A. S. (2023). Acceptance of mobile learning technology by teachers: Influencing mobile self-efficacy and 21st-century skills-based training. *Sustainability*, *15*(11), 8514.

9. Demir, K., & Akpinar, E. (2018). The Effect of Mobile Learning Applications on Students' Academic Achievement and Attitudes toward Mobile Learning. *Malaysian Online Journal of Educational Technology*, *6*(2), 48-59.

10. Fazil, A. W., Hakimi, M., Akrami, K., Akrami, M., & Akrami, F. (2024). Exploring the Role of Social Media in Bridging Gaps and Facilitating Global Communication. *Studies in Media, Journalism and Communications*, *2*(1), 13-21.

11. Gui, H.-C., Wong, S. S.-L., Ahmad Zaini, A., & Goh, N. A. (2023). Online learning amidst covid-19 pandemic–explicating the nexus between learners' characteristics, their learning environment and the learning outcomes in built environment studies. *Interactive Learning Environments*, *31*(7), 4675-4686.

12. Han, Y. (2024). Social media addiction, fatigue and the effects on young adults'academic performance china. *Quantum Journal of Social Sciences and Humanities*, *5*(5), 70-80.

13. Hashimova, A., Prasolov, V., Burlakov, V., & Semenova, L. (2020). Flexible and Contextual Cloud Applications in Mobile Learning.

14. Holly, S., Maulik, B., & Samuel, I. (2023). Use of Whatsapp as A Learning Media to Increase Students' Learning Interest. *Scientechno: Journal of Science and Technology*, *2*(1), 35-48.

15. Mabaso, N., Tiba, C., Condy, J., & Meda, L. (2023). WhatsApp as an educational tool: perspectives of pre-service teachers. *Technology, Pedagogy and Education*, *32*(4), 521-536.

16. Mujayanah, S., Maruf, N., & Asari, S. (2023). Whatsapp use on reading comprehension: Exploring the impact among EFL learners. *English Review: Journal of English Education*, *11*(2), 391-404.

17. Nazir, S., Solangi, S. A., Umer, N., & Soomro, I. A. (2023). Technology-Driven Learning in Nursing Education: Transforming the Learning Landscape through WhatsApp Groups and Zoom-Based Learning Materials. *Journal of Education And Humanities Research (JEHR), University of Balochistan, Quetta*, *15*(1), 157-164.

18. Nuuyoma, V., Mhlope, N. J., & Chihururu, L. (2020). The Use of WhatsApp as an Educational Communication Tool in Higher Education: Experiences of Nursing Students in Kavango East, Namibia. *International Journal of Higher Education*, *9*(5), 105-114.

19. Odekeye, O. T., Fakokunde, J. B., Alaba, A. O., & Iwintolu, R. O. (2023). Secondary

School Students' Perceived Influence of WhatsApp Social Media on Academic Performance in the English Language in Osun State. *Journal of Education in Black Sea Region*, *8*(2), 80-88.

20. Olarewaju, A., Ahmed, F., & Ahmed, R. (2023). Assessment of utilization of whatsapp for collaborative learning among mathematics undergraduates in ilorin metropolis. Conference Proceedings of the AITIE 5th International Conference and Workshop on Innovation, Technology and Education (ICWITE, Minna 2023),

21. Pérez-Juárez, M. Á., González-Ortega, D., & Aguiar-Pérez, J. M. (2023). Digital distractions from the point of view of higher education students. *Sustainability*, *15*(7), 6044.

22. Sahito, Z. H., Rahoo, L. A., Jatoi, Z. M., Khan, M. A., & Channar, M. H. (2023). Impact of Social Media Tools on Knowledge Sharing among Students of Jamshoro Education City. *Bulletin of Business and Economics (BBE)*, *12*(3), 528-535.

23. Samala, A. D., Rawas, S., Criollo-C, S., Fortuna, A., Feng, X., Prasetya, F.,…Hidayat, R. (2024). Social Media in Education: Trends, Roles, Challenges, and Opportunities for Digital-Native Generations–A Systematic Literature Review. *Asian Journal of University Education*, *20*(3), 524-539.

24. Shater, A., Abualrish, M. A., & Al_manei, M. M. A. (2024). The Impact of Social Media Usage on Academic Performance: A Study of the Professional Educational Diploma Program in UAE. *American Journal of Education and Technology*, *3*(3), 71-79.

25. Sun, L. (2023). Social media usage and students' social anxiety, loneliness and well-being: does digital mindfulness-based intervention effectively work? *BMC psychology*, *11*(1), 362.

26. Zhang, C. a., Tang, L., & Liu, Z. (2023). How social media usage affects psychological and subjective well-being: testing a moderated mediation model. *BMC psychology*, *11*(1), 286.