



The Impact Of Whatsapp Usage on the Academic Learning and Professional Development of Journalism Students in Pakistan

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Abstract

This paper explores the significance of WhatsApp as an online learning tool in journalism communication and examines its potential, efficiency, and constraints for improving students' academic interest and professional readiness. The study uses thematic analysis of relevant literature to examine the role that WhatsApp plays in fostering collaborative, interactive, and resource-based learning processes among journalism students in Pakistan. The results suggest that WhatsApp has a positive effect on communication efficiency, peer cooperation, teamwork, real-time communication, and the availability of learning materials, consistent with the current body of literature on the positive impact of mobile-assisted learning on education. Nonetheless, the distraction and misinformation, the lack of monitoring, and digital inequalities were identified as the major limitations. The paper concludes that WhatsApp can be a useful additional learning tool in journalism courses, though its implementation must be informed by ethical, pedagogical, and institutional practices. The recommendations are to formalize it within curricula, advance digital literacy, and establish governance to maximize its contribution to academic performance and skill acquisition in journalism education

Keywords: Digital Learning; Journalism Students; WhatsApp; Journalism Education; Pakistan; Mobile-Assisted Learning; Online Learning; Digital Media Literacy; Collaborative Learning

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1. INTRODUCTION

Digital communication technologies have brought significant change to learning processes worldwide, and Pakistan is no exception. Mobile communication platforms are becoming part of educational settings to enable interaction, collaboration, and knowledge exchange among students and educators (Ali, Yasmin, & Ahmed, 2021). WhatsApp is one of the applications that has become widely used in terms of communication and information sharing among these technologies. It has been widely adopted in educational institutions in Pakistan, including schools, universities, language-learning institutions, and even in the training of professionals, due to its accessibility, low cost, and familiarity. A study conducted in Pakistan indicates that WhatsApp improves the interactive learning process, makes students more active, and allows teachers and students to communicate in a timely manner (Afzal & Abdullah, 2022).

Recent research also points to the educational potential of WhatsApp in higher education. Course boundary learning allows learners to disseminate academic materials, discuss course material, and study outside the classroom through the learning environments provided on WhatsApp. In such a way, Ali, Yasmin, and Ahmed (2021) observed that the use of WhatsApp in language learning is beneficial due to the effects of peer interaction and informal knowledge sharing. Similarly, Aziz et al. (2021) mentioned that e-learning systems were supported with the aid of WhatsApp that allowed students to communicate and get academic assistance at all times.

The study conducted by Zohaib, Naveed, and Shah (2025) showed that WhatsApp, as a learning tool, enhanced university students' speaking skills and academic interaction through collaboration and real-time feedback. Similarly, teaching methods within WhatsApp have been revealed to enhance the performance and satisfaction with learning among students in institutions of higher learning (Al Mutair et al., 2025). Research findings also show that WhatsApp can facilitate the student transition to the university, through facilitating communication among peers, scholarly debates, and the exchange of information (Qiqieh et al., 2025). Moreover, WhatsApp features like polls and discussion forums will support the process of participation, collaborative learning, and thought in students (Bahador, 2025), as well as increase the level of engagement in online learning environments (Widari et al., 2025).

There is a specific role of technological integration in journalism education, as it keeps changing fast because of digital media and artificial intelligence. Students of journalism are increasingly turning to digital in their reporting, fact-checking, collaboration, and communication. As the nature of journalism practices is transformed by digital platforms and real-time information environments (Albizu-Rivas et al., 2024), schools are being urged to use digital communication channels in their instruction methods.

Within this context, WhatsApp can facilitate the teaching of journalism through instant communication, collaborative discussion, data sharing, and the ability to

engage with information shared through news media in real time. WhatsApp groups will enable journalism students to discuss news articles and provide the multimedia content and simulate the newsroom-style communication. Therefore, it is important to learn more about the contribution made by the WhatsApp to the education of journalism so as to understand its possible strengths and weaknesses to journalism students in Pakistan.

1.1 Research Problem

Even though the adoption of WhatsApp in Pakistan has gained massive popularity in the educational sector, there is no research that specifically focuses on the effect the application has on journalism education. The students of journalism need to engage in active learning which promotes collaboration, critical thinking and professional practice. It is not yet clear that WhatsApp addresses these needs or is just one of the informal communication tools. There is relative lack of empirical data about journalism students and their perceptions to WhatsApp and the implications of its use in Pakistan, especially the question of how it is used, how it impacts learning and the issues that are related to it. The research gap in the literature demonstrates the necessity of specific research on the learning benefits of WhatsApp among journalism students.

1.2 Research Rationale

Knowledge of WhatsApp's educational usefulness for journalism students is significant both academically and professionally. To begin with, journalism, as a field, depends on communication, teamwork, and the immediate flow of information, which WhatsApp has and suits well. Secondly, the Pakistani universities are transitioning to blended, digitally supported learning environment; therefore, a review of the tools that already are in place to be used by students can inform educators in the developing of digital learning plan. Thirdly, because WhatsApp has already achieved successful educational results in other spheres of knowledge in Pakistan, exploring the application of this tool in journalism education may assist in construction of curriculum and the new methods in teaching.

1.3 Aim and Objectives

This paper will examine how WhatsApp application has the potential to revolutionize the learning process of journalism students in Pakistan.

The objectives are to:

- To explore the application of WhatsApp among journalism students in their professional and academic learning process.
- To determine the perceived educational qualities of WhatsApp in journalism training.
- To discuss the obstacles and constraints of its use among students of journalism.
- To determine the role of WhatsApp in the communication, cooperation, and involvement in journalism learning settings.

1.4 Research Questions

- What is the impact of WhatsApp on the educational activities of journalism students in Pakistan?
- What do WhatsApp perceive as benefits in aiding journalism education?
- What are the flaws or issues in WhatsApp among journalism students in learning?
- What is the effectiveness of WhatsApp as a tool of communication, collaboration and engagement in journalism education?

2. LITERATURE REVIEW

The rapid development of Information and Communication Technologies (ICTs) has caused a significant paradigm shift in pedagogical and professional journalism worldwide. According to Khan (2021), WhatsApp has become one of the strongest tools for academic study and professional practice in Pakistan, especially as more people adopt digital infrastructure in the country due to the spike in digital adoption. This literature review synthesizes the literature to investigate how WhatsApp can support education, its role in socializing journalism students into the profession, and how this service overlaps with new technologies such as Artificial Intelligence (AI) and citizen journalism.

2.1 WhatsApp as a Pedagogical Tool in the Pakistani Context

The concept of Mobile Assisted Language Learning (MALL) and the integration of e-learning tools, in particular, have become a necessity in Pakistan, particularly after the COVID-19-induced shocks. The article by Khan (2021) claims that WhatsApp became the most important tool to carry out the teaching activity in times of lockdowns and that it acted as a communication channel between institutions and students in a scarcity-of-resources environment. Afzal and Abdullah (2022) also substantiate this fact, stating that, in Pakistani schools, the teaching and learning process is more interactive in WhatsApp because it is possible to share resources and receive feedback in real-time. In line with this, Ramzan, Iqbal, and Khan (2024) discovered that Pakistan teachers have become more inclined towards using WhatsApp to share learning materials, distribute newsletters, and make students participate in the blended learning process.

Even though most of the research done is in the medical education field, the results have a high transferability to students of journalism (Bahador, 2025). As an example, Aziz et al. (2021) have shown that WhatsApp Messenger can contribute to the performance of undergraduate students as a powerful means of e-learning. In a similar study, Hussain et al. (2020) contrasted the effectiveness of WhatsApp and Facebook and discovered that WhatsApp is a more effective learning tool for students due to a simplified interface and direct notification system. In line with this opinion, Cetinkaya (2023) discovered that WhatsApp would stimulate collaborative learning, allowing students at the university to exchange information fast and discuss it with their peers. In line with that, Lee, Chern, and Azmir (2023) found that communication via WhatsApp reinforces teamwork, academic engagement,

and sharing of information in higher education learning settings. Professional Development and Journalistic Practices (Lee, Chern, and Azmir, 2023)

WhatsApp is not just a communication device for journalism students, but it is an open door to the practice. Zulqarnain, Hashmi, and Zulqarnain (2020) underline that news collection and source organization have become more dependent on WhatsApp among Pakistani journalists. This use has a direct effect on their moral performance and professional standards. Innovating in the workplace, students move to adopt them, and their mastery of them defines their competitiveness in a market characterized by technological convergence (Jamil, 2020).

According to Jamil (2020), technological convergence is transforming journalists' practices in Pakistan, especially in ethnically based news media. It is a transformation that the journalism students must learn to adjust to by using WhatsApp to keep in touch with different communities. Additionally, as Safdar (2022) notes, the digital media is quite influential on the cultural and professional views of the Punjabi university students. They claim that the WhatsApp setting offers 24/7 connection.

2.2 Digital Literacy, Ethics, and Citizen Journalism

The news creation has also been democratized by the digital media and consequently, citizen journalism has come up (Bahador, 2025). In the article by Baneen, Ansari, and Raza (2023), the authors discuss the application of mobile tools which have facilitated the citizen reporting in conflict-based areas, e.g., Indian-Occupied Kashmir, where media accessibility is restricted. The same has been witnessed in other parts of the world, as smartphones and messaging technology have allowed common people to take part in the news collection and spread (Allan, 2024).

Ethical use of digital tools is one of the themes of the recent Pakistani discourse. According to Khaliq (2024), in Khyber Pakhtunkhwa (KP), journalists are being increasingly encouraged to acquire the so-called responsible use of the new technologies. Nevertheless, the information sharing facilitated by WhatsApp can also pose a threat to students, particularly through the dissemination of misinformation and the blurring of the distinction between personal communication and professional reporting. Research on the practice of digital journalism education indicates that students should also acquire digital literacy skills to critically assess online information and use digital media platforms responsibly (Ferrucci & Nelson, 2022). Betell (2010) has already noted that the impact of mobile technology on students' learning experience has far-reaching implications for journalism education and requires a curriculum that not only prepares them with the necessary technical expertise but also with ethical integrity. On the same note, journalism training programs should incorporate digital ethics and verification skills to support students in digital media reporting (Ward, 2023).

2.3 The AI Frontier and Future Trends

The 2025 journalism world will be more and more defined by the so-called AI revolution. According to Khattak et al. (2025), the future of journalism in Pakistan has both opportunities and challenges associated with AI. WhatsApp can be one of

the major channels for disseminating AI-generated information and coordinating human editors with digital machinery as newsrooms adopt AI to report the news and conduct data analysis (Istiyanto, Mardiana, Widjanarko, & Ayuningtyas, 2025). According to Baig (2025), a fresh set of competencies is needed in Journalism after AI. Learners now have the responsibility of learning to discern the intersection of AI-powered tools with their communication platforms in everyday life. The same change is reflected in the global outlook offered by Albizu-Rivas et al. (2024); the success of Pakistani journalism students in using WhatsApp to engage in advanced professional networking and apply AI-assisted research will be one of the determining factors in the development of the concerned professions.

2.4 Challenges and Comparative Perspectives

Although the adoption of modern media technologies in education has its benefits, it is not without challenges. According to Pavlovic and Ljajic (2017), modern technologies are imperative but require a systematic pedagogical approach to be effective. In the same way, Selwyn (2021) states that the introduction of digital technologies into learning should be carefully considered so that they can indeed positively influence the educational process, rather than merely introduce new communication tools. Perceptions of electronic news media are still in flux in Pakistan. Saeed et al. (2021) discovered that as digital platforms are on the rise, the validity of the information is an issue that concerns people.

This transition has trapped journalism students. They rely on WhatsApp because it is quick (Ali, Yasmin, and Ahmed, 2021), but they also have to use traditional (such as content analysis) tools to filter the flood of information they are receiving through social messaging. WhatsApp, therefore, has a dual effect of offering the technical infrastructure of rapid development, but requiring a higher order of critical thinking in order to move through the digital noise (Pavlovic and Ljajic, 2017).

Besides the pedagogical and professional aspects, the issue of access, equity, and digital divide is also important in gaining insight into the role of WhatsApp in media education in Pakistan (Ali, Yasmin, and Ahmed, 2021). Despite the popularity of WhatsApp, access to the internet, device quality, and individuals' economic status affect students' ability to participate in the digital learning environment (Pavlovic and Ljajic, 2017). Rural and low-income students can have problems with regular disconnection, inaccessibility, and insufficiency of data, and out-of-date smartphones, which might interfere with engagement in the smartphone-mediated academic discussion and newsroom simulations provided through WhatsApp (Hussain et al, 2020). In addition, gendered digital disparities persist in most parts of Pakistan, with female pupils possibly experiencing social or cultural limitations when using mobile phones, thereby being constrained in making the most of digital learning portals (Ali, Yasmin, and Ahmed, 2021).

The other area of concern that is currently increasing is the problem of privacy, surveillance, and psychological well-being (Betell, 2010). The unending torrent of academic materials, news alerts, and professional communication through WhatsApp has the potential to define the boundaries between personal and professional life,

which can lead to digital fatigue. Without systematic guidelines, scholars believe that the learning on WhatsApp can easily be used to condone informal practices that undermine the vision of journalism, confidentiality, and health (Pavlovic and Ljajic, 2017). Other recent works also focus on the fact that an untapped digital presence may increase the level of stress and anxiety among students, and thus it is essential to implement digital wellness (Chen et al., 2023). On the same note, Lee and Park (2024) argue that social messaging applications need ethical guidelines and institutional regulations to protect privacy and academic integrity.

Moreover, according to Khattak et al. (2025), there is no methodological rigor in the existing literature. A lot of the research studies to date have been oriented toward general educational backgrounds or specific fields such as medicine and language learning, and empirical research on journalism education is rare. Longitudinal studies are also required to evaluate the ability of the skills acquired through WhatsApp to be converted into professional competence in the newsroom setting. These gaps would help provide a more detailed picture of the educational value of WhatsApp and its long-term value to journalism practice in Pakistan (Pavlovic and Ljajic, 2017).

3. METHODOLOGY

This paper uses a qualitative content analysis to examine the available academic literature on the role of WhatsApp in journalism education and, more generally, in the educational setting. Content analysis is widely known as a flexible and systematic approach to analyzing text-based data to identify patterns, themes, and meanings in the existing literature (White and Marsh, 2006). Weber (2017) explains that content analysis allows researchers to make sense of a social phenomenon by categorizing textual data with appropriate care, making it a useful tool for understanding how digital applications such as WhatsApp can change the process of learning and professional growth.

3.1 Selection of Research Articles

In this paper, six peer research articles have been chosen to make sure that they were related and analysis-rich. This implies that this research had a sample size of 10. The choice was motivated by inclusion criteria outlined for the use of WhatsApp in the context of education, with specific reference to journalism education where possible. The search was based on two keywords: the impact of using WhatsApp on journalism education and the impact of using WhatsApp on education. These keywords allowed locating studies that discussed WhatsApp as a tool for instruction or as a platform for professional learning and student interaction. In line with Singh (2022), the choice of information sources was limited to purposive sampling, and the aim was to ensure that the chosen sources were directly relevant to addressing the research goals.

3.2 PRISMA Framework

The Preferred Reporting Items of the Systematic Reviews and Meta-Analyses (PRISMA) was utilized to ensure the enthusiasm and transparency in the selection process. PRISMA assisted in the selection of the appropriate studies through identification, screening, eligibility and inclusion of the studies. Initial database searches yielded a number of studies; by removing the duplicates, irrelevant topics, and studies with no text, we obtained a final set of studies (Singh, 2022). For this research, 10 research articles will be selected.

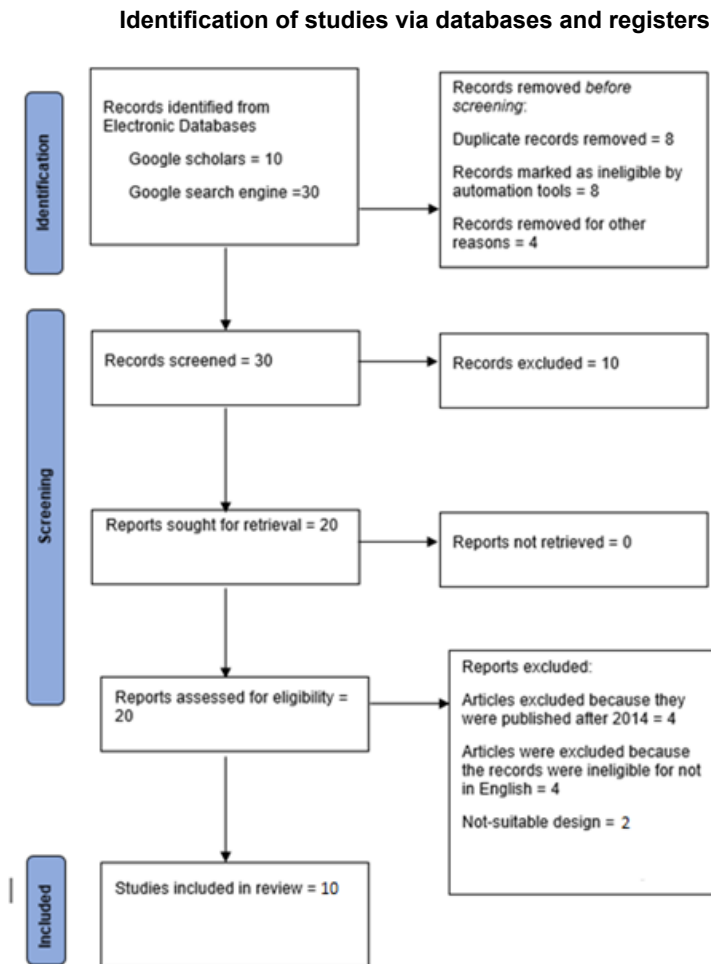


Figure 1: Extraction of related studies

3.3 Data Analysis: Thematic Content Analysis

Each article was selected, and a qualitative content analysis was conducted to identify common ideas, trends, and understandings. Content analysis, as discussed by Prasad (2008), entails the decomposition of textual information into manageable units and the creation of meaning from them. The analysis was inductive, meaning the themes emerged from the data rather than being prescribed, in line with the argument that themes should be developed organically based on the content under analysis (Weber, 2017).

3.4 Ethical Considerations

A qualitative content analysis was conducted on the selected articles to identify common ideas, trends, and understandings. Content analysis has been defined by Prasad (2008) as the process of disaggregating textual information into manageable categories and making sense of it. The data were inductively analyzed, and the themes were not predetermined, which is appropriate, given Weber's (2017) view that themes should be created in organisms in relation to the content under consideration.

3.5 Methodological Justification

The rationale behind the choice of content analysis is that it allows performing a systematic study of the existing scholarly debates and the researcher to make sense of the insights. The use of content analysis, as indicated by White and Marsh (2006) is particularly handy in situations where one needs to focus on how ideas develop in a variety of contexts and disciplines. This method is a systematic but an open means of comprehending the study of the educational role of WhatsApp in journalism investigation due to the variations in digital education. PRISMA is integrated in order to guarantee transparency and rigor.

Overall, this research design will provide a dependable, consistent, and ethically sound study of current sources, providing valuable insights into the purpose of WhatsApp in news writing and education in general.

Table 1: CASP Checklists - Critical Appraisal Skills Programme (Data Validation)

Article / Author(s)	Design	Critical Appraisal (CASP)
Gamji & Salman (2019)	Quantitative Survey	Effective objective; strong Likert questionnaire; statistics suitable; no ethical statement; applicable to WhatsApp learning.
Muzaffar, Yaseen, & Safdar (2020)	Qualitative Case Study	Preciseness; case study; thematic analysis, legitimate; questionable ethical conduct; applicability to the dissemination of political information.

Article / Author(s)	Design	Critical Appraisal (CASP)
Binti-Mistar & Embi (2016)	Quantitative Survey	A clear aim; descriptive statistics were employed; the survey design was suitable; no ethical issues were reported; it was moderately transferable.
Gasaymeh (2017)	Quantitative Cross-sectional	Defined purpose; questionnaires to be filled in; analysis; no ethical reporting; applicable to student use of WhatsApp.
Kushwaha & Jhawar (2018)	Quasi-Experimental	Goal focus; pre/post-test study good; causal implication can be made; ethical questionable; very important to the learning effects.
Amjad, Aslam, & Tabassum (2024)	Mixed Methods	Well defined purpose; both quantitative and qualitative data is used; strong analysis; ethics unreported; extremely applicable to mobile learning.
Mulyono, Suryoputro, & Jamil (2021)	Quantitative Online Survey	Purpose properly stated; survey on the Internet; analysis properly stated; ethics unclear; applicable to the context of online learning.
Munir, Erlinda, Putra, & Afrinursalim (2021)	Qualitative / Descriptive	Clarity; theme analysis above rigorous; no mention made of ethics; practical in student/ teacher views.
Tabassum, Qiang, Abbas, Amjad, & Al-Sulaiti (2024)	Quantitative SEM	Precise aim; statistical rigor; ethics not reported; extremely relevant to factors of psychological interest.
Tabbasam, Amjad, Ahmed, & Qiang (2023)	Quantitative Comparison	Specific objective; active scales; use of T-tests/ ANOVA is valid; unclear ethics; moderate applicability to adolescent behavior.

Table 2: Novelty of Study

Article / Author(s)	Novelty / Contribution
Gamji & Salman (2019)	First to measure the WhatsApp impact on the perceptions of Pakistani undergraduates in relation to learning.
Muzaffar, Yaseen, & Safdar (2020)	Researched the extent to which WhatsApp was used to spread political information in 2018 Pakistani elections.
Binti-Mistar & Embi (2016)	This investigated how ESL students feel about using WhatsApp in learning in Malaysia.
Gasaymeh (2017)	Researched trends of incorporating WhatsApp into the learning process of higher education institutions.

Article / Author(s)	Novelty / Contribution
Kushwaha & Jhawar (2018)	When comparing WhatsApp-aided vs. conventional teaching effectiveness.
Amjad, Aslam, & Tabassum (2024)	Combined ChatGPT, social media, and mobile learning has an effect on academic performance.
Mulyono, Suryoputro, & Jamil (2021)	Targeted on the WhatsApp application in online learning during COVID-19 in Indonesia.
Erlinda, Munir, Putra, and Afrinursalim (2021).	Student and teacher image of the advantages and disadvantages of WhatsApp.
Tabassum, Qiang, Abbas, Amjad, and Al-Sulaiti (2024).	Medicated the interaction of happiness and self-strength in the help-seeking of adolescents.
Tabbasam, Amjad, Ahmed, & Qiang (2023)	An adolescent comparison between Pakistani and Chinese adolescents on psychological scales.

4. FINDINGS

The selection of the research articles is associated with a strong and transformational impact of digital technologies on the education and journalism sectors in Pakistan. The data extraction table is below

Table 3: Data Extraction table (DET)/ (Authorship(s) validation)

Article / Author(s)	Journal Name	Methodology Type	Research Design & Instruments
Gamji & Salman (2019)	<i>International Journal of Information Processing and Communication</i>	Quantitative	Survey Research: Likert-scale, structured questionnaire of frequency, perception, and influence of WhatsApp utilization in undergraduate Pakistani students.
Muzaffar, Yaseen, & Safdar (2020)	<i>Journal of Political Studies</i>	Qualitative / Case Study	Case Study: Interpreted the Pakistani elections of 2018. Analysis of social media activity that has been used and/or interviewing campaign managers to study the role of WhatsApp in the dissemination of information.

Article / Author(s)	Journal Name	Methodology Type	Research Design & Instruments
Binti-Mistar & Embi (2016)	<i>Journal of Education and Social Sciences</i>	Quantitative	Perceptual Survey: Descriptive statistics used on the data of questionnaires to investigate the perception of ESL students towards WhatsApp as a learning tool.
Gasaymeh (2017)	<i>Global Journal of Computer Science and Technology</i>	Quantitative	Cross-sectional Survey: University students were asked to complete structured questionnaires that measured patterns of integrating WhatsApp into education and attitudes towards the platform.
Kushwaha & Jhavar (2018)	<i>Ushus Journal of Business Management</i>	Quantitative	Experimental / Quasi-Experimental: Comparison of groups in which WhatsApp will be used as a teaching tool and traditional teaching techniques, with pre- and post-tests as the indicators of learning results.
Amjad, Aslam, & Tabassum (2024)	<i>European Journal of Education</i>	Mixed Methods	Detailed Research: The quantitative data of academic achievement and qualitative data of interactions of ChatGPT, mobile learning, and social media use in Pakistani classrooms.
Mulyono, Suryoputro, & Jamil (2021)	<i>Heliyon</i>	Quantitative	Online Survey: Online questionnaires that were sent to students and teachers to explore the use of WhatsApp in supporting online learning during COVID-19 (Indonesian setting).

Article / Author(s)	Journal Name	Methodology Type	Research Design & Instruments
Munir, Erlinda, Putra, & Afrinursalim (2021)	<i>International Journal of Educational Best Practices</i>	Qualitative / Descriptive	Thematic Analysis: Data gathered through the use of open-ended surveys or interviews to strategize the benefits and drawbacks of WhatsApp in the minds of students and teachers.
Tabassum, Qiang, Abbas, Amjad, & Al-Sulaiti (2024)	<i>Kybernetes</i>	Quantitative	Mediation Analysis: Structural Equation Modeling (SEM) to address the following question: How is the relationship between happiness and self-strength in Pakistani adolescents mediated by the factor of help-seeking?
Tabbasam, Amjad, Ahmed, & Qiang (2023)	<i>International Journal of Mental Health Promotion</i>	Quantitative	Comparison Study: Standardized psychological scales included Happiness and Self-Strength; T-tests or ANOVA were applied in order to compare two groups of adolescents, Pakistani and Chinese.

Table 4: Thematic Framework: Digital Transformation in Pakistan

High-Level Theme	Sub-Themes (Codes)	Supporting References
I. Pedagogical Innovation	Skill Improvement, E-Learning Efficacy, perceptions of students.	Gamji & Salman (2019); Gasaymeh (2017); Kushwaha and Jhavar (2018); Binti-Mistar and Embi (2016)
II. Professional & Journalistic Development	Digital Reporting Tools, News Production Change, Technological Convergence.	Muzaffar, Yaseen, & Safdar (2020);
III. Emerging AI & Digital Literacy	Job Preparedness, AI Opportunities, Automation, Productivity.	Amjad, Aslam, & Tabassum (2024);

High-Level Theme	Sub-Themes (Codes)	Supporting References
IV. Ethical & Structural Barriers	Misinformation, Coherence Problems Infrastructure Problems Privacy/Security.	Qiang, Tabassum, Abbas, Amjad, and Al-Sulaiti (2024); Tabbasam, Amjad, Ahmed, and Qiang (2023)

4.1 Thematic Analysis

Theme 1: Pedagogical Innovation

One of the main themes that appeared in the literature is the role of WhatsApp in improving pedagogical processes. Research shows that WhatsApp can be used to provide e-learning, enhance interaction, and skills acquisition among learners (Gamji and Salman, 2019; Binti-Mistar and Embi, 2016; Gasaymeh, 2017). For journalism students, this reflects group learning, faster access to materials, and better communication about reporting assignments. Also, there is experimental evidence that including WhatsApp in classroom processes can yield tangible, positive learning outcomes superior to those of conventional learning (Kushwaha and Jhawar, 2018). WhatsApp is viewed by students as a convenient means of discussing, having peer feedback, and sharing knowledge, which contributes to a better grasp of the theoretical material and practical competence.

Theme 2: Professional and Journalistic Development

The other major theme is on WhatsApp as a means of developing professional skills and practicing journalism. The platform enables the sharing of real-time information, collaborative news production, and integration with digital reporting tools (Amjad, Aslam, and Tabassum, 2024). For example, research grounded in case studies of political campaigns in the country shows how WhatsApp can quickly spread news and connect with users, which is why it is relevant to novice journalists (Muzaffar, Yaseen, and Safdar, 2020). The theme highlights this simultaneous meeting of conventional journalism art with new digital directions, according to which students should go to work in the updated newsrooms.

Theme 3: Emerging AI and Digital Literacy

WhatsApp is also enhancing digital literacy and AI awareness, where students will learn how to share information and use automated systems in reporting processes. Quantitative research indicates that students' learning outcomes and self-efficacy are mediated by help-seeking behavior via WhatsApp, highlighting the role the app plays in the development of technological competencies among students. (Tabassum, Qiang, Abbas, Amjad, & Al-Sulaiti, 2024; Tabbasam, Amjad, Ahmed, & Qiang, 2023). This theme underscores the readiness of students in AI-based journalism, such as personality checking of the content and productivity improvements that are becoming more and more vital in professional reporting.

Theme 4: Ethical and Structural Barriers

Finally, the use of WhatsApp has challenges and ethical concerns as covered in the literature. Untrustworthy and unrelated info, the security gaps, and technical constraints are the problems that concern both education and work (Munir, Erlinda, Putra, & Afrinursalin, 2021; Mulyono, Suryoputro, & Jamil, 2021). For journalism students, overcoming these obstacles is essential to remain credible and living by professional ethics. Knowledge of these structural limitations will guide teachers and learners to be more responsible and efficient in their use of WhatsApp.

4.2 Summary

In general, the thematic analysis shows that WhatsApp can be used as a two-fold tool: to improve academic learning by means of engagement and collaboration, as well as to develop a profession based on exposure to real-time reporting, digital tools, and AI-mediated practices. Nevertheless, the ethical and structural barriers are significant concerns that must be strategically addressed in educational and professional settings.

5. DISCUSSION

The section presents the argument of these findings in relation to the research objectives and questions, evaluates the similarities and differences of the available literature, and suggests implications.

Objective 1: To examine how WhatsApp contributes to teaching and learning in Pakistan

The results confirm the argument that WhatsApp has increased academic interaction, interactivity, and access to educational resources in Pakistani education settings. Research indicates that WhatsApp has made collaborative learning, sharing of information, and interacting with peers possible, especially in situations of emergency remote education like the COVID-19 lockdown (Gamji & Salman, 2019; Binti-Mistar & Embi, 2016; Gasaymeh, 2017). According to experimental studies, students who use WhatsApp as an educational support platform achieve higher academic success than their peers who rely solely on conventional study methods (Kushwaha & Jhavar, 2018).

Similarly, Afzal and Abdullah (2022) conclude that WhatsApp facilitates classroom extension, cooperation among peers and enhancement of motivation since it addresses the research question about whether WhatsApp can positively affect the academic engagement and performance. These findings confirm the fact that the convenience of technologies is not a big disadvantage, and students consider WhatsApp as an easy to use, familiar, and useful tool to ensure meaningful learning experiences.

Nevertheless, there are limitations also implied in the literature. Whereas it will be more accessible, the platform may lack pedagogical control, formal evaluation, and long-term plans of integrating the curriculum into whatsapp (Bethell, 2010).

Objective 2: To explore how digital platforms and AI are reshaping journalistic practices in Pakistan

The findings reveal the disruptive feature of WhatsApp and mobile technology in the production, verification and spreading of news that enables reporters to report and collaborate over real-time (Muzaffar, Yaseen, and Safdar, 2020; Amjad, Aslam, and Tabassum, 2024). The platform gives students access to exploring the new professional practices, trying various digital reporting tools, and adjusting to technological convergence, which represents the theme of Professional and Journalistic Development.

These opportunities however are surrounded by ethical tensions. Quick information distribution has the potential to increase misinformation, sensationalism, and less editorial control, and this is a challenge to journalistic credibility (Munir et al., 2021; Safdar, 2022). These problems support the necessity of digital literacy and ethical education in the journalism programs in Pakistan.

Objective 3: To assess perceptions, opportunities, and risks of Artificial Intelligence in Pakistani journalism

AI has been viewed as a disruptive, though advantageous, technology in the journalism sector and is seen to assist in automated reporting, analytics and customized content generation (Tabassum, Qiang, Abbas, Amjad, and Al-Sulaiti, 2024; Tabbasam, Amjad, Ahmed, and Qiang, 2023). The apps fit the Emerging AI and Digital Literacy theme demonstrating that AI can be used to improve the productivity and storytelling.

Concurrently, AI presents hazards, such as the displacement of jobs and the obsolescence of skills and contacts the precariousness of at least the systematic AI illiteracy and capacity-building of existing journalism courses (Tabassum et al., 2024). This highlights the importance of the fact that technological competencies should be considered in the process of educational and professional development. Nonetheless, the results also answer the research question on whether AI poses a threat to employment and professional identity in journalism. The writers of the news lament about job replacement practices, reduction of editorial positions, and skills becoming outdated (Khaliq, 2024). Such fears demonstrate the evident lack of education in the field, as currently journalism programs do not provide sufficient training on AI literacy, repeating the statement that capacity-building and systematic skill training are needed to train future journalists (Albizu-Rivas, Parratt-Fernández, & Mera-Fernández, 2024).

Objective 4: To identify ethical and structural challenges in digital education and journalism

The discussion singles out ethical and infrastructural obstacles of misinformation, a lack of trust in online news, and inadequate technological infrastructure (Munir et al., 2021; Muzaffar et al., 2020; Mulyono, Suryoputro, and Jamil, 2021). Distractions, the authenticity of the content taught, and a lack of formal assessment structures are some problems within the educational setting. The above challenges can be associated with the Ethical and Structural Barriers theme, which emphasizes the necessity of a policy-oriented, ethically motivated, and methodologically sound integration of WhatsApp and digital tools.

In line with the research questions, it has been found that deep ethical and infrastructural barriers exist. The spread of fake news and deepfakes, the lack of trust in journalism, weak regulation, and insufficient technological infrastructure undermine the responsible introduction of digital integration (Safdar, 2022; Saeed, Farooq, Khan, & Mahmood, 2021). According to Weber (2017) and White and Marsh (2006), technological innovation should be complemented by methodological rigor and ethical responsibility- something that has not been developed in Pakistan. In the same manner, there are issues surrounding education in terms of authentic materials of content, academic discipline, and risk of distraction by the digital world. Therefore, technological integration improves functionality, and ethical governance is yet to be developed, which satisfies this research purpose.

5.2 Summary

WhatsApp can enhance the prospect of learning and access to a considerable extent, and digital platforms and AI transform the way of journalism and professional skills growth. However, ethical, infrastructural and pedagogical limitations are still present. Strategic planning, ethical governance and capacity-building programs are required to achieve the potential of the digital transformation in Pakistan to ensure that the process becomes sustainable and responsible in educational and journalism sectors.

6. CONCLUSION

This paper addressed the application of WhatsApp as digital communication and learning resource in journalism education in Pakistan, and how the application has affected the learning practices, student engagement, collaborative learning, and development of professional skills. The study used systematic content analysis and thematic interpretation to check the purpose of the WhatsApp application, as either a convenient or a significant influence on learning process of journalism students. The results show that WhatsApp is not just the communication tool: it also allows sharing information in real-time, cooperating with peers, and exchanging feedback, and interactive learning, which all lead to better academic and professional readiness. These findings can be compared to the available literature on the topic of mobile-assisted learning and digital communication, which notes that WhatsApp can be useful in stimulating pedagogical innovation and engagement in higher education

(Gamji and Salman, 2019; Binti-Mistar and Embi, 2016; Gasaymeh, 2017; Kushwaha and Jhavar, 2018; Amjad, Aslam, and Tabassum, 2024). In addition, the platform aids in the creation of digital literacy and applied skills that are pertinent to the contemporary journalism, in line with the requirements of convergent news settings that are technologically oriented.

Although WhatsApp improves access and collaboration, the results also indicate ethical, structural, and pedagogical issues, such as misinformation, the absence of formal evaluation, and the necessity to be guided to integrate into curricula, which also reflects the concerns mentioned in the research on mobile learning at the time of COVID-19 (Munir et al., 2021; Mulyono, Suryoputro, and Jamil, 2021). All in all, WhatsApp is not just a convenient tool but a tactical learning experience, career building tool, and a hands-on experience amidst journalism students in Pakistan.

6.1 Implications

By future implication, the research also highlights the necessity of formal integration of WhatsApp in journalism pedagogy as opposed to ad hoc use. Teachers ought to develop ethical standards, organized systems of participation, and a set of moderation in order to have ethical digital learning undertakings. Learning Management Systems can also be implemented with WhatsApp to have quality assurance and responsibility in institutions (Hussain, Khan, Mahboob, Latif, & Waheed, 2020). Moreover, with the growing interdependence of journalism and artificial intelligence and digital technologies, such platforms as WhatsApp might keep developing as valuable professional learning environments.

In general, the paper has concluded that WhatsApp has become a strong auxiliary academic resource in the field of journalism education in Pakistan. It provides better communication, interaction, and continuity of learning when properly designed, especially when dealing with a pandemic disruption and remote learning cases (Khan, 2021). Nevertheless, it is limited in its full educational utility according to the systematic incorporation, ethical media consciousness, and directed academic structures. As a consequence, instead of replacing traditional teaching, WhatsApp must be promoted as an additional digital learning resource that enhances journalistic competencies, collaboration, and real-time interaction in journalism education.

6.2 Research Recommendations

According to the findings, a number of key recommendations can be made to improve the successful use of WhatsApp, digital media tools, and AI in the journalism and education sector in Pakistan. To begin with, the students and journalists should be provided with structured training programs to develop the skills of digital literacy, fact-checking, ethical reporting, and AI-assisted journalism. Mobile-Assisted Language Learning (MALL) and social media-based learning approaches should be officially incorporated into the curricula of educational institutions with a clear set of pedagogical instructions. In an effort to manage the digital reporting activities, eliminate misinformation, and maintain credibility, news companies will establish ethical systems and editorial principles to govern the online reporting

practice. Policymakers/regulators should increase accessible and affordable and secure digital infrastructure in institutions. The government, academia, and media houses must come together to come up with uniform curricula and capacity building programs to create awareness of the preparedness to use them. AI. Finally, ongoing research is needed to track the changing trends in digital in order to optimise the strategies, thus responsible, innovative, and sustainable transformation of digital in journalism and education sectors.

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