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ELANTIC JOURNAL OF SOCIAL SCIENCES Unraveling the Impacts of Whatsapp Messaging on Interpersonal Communication Dynamics: A Study of University Students

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Abstract: This quantitative study investigates the influence of WhatsApp usage on interpersonal communication skills and interpersonal relationships among university students. Utilizing a self-administered questionnaire, 202 valid responses were collected to explore the correlation between WhatsApp use and these two variables. Our findings indicate a significant association between the frequency of WhatsApp usage and interpersonal communication skills and interpersonal relationships among the participating university students. This research contributes valuable insights into the contemporary dynamics of communication technology and its impact on the social fabric within educational settings. This can empower students to navigate the digital communication landscape with awareness and skill. Future research should adopt an interdisciplinary approach to study the cultural and psychological aspects of WhatsApp usage.

Key Words: WhatsApp Messaging, Interpersonal Communication, University Students, Communication Technology, Education

Introduction

WhatsApp, a widely utilized instant messaging application, has become an integral part of the daily communication landscape (Jordan, 2023). With its widespread adoption, understanding the usage patterns among specific demographic groups becomes imperative for researchers and policymakers. WhatsApp Messaging is a speedy approach to staying in touch with people for private or business purposes (Moawad, 2022). Through WhatsApp Messaging, you can converse with another person by typing and reading on the mobile screen. WhatsApp Messaging is faster than e-mail and phone calls (Aal et al., 2014). WhatsApp Messaging is greatly famous among personal mobile users because they can communicate with each other when they can not use phone calls (Nouwens et al., 2017). The major reason for its popularity is that WhatsApp Messaging is much cheaper than making a phone call. Usually, WhatsApp Messaging is more expensive. People basically text because it is comparatively cheaper than a phone call. WhatsApp Messaging has new transformations to wrap messages that comprise picture, capture, and sound (Chikoko, 2020). It has furthermore evolved as individual-to-individual messaging consisting of communication with regular systems and is accessible on an extensive multiplicity of networks. However, the communication dynamic is characterized by the interactive exchange of information, ideas, and messages, demonstrating responsiveness, adaptability, and engagement (Wang et al., 2009). It encompasses active listening, articulate expression, and the skill to tailor communication style according to the specific situation and audience (Singh & Victor, 2021). This notion underscores the fluid and interactive aspects that contribute to the effectiveness of communication.

Effective interpersonal communication skills remain crucial for students engaged in discussions with both peers and lecturers. In comparison to virtual communication, interpersonal communication facilitates

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the clear delivery and reception of messages (Solomon & Theiss, <u>2022</u>). The ability to observe facial expressions and body language during face-to-face interactions plays a pivotal role in enhancing the clarity of communication and preventing misunderstandings.

While numerous studies have underscored the positive impacts of social networking on interpersonal communication, it is essential to acknowledge the existence of research demonstrating negative effects (Abbas et al., 2019). Some studies suggest that social networking can diminish the desire for interpersonal communication. This discrepancy in findings necessitates a reassessment of the topic, urging researchers to revisit WhatsApp's omnipresence in contemporary communication warrants examination due to its prevalence among the student demographic (Turp, 2020). Understanding how this platform influences the cultivation and application of interpersonal communication skills is crucial in light of its widespread adoption. In the context of rapidly advancing technology, it is paramount to assess how the reliance on instant messaging platforms like WhatsApp shapes traditional interpersonal communication skills (Kiran & Srivastava, 2018). Investigating this relationship can offer insights into the evolving nature of communication in the digital age.

WhatsApp's diverse communication modalities, encompassing text, voice messages, and multimedia sharing, necessitate an exploration of their impact on interpersonal communication skills (Gupta & Upadhyay, 2019). Understanding how students adapt their communication styles to leverage these features is essential for a comprehensive analysis. Interpersonal communication skills are fundamental to personal and professional success (Sun et al., 2021). Assessing the impact of WhatsApp on these skills is crucial for discerning potential social implications, such as changes in the quality and depth of relationships among student users.

Given the extensive use of WhatsApp in academic settings for group discussions, project coordination, and information sharing, examining its relationship with interpersonal communication skills is pertinent in the educational context (Li et al., <u>2021</u>). Such an analysis may yield insights into collaborative learning and academic success.

A comprehensive investigation should consider both the positive and negative impacts of WhatsApp usage on interpersonal communication skills (Dhir et al., 2018). While the platform enhances connectivity, challenges such as message misinterpretation and reduced face-to-face interactions need thorough exploration. Recognizing that students using WhatsApp represent diverse backgrounds and cultures, an analysis of how demographic factors influence the relationship between WhatsApp usage and interpersonal communication skills ensures a nuanced understanding (Al-Rahmi et al., 2020). Insights gained from studying the relationship between WhatsApp usage and interpersonal communication skills contribute to an understanding of broader trends in digital communication, preparing students for future communication environments (Junco, 2015).re-examine the dynamics between social networking and interpersonal communication.

Problem Statement

The widespread adoption of WhatsApp in the daily communication routines of university students underscores the pressing need to comprehensively explore the diverse impacts of this omnipresent messaging platform on interpersonal communication dynamics. Despite its popularity and convenience, there exists a critical gap in our understanding of how WhatsApp usage shapes fundamental aspects such as interpersonal communication skills and relationships among students. This study endeavors to bridge this gap by scrutinizing the correlation between the frequency of WhatsApp usage and the proficiency of interpersonal communication skills, along with the quality of interpersonal relationships within the university milieu.

With ongoing technological advancements, the increasing prevalence of instant messaging platforms like WhatsApp prompts inquiries into potential transformations in traditional interpersonal communication norms. The inherent features of WhatsApp, encompassing text messages to multimedia sharing, offer a spectrum of communication modalities that may influence how students engage with their peers and educators. The objective of this study is to investigate how students adapt their communication styles to leverage these features and evaluate the resulting implications for their interpersonal communication skills. While existing research has emphasized the positive impact of social networking on interpersonal communication, the existence of contradictory findings and indications of negative effects necessitate a thorough reassessment, particularly given WhatsApp's dominance in student communication. Understanding how this platform shapes both the development and application of interpersonal communication skills is crucial, given its integral role in academic collaboration, group discussions, and information sharing within educational settings.

Moreover, this study acknowledges the significance of investigating the influence of demographic factors on the relationship between WhatsApp usage and interpersonal communication skills. Recognizing that students from diverse backgrounds and cultures may engage with the platform differently, a comprehensive analysis is essential to gain insights into potential variations in communication patterns. Additionally, the research underscores the need to consider both the positive and negative impacts of WhatsApp, recognizing challenges such as message misinterpretation and reduced face-to-face interactions.

Literature Review

Several studies demonstrate the benefits of WhatsApp in promoting connectedness and enabling smooth communication between students (Van & Mudau, 2022; Stone & Logan, 2018). Text messaging, voice notes, and multimedia sharing are just a few of the platform's many communication modes that have been recognized for improving the depth and speed of collaboration (Gupta et al., 2019). This is consistent with the more general idea that technology can facilitate social networking and other forms of human interactions (Boyd & Ellison, 2007).

However, an increasing amount of research also highlights the possible disadvantages of relying too much on WhatsApp. Dhir et al. (2018) draw attention to the possibility that more virtual communication would result in less face-to-face contact among students. Concerns are raised over how this change may affect conventional interpersonal communication techniques, which frequently rely on non-verbal cues and real-time interaction (Dávila-Montero et al., 2021). Furthermore, academics warn about the possibility of misinterpreting communications in virtual communication spaces, pointing out that the lack of body language and facial emotions may cause misconceptions (Dhir et al., 2018). This is consistent with the social presence theory (Short, Williams, & Christie, 1976, as quoted by Weidlich et al., 2018), which suggests that the lack of nonverbal cues in computer-mediated communication may have an effect on the nature of social relationships.

The literature is in agreement that further in-depth research is necessary, even if it largely recognizes WhatsApp's dual impact on interpersonal communication. According to Gupta et al. (2019), it's critical to comprehend how students modify their communication approaches to take advantage of WhatsApp's capabilities. Al-Rahmi et al. (2020) note that students from different backgrounds can use WhatsApp in different ways. Therefore, they support taking demographic aspects into account. Research on social networking sites (SNS) and interpersonal communication underscores their significant role. Positive aspects include enhanced connectivity and relationship maintenance (Ellison et al., 2007; Hampton et al., 2014). However, concerns arise regarding privacy issues (Boyd & Ellison, 2007) and potential negative impacts on face-to-face interactions (Vitak et al., 2011).

Communication Dynamics and Whatsapp Usage

In the era of digital advancements, the landscape of communication dynamics has undergone a profound transformation (Gao, 2023). Central to this evolution is instant messaging platforms like WhatsApp, which have emerged as pivotal influencers in shaping interpersonal interactions. The emergence of digital communication platforms has ushered in novel dimensions of how individuals engage with one another (Sun et al., 2022). WhatsApp, as one of the most extensively utilized instant messaging applications, has become an indispensable tool in the daily communication environment. Beyond conventional face-to-face interactions, WhatsApp introduces a fusion of text, voice messages, and multimedia sharing, redefining the dynamics of modern communication Bashir-Badmus, 2018). A distinctive hallmark of WhatsApp lies in its adaptability and flexibility, embodying the dynamic nature of contemporary communication



(Manurung, 2022). Users seamlessly transition between text and multimedia messages, enabling a more complete expression of thoughts and emotions. The real-time nature of the platform cultivates immediacy, facilitating fluid and spontaneous conversations. The influence of WhatsApp on interpersonal communication extends to both the development and application of communication skills (Baguma et al., 2019). However, the integration of WhatsApp into interpersonal communication is not devoid of challenges. Message misinterpretation, stemming from the absence of non-verbal cues, presents a potential obstacle (Damanhouri, 2018). Additionally, the convenience of instant messaging may, in certain instances, contribute to a reduction in face-to-face interactions, prompting reflections on the depth and quality of relationships.

On the other hand, WhatsApp has evolved into a vital instrument for collaborative endeavors among students. The platform's efficiency shines in group discussions, project coordination, and information sharing (Nkambule, 2023). While facilitating academic discourse, it becomes imperative to scrutinize its impact on interpersonal communication skills within educational settings. The adaptation of communication styles by students in these academic interactions contributes to the ongoing evolution of communication dynamics in learning environments. In conclusion, the utilization of WhatsApp significantly molds communication dynamics in interpersonal interactions, including academia (Chandio et al., 2023).

Theoretical Framework

The Uses and Gratifications Theory provides a valuable lens to understand the impact of WhatsApp messaging on interpersonal communication, emphasizing that individuals actively choose and use media for specific needs and gratifications. Users often turn to WhatsApp to seek and share information. Whether it's academic updates, news, or personal anecdotes, the app fulfills the need for information exchange (Katz et al., <u>1973</u>).

WhatsApp allows users to express themselves through text, images, and multimedia. Users can curate and present their identity, fostering a sense of self-expression and individuality (Manago & McKenzie, 2022). WhatsApp facilitates social interactions, supporting both one-on-one and group conversations. Users seek social integration by staying connected with friends, family, and peers, reinforcing the theory's emphasis on social needs (Sun & Zhang, 2021). Through features like emojis, stickers, and multimedia sharing, WhatsApp provides entertainment and serves as an escape from daily routines. Users derive gratification by engaging in enjoyable and light-hearted communication (Falgoust et al., 2022). One of WhatsApp's primary functions is to maintain personal relationships. Users utilize the platform to strengthen connections, stay updated on others' lives, and feel a sense of social connectedness (Katz et al., 1973).

Users engage in monitoring others' status updates, a feature that satisfies the surveillance gratification. This aligns with the theory's recognition that individuals use media to observe and keep track of their social environment (Blumler & Katz, 1974). WhatsApp groups serve as platforms for expressing opinions, affiliating with like-minded individuals, and participating in discussions. This aligns with the theory's acknowledgment of media as tools for opinion expression and affiliation (Blumler & Katz, 1974). The theory emphasizes the intrinsic need for communication and companionship. WhatsApp, through its real-time messaging and multimedia sharing, satisfies this fundamental human need (Mazzuoccolo et al., 2019).

Research Questions

- **RQ1**: Is there a significant relationship between the usage of WhatsApp and individuals' interpersonal communication skills?
- **RQ2**: Is there a significant relationship between the usage of WhatsApp and individuals' interpersonal relationships?

Methodology

The sample for the current study was chosen through a quantitative approach using an online survey with a structured questionnaire. The survey instrument consisted of two parts: demographics and survey

questions. The target population for this research was WhatsApp users, and particular attention was given to ensuring diversity within the sample. To achieve this diversity, the study focused on the youth demographic enrolled in universities in Islamabad. The choice of this population was driven by the need to capture a broad range of experiences and perspectives among WhatsApp users. The youth demographic, being dynamic and diverse, was considered relevant for understanding the multifaceted impacts of WhatsApp on interpersonal communication dynamics. A purposive sampling technique was employed to select participants for the study. This approach allowed the researchers to deliberately choose individuals who met specific criteria, ensuring a representative and varied sample. Factors such as age, gender, academic discipline, and socio-economic background were considered during the selection process to encompass a wide spectrum of experiences within the youth population. By employing purposive sampling, the researchers aimed to gather insights from WhatsApp users with different demographic characteristics, thereby enriching the study's findings and providing a more comprehensive understanding of how communication dynamics are influenced by WhatsApp usage among university students in Islamabad.

An online survey was chosen as the primary method of data collection. The survey instrument is a structured questionnaire consisting of two parts: demographics and survey questions. The demographics section aims to capture essential information about the respondents, while the survey questions delve into specific aspects of WhatsApp usage. The questionnaire is carefully designed to elicit detailed information on various dimensions of WhatsApp usage. The demographic section includes inquiries about age, gender, academic discipline, and socio-economic status. The rest of the instrument is designed to measure the major variables of the study. The items adopted from Drussel (2012) measure interpersonal communication skills. His work investigates the impact of social networking sites on interpersonal communication. Items to measure perceived usefulness are adopted from Porter and Donthu (2006). Meanwhile, perceived user-friendliness is adopted from Porter and Donthu (2006) and Sevük (2013). The questionnaire is pilot-tested. Cronbach's alpha value for interpersonal communication skills is 0.811, interpersonal relationships 0.717, and effect on language 0.817, which, according to Ghozali (2011) as quoted by (Savitri, 2016), is reliable.

Results and Discussions

Questionnaires were distributed among the students of Rawalpindi and Islamabad. The age group is divided into four categories, i.e., 20–25, 26–30, and 36–40. So, most of the respondents lie between the age limits of 20–25. Education level is divided into four categories, i.e., Matriculation, Intermediate, Graduation, and Post– graduation. 8 percent of respondents' education level is matriculation, 14 percent of respondent's education level is intermediate, 52 were graduates, and 26 percent were postgraduates. 87 percent of respondents have their own mobile phones, while 67 percent of respondents use WhatsApp very often.

Table 1

Correlation between WhatsApp usage and interpersonal relationships (N=202)

		Interpersonal relationship
	Pearson Correlation	.611**
WhatsApp usage	Sig. (2-tailed)	.000
	Ν	202

**. Correlation is significant at the 0.01 level (2-tailed).

The results showed a significant correlation (r = 0.611, p<0.01) between interpersonal relationships and WhatsApp usage. Consequently, it may be said that WhatsApp messaging is crucial for preserving interpersonal connections.

Table 2

Impact of WhatsApp usage on interpersonal communication skills

		Interpersonal Communication Skills	
	Pearson Correlation	.574**	
Whatsapp Usage	Sig. (2-tailed)	.000	
	Ν	202	

**. Correlation is significant at the 0.01 level (2-tailed)

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The results showed a significant correlation (r = 0.574, p<0.01) between interpersonal relationships and WhatsApp usage usage. Consequently, it may be said that WhatsApp has a vital effect on the interpersonal communication skills of university students. Relationships between variables can be found and described using the correlation technique. The degree to which two variables have a linear relationship is expressed using Pearson's correlation. The results of the correlation values range from +1 to -1. A value of +1 denotes a strong positive association between two variables, a value of -1 denotes an inverse relationship, and a value of 0 denotes no correlation or relationship at all between the two variables.

Discussion

The growing popularity of WhatsApp Messenger has given rise to an integral aspect of our daily lives. According to empirical data, the global population of active social media users amounts to approximately 3.95 billion individuals. Furthermore, it has been observed that approximately 48% of the global population actively engages with these platforms. This media offers significant opportunities in various domains, such as communication and information dissemination, education, and marketing, among others, and facilitates the establishment of communities, enabling individuals to engage and establish connections with others, regardless of geographical barriers. Effective use of WhatsApp can enhance the learning abilities of university students by establishing a platform for communication with fellows and professors.

Conclusion

The findings of this study highlight the significant impact of WhatsApp usage on interpersonal communication dynamics among the youth demographic enrolled in universities in Islamabad. Through a quantitative approach and purposive sampling, we gained discussed the relationship between WhatsApp usage and various demographic factors, including age, gender, academic discipline, and socio-economic background. The adaptability and flexibility offered by WhatsApp were evident in the diverse communication modalities embraced by the participants. The platform's influence on both the development and application of interpersonal communication skills was apparent, with users navigating seamlessly between text, voice messages, and multimedia sharing. While these aspects contribute to the richness of communication, challenges such as the potential for message misinterpretation and a reduction in face-to-face interactions were also acknowledged. The study's focus on diversity within the sample shed light on how different demographic factors influence WhatsApp usage patterns. These variations are crucial for understanding the nature of interpersonal communication dynamics among WhatsApp users. In the academic context, WhatsApp emerged as a vital tool for collaborative learning and communication among students. Group discussions, project coordination, and information sharing thrived on the platform's efficiency, indicating its integral role in educational settings.

Recommendations

Educational institutions should consider incorporating digital literacy programs that provide guidance on effective and responsible use of communication platforms like WhatsApp. This can empower students to navigate the digital communication landscape with awareness and skill. Future research should adopt an interdisciplinary approach to study the cultural and psychological aspects of WhatsApp usage. Collaborations between communication studies, psychology, and sociology can provide a more comprehensive understanding of the broader implications of instant messaging on interpersonal communication. Regular forums and discussions within educational institutions can foster an ongoing dialogue about the role of instant messaging in academia. This can serve as a platform for sharing best practices, addressing challenges, and exploring innovative ways to integrate these tools into the learning experience. At the same time, future studies should discuss the challenges identified in this research, such as message misinterpretation and reduced face-to-face interactions. Understanding the root causes and developing strategies to mitigate these challenges can contribute to more effective communication practices.

References

- Aal, L. B., Parmar, J. N., Patel, V. R., & Sen, D. J. (2014). WhatsApp, Skype, Wickr, Viber, Twitter, and Blog are ready to asymptote globally from all corners during communications in the latest fast life. Research Journal of Science and Technology, 6(2), 101–116. https://rjstonline.com/AbstractView.aspx?PID=2014-6-2-9
- Abbas, J., Aman, J., Nurunnabi, M., & Bano, S. (2019). The impact of social media on learning behavior for sustainable education: Evidence of students from selected universities in Pakistan. Sustainability, 11(6), 1683. <u>https://doi.org/10.3390/su11061683</u>
- Al-Rahmi, W. M., Alzahrani, A. I., Yahaya, N., Alalwan, N., & Kamin, Y. B. (2020). Digital communication: Information and communication technology (ICT) usage for education sustainability. *Sustainability*, 12(12), 5052. <u>https://doi.org/10.3390/su12125052</u>
- Al-Rahmi, W. M., Othman, M. S., & Musa, M. A. (2014). The improvement of students' academic performance by using social media through collaborative learning in Malaysian higher education. *Asian Social Science*, *10*(8), 210. <u>https://doi.org/10.5539/ass.v10n8p210</u>
- Babbie, E. (2015). Observing ourselves: Essays in social research. Waveland Press.
- Baguma, R., Bagarukayo, E., Namubiru, P., Brown, C., & Mayisela, T. (2019). Using WhatsApp in Teaching to Develop Higher Order Thinking Skills--A Literature Review Using the Activity Theory Lens. International Journal of Education and Development Using Information and Communication Technology, 15(2), 98-116.
- Bashir–Badmus, K. (2018). Analysis of Gender Issues in Selected WhatsApp Status (Doctoral dissertation, Kwara State University (Nigeria)). Behavior and Social Networking, 14(4), 253–258.
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated* <u>6101.2007.00393.x</u> *Communication*, 13(1), 210–230. <u>https://doi.org/10.1111/j.1083-</u>
- Chandio, D. A., Shabbir, T., & Ramzan, M. (2023). Incorporating the globalization paradigm: Effects of digital media usage on gratification. *Global Digital & Print Media Review*, VI(II), 354-364. <u>https://doi.org/10.31703/gdpmr.2023(vi-ii).25</u>
- Chikoko, V. (2020). This technology we all wash with The efficacy of leveraging WhatsApp in delivering a master's module. *Technology-based Teaching and Learning in Higher Education during the Time of COVID*, 19, 134–156.
- Damanhouri, M. (2018). Undefined. *Khazar Journal of Humanities and Social Sciences*, 21(1), 68–82. <u>https://doi.org/10.5782/2223-2621.2018.21.1.68</u>
- Dhir, A., Yossatorn, Y., Kaur, P., & Chen, S. (2018). Online social media fatigue and psychological wellbeing—A study of compulsive use, fear of missing out, fatigue, anxiety and depression. *International Journal of Information Management*, 40, 141–152. <u>https://doi.org/10.1016/j.ijinfomgt.2018.01.012</u>
- Dhir, A., Yossatorn, Y., Kaur, P., & Chen, S. (2018). Online social media fatigue and psychological wellbeing—A study of compulsive use, fear of missing out, fatigue, anxiety and depression. *International Journal of Information Management*, 40, 141–152. https://doi.org/10.1016/j.ijinfomgt.2018.01.012
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "Friends:" social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), 1143–1168. <u>https://doi.org/10.1111/j.1083-6101.2007.00367.x</u>
- Falgoust, G., Winterlind, E., Moon, P., Parker, A., Zinzow, H., & Chalil Madathil, K. (2022). Applying the uses and gratifications theory to identify motivational factors behind young adults' participation in viral social media challenges on TikTok. *Human Factors in Healthcare*, 2, 100014. <u>https://doi.org/10.1016/j.hfh.2022.100014</u>
- Gao, L. (2023). The Art of Communication in the Digital Age: Trends, Challenges, and Innovations. International Journal of Education and Humanities, 11(3), 287–290.
- Gupta, S., & Upadhyay, P. (2019). Social Sustainability of Online Instant Messaging Platform—WhatsApp. In Research into Design for a Connected World: Proceedings of ICoRD 2019 Volume 1 (pp. 473-482). Springer Singapore.

- Jordan, K. (2023). How can messaging apps, WhatsApp and SMS be used to support learning? A scoping review. *Technology*, *Pedagogy* and *Education*, 32(3), 275–288. https://doi.org/10.1080/1475939x.2023.2201590
- Junco, R. (2015). Student class standing, Facebook use, and academic performance. *Journal of Applied Developmental Psychology*, 36, 18–29. <u>https://doi.org/10.1016/j.appdev.2014.11.001</u>
- Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. *The Public Opinion Quarterly*, 37(4), 509–523. <u>https://doi.org/10.1086/268109</u>
- Kiran, P., & Srivastava, A. (2018). WhatsApp and its impact on the social life of youngsters: a perspective. *Management Insight*, 14(1), 57–64. <u>https://doi.org/10.21844/mijia.14.01.9</u>
- Li, J., Wang, Y., Sun, Y., Liang, Y., & Dou, K. (2021). undefined. *Current Psychology*, 42(4), 3349-3361. <u>https://doi.org/10.1007/s12144-021-01693-9</u>
- Manago, A. M., & McKenzie, J. (2022). Culture and digital media in adolescent development. Handbook of adolescent digital media use and mental health, 162–187.
- Manurung, J., Napitupulu, M. H., & Simangunsong, H. (2022). Undefined. Jurnal Ilmu Pendidikan dan Humaniora, 11(2), 153–169. <u>https://doi.org/10.35335/jiph.v11i2.21</u>
- Mazzuoccolo, L. D., Esposito, M. N., Luna, P. C., Seiref, S., Dominguez, M., & Echeverria, C. M. (2019). Undefined. *Telemedicine and e-Health*, 25(4), 294–300. <u>https://doi.org/10.1089/tmj.2018.0059</u>
- Moawad, R. A. (2022). Using WhatsApp during the COVID-19 pandemic and the emotions and perceptions of users. *Psychology Research and Behavior Management*, 15, 2369-2381. <u>https://doi.org/10.2147/prbm.s367724</u>
- Nkambule, B. I. (2023). WhatsApp Messenger as a supplementary tool for school curriculum knowledge transfer and acquisition during COVID-19 stricter lockdown: Educators' perceptions. *Research in Social Sciences and Technology*, 8(2), 37–55. <u>https://doi.org/10.46303/ressat.2023.10</u>
- Nouwens, M., Griggio, C. F., & Mackay, W. E. (2017). "WhatsApp is for the family; Messenger is for friends." *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. https://doi.org/10.1145/3025453.3025484
- Porter, C. E., & Donthu, N. (2006). Using the technology acceptance model to explain how attitudes determine internet usage: The role of perceived access barriers and demographics. *Journal of Business Research*, 59(9), 999–1007. <u>https://doi.org/10.1016/j.jbusres.2006.06.003</u>
- Savitri, E., & Musfialdy. (2016). The effect of taxpayer awareness, tax socialization, tax penalties, and compliance cost at taxpayer compliance with service quality as a mediating variable. *Procedia Social and Behavioral Sciences*, 219, 682–687. <u>https://doi.org/10.1016/j.sbspro.2016.05.051</u>
- Sevük, T. (2013). The influence of Facebook on interpersonal communication (Doctoral dissertation, Eastern Mediterranean University (EMU)–Doğu Akdeniz Üniversitesi (DAÜ)).
- Singh, R. K., & Victor, S. R. (2021). Development of Video Modules to Enhance English Communication Skills Among Tribal Students of MP State (Doctoral dissertation, Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh-484886).
- Solomon, D., & Theiss, J. (2022). Interpersonal communication: Putting theory into practice. Routledge.
- Stone, S., & Logan, A. (2018). Exploring students' use of the social networking site WhatsApp to foster connectedness in the online learning experience. *Irish Journal of Technology Enhanced Learning*, 3(1), 44–57. <u>https://doi.org/10.22554/ijtel.v3i1.28</u>
- Sun, S., Liu, Z., Zhai, Y., & Wang, F. (2022). COVID-19 vaccines on TikTok: A big-data analysis of entangled discourses. International Journal of Environmental Research and Public Health, 19(20), 13287. <u>https://doi.org/10.3390/ijerph192013287</u>
- Sun, Y., & Zhang, Y. (2021). A review of theories and models applied in studies of social media addiction and implications for future research. *Addictive Behaviors*, 114, 106699. https://doi.org/10.1016/j.addbeh.2020.106699
- Sun, Y., Wang, G., & Feng, H. (2021). Linguistic studies on social media: A bibliometric analysis. SAGE Open, 11(3), 215824402110475. <u>https://doi.org/10.1177/21582440211047572</u>
- Turp, M. (2020). Social media, interpersonal relations and the objective attitude. *Ethics and Information Technology*, 22(3), 269–279. <u>https://doi.org/10.1007/s10676-020-09538-y</u>

- Vitak, J., Zube, P., Smock, A., Carr, C. T., Ellison, N., & Lampe, C. (2011). It's complicated: Facebook users' political participation in the 2008 election. *Cyberpsychology, Behavior, and Social Networking*, *14*(3), 107–114. <u>https://doi.org/10.1089/cyber.2009.0226</u>
- Wang, H., Fussell, S. F., & Setlock, L. D. (2009). Cultural difference and adaptation of communication styles in computer-mediated group brainstorming. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. <u>https://doi.org/10.1145/1518701.1518806</u>
- Weidlich, J., Kreijns, K., Rajagopal, K., & Bastiaens, T. (2018, June). What Social Presence is, what it isn't, and how to measure it: A work in progress. In *EdMedia+ Innovate Learning* (pp. 2142–2150). Association for the Advancement of Computing in Education (AACE).