

# Exploring the Effectiveness of Whatsapp Application on Teaching and Learning at One Midlands Teacher Education Institution in Zimbabwe



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## ABSTRACT

Generally, social media platforms have been utilised to convey personal and non-academic information. Lecturers at higher education institutions have treated social media as a non-formal means of communication. However, with the advent of COVID-19-induced lockdowns, social media platforms gained importance in conveying both formal and non-formal information. This study thus analysed the effects of utilising the whatsapp platform for teaching and learning at one Midlands Teacher Education institution. Through the connectivism lens, the study adopted a qualitative case study generating data through interviews, observations and focus group discussions. Findings pointed to the fact that though sceptical about social media platforms in general, lecturers and students utilise whatsapp to a greater extent for online teaching and learning and for conveying important information. Most students own smartphones and Whatsapp, and though prone to cyberbullying and circulation of falsehoods, the platform was preferred to other platforms as it was categorised under cheaper modes of conveying information to many people at once. The study recommends that while integrating social media applications in teaching and learning, lecturers and students should verify the authenticity of social media information. This study contributes to the ongoing discourse on the use of blended learning and the possibility of utilising social media in educational contexts.

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## INTRODUCTION

The closure of schools due to COVID-19 pandemic culminated in the introduction of blended learning (face-to-face and online learning). Regardless of implementation obstacles, some benefits have been identified in the need to migrate to remote learning in the process of fighting the COVID-19 virus.<sup>1</sup> The transition to a virtual learning approach has also been cited as a positive change for student teachers to develop their artistic abilities.<sup>2</sup> Many studies have been done worldwide to identify elements that contribute to the success of integrating various facets of technology with the traditional teaching method.

<sup>1</sup> Cathy Mae Toquero, "Challenges and Opportunities for Higher Education amid the COVID-19 Pandemic: The Philippine Context.," *Pedagogical Research* 5, no. 4 (2020).

<sup>2</sup> S. Ntuli and T. Murahwi, "Access to Internet Connectivity – the Rights of Learners in the Post-COVID-19 Era in Africa," in *JET EXchanges*, ed. J. Mugo, Z. Afrique, and H. Katayama (Johannesburg: JET Education Services, 2020), 1–10, <https://en.unesco.org/covid19/educationresponse>.; UNESCO, "#LearningNeverStops. COVID-19 Education Response," Global Education Coalition, 2020, <https://en.unesco.org/covid19/educationresponse/globalcoalition>.

Although online learning has been adopted by many education systems globally, the extent to which it is employed and accepted differs. In many developed countries the implementation of virtual learning was successful due to the presence of the right information technology infrastructure.<sup>3</sup> The success of online learning is promoted and hindered by a number of factors that should be taken into consideration. The fruits of online learning have since been enjoyed in some countries and parts of Zimbabwe even though the technique cannot be applied and yield the same effects.

Social media platforms face a degree of rejection when it comes to formal teaching and learning on the grounds that they are meant for non-formal information and that people are skeptical of them because they are prone to cyberbullying and the circulation of falsehoods. This is despite the fact that in Africa, Zimbabwe included, social media, and especially whatsapp constitute the largest part of online forms of communication due to its availability and accessibility even in remote districts. In line with these attributes, Whatsapp became a more valuable part of students' and lecturers' online communication especially during the Covid-19 pandemic even though it remains sidelined.<sup>4</sup> The use of social media in education is well documented.<sup>5</sup> However, little is known about how the student teachers at one teacher education institution in the Midlands Province of Zimbabwe effectively utilise whatsapp and how they ensure the authenticity of educational information passed on through this social media platform. This study examines the effectiveness of using the whatsapp platform as an online form of teaching and learning for student teachers, especially during the Covid-19 pandemic and post-pandemic.

The following research questions underlie the study:

- What factors promote the use of the whatsapp application for teaching and learning by lecturers and student teachers at one teacher education institution in the Midlands Province?
- What factors constrain the use of the whatsapp application for teaching and learning purposes by lecturers and student teachers at one teacher education institution in the Midlands Province?
- How effective and reliable is the whatsapp application in conveying teaching and learning content to student teachers?

## LITERATURE REVIEW

The ICT, Postal and Courier Services, and Primary and Secondary Education ministries are all involved in Zimbabwe's multi-ministerial national e-learning strategy for schools. In the National Development Strategy 1: 2021-2025, Information and Communication Technologies (ICTs) are explicitly stated as a key component for the creation of a digital economy. Consequently, the e-learning strategy that is the SMART Zimbabwe 2030 Master Plan, one of the Cabinet-approved Government priority initiatives for innovation, science, and technology development for the years 2019–2030 was incorporated. Zimbabwe's transition to a knowledge-based and digital economy depends on SMART Zimbabwe. One of the elements of SMART Zimbabwe is SMART Education, which seeks to improve the integration of ICT throughout the educational system, irrespective of location or financial situation. Nyamudzodza, et.al. report that as part of the International Telecommunications Union's (ITU) Connect a School-Connect a Community Program, the Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) has supplied devices for schools, especially those in remote areas.<sup>6</sup> Connectivity at schools and higher education institutions has been facilitated by companies in the telecom sector, including TelOne, NetOne, Econet, Telecel, Liquid Telecoms, Africom, Zimbabwe Academic and Research Network (ZARNet), and others. Zimbabwe is part of a program by the United Nations Educational,

<sup>3</sup> Ronghuai H Huang et al., "Handbook on Facilitating Flexible Learning during Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak," *Beijing: Smart Learning Institute of Beijing Normal University* 46 (2020).

<sup>4</sup> Burak Yılmazsoy, Mehmet Kahraman, and Utku Köse, "Negative Aspects of Using Social Networks in Education: A Brief Review on WhatsApp Example," *Journal of Educational Technology and Online Learning* 3, no. 1 (2020): 69–90.

<sup>5</sup> Constantina Catalano, "The Use Of Social Media In Online Learning And Teaching," *European Proceedings of Educational Sciences*, n.d.; Arif Rahman and Areski Wahid, "Perception of Teacher and Students toward Whatsapp Use for English as Foreign Language Distance Learning," *Perception* 5, no. 2 (2022); E. Mhlanga, F. N. Tlou, and Z. Sibanda, "Challenges of Online Teaching and Learning in the Crisis of Covid 19 in Lupane Rural Schools in Matabeleland North in Zimbabwe," *International Journal of Latest Research in Humanities and Social Science*. 5, no. 3 (2022): 1–8.

<sup>6</sup> Juet Nyamudzodza et al., "The Effectiveness of Online Learning Strategies Adopted by Secondary Schools in Nyanga North, Zimbabwe," 2021.

Scientific, and Cultural Organization (UNESCO) and the International Telecommunications Union (ITU) to connect all schools worldwide.<sup>7</sup>

Many scholars have deliberated on the integration of ICTs in education and the much-celebrated e-learning during the COVID-19 pandemic and the post-pandemic error.<sup>8</sup> While the expectation was that online learning would take place on formal ICT platforms such as Google Class, Moodle, Zoom, and many more, a practical look into day-to-day online practices on the educational use of ICT points to the extensive use of social media. Social media encompasses a number of social networks, which are online spaces designed especially to facilitate everyday communication between individuals who share interests in order to discuss the most recent news, educate one another on various topics, or just socialize. These networks are heavily used by the younger generation, who use them to talk online or share useful content with friends and workmates.<sup>9</sup> This study examines the effectiveness of utilising social media, whatsapp in particular for teaching and learning purposes in teacher education.

Sharma and Shukla report that Brain Acton and Jan Koum designed WhatsApp in 2009, so as to enable messaging communication and circulation clearer and faster, thanks to the internet and wifi technologies keeping users in touch.<sup>10</sup> WhatsApp enables users to communicate with other individuals and groups using text messages, audio, video, images, and real-time location information. These duties are all done for a barely minimal cost, and target users can get up to 100 MB of text messages, photos, audio, videos, spreadsheets, PDF/Word documents, slide shows, and other types of data.<sup>11</sup> Additionally, WhatsApp is a potent social network that may facilitate quick communication, appeal to users of all ages, and distribute connections to websites.<sup>12</sup> As one of the most widely used mobile applications globally, WhatsApp is an instant messaging application that works on most mobile devices.<sup>13</sup> The WhatsApp social network makes it possible to share various kinds of data and resources, guaranteeing efficient communication and engagement. It even allows for the creation of cooperative activities within groups that have been formed.<sup>14</sup> Higher education institutions have begun implementing mobile technology to satisfy the demands and expectations of students in light of this highly interactive and communicative environment.<sup>15</sup> In an educational institution, mobile devices and their related applications can be utilized to obtain educational content, locate other data sources, look up specific information, and promote peer group engagement and communication. (Echeverria et al., 2011). In the age of web-based teaching and learning, WhatsApp plays a significant role in integrating all essential and useful features to guarantee positive educational experiences.

## THEORETICAL FRAMEWORK

This study was informed by the connectivism theory of Siemens.<sup>16</sup> According to connectivism, learning occurs via cyber nodes that are mostly based on social networks. Any entity, including a person, a group of people, a computer, ideas, and communities, could be considered a node. Dunawa claims that connectivism is a theory of learning that uses various node series to link hundreds of networks in order

<sup>7</sup> Nyamudzodza et al., "The Effectiveness of Online Learning Strategies Adopted by Secondary Schools in Nyanga North, Zimbabwe."

<sup>8</sup> C. A. Twigg, "Models of Online Learning," *Educause Review* 38, no. 1 (2003): 28–38; Chetanath Gautam, "Scholar-Practitioner Dynamics: A Transformative and Dynamic Model of Educational Leadership," *Scholar-Practitioner Quarterly* 10, no. 3–4 (2016): 150–73; Mhlanga, Tlou, and Sibanda, "Challenges of Online Teaching and Learning in the Crisis of Covid 19 in Lupane Rural Schools in Matabeleland North in Zimbabwe."

<sup>9</sup> Catalano, "The Use Of Social Media In Online Learning And Teaching."

<sup>10</sup> Ashish Sharma and Aditya Kumar Shukla, "Impact of Social Messengers Especially WhatsApp on Youth-a Sociological Study," *International Journal of Advance Research and Innovative Ideas in Education* 2, no. 5 (2016): 367–75.

<sup>11</sup> Yilmazsoy, Kahraman, and Köse, "Negative Aspects of Using Social Networks in Education: A Brief Review on WhatsApp Example." WhatsApp, "About WhatsApp," November 20, 2019, e: <https://www.Whatsapp.com/about/>.

<sup>12</sup> Dan Bouhnik and Mor Deshen, "WhatsApp Goes to School: Mobile Instant Messaging between Teachers and Students," *Journal of Information Technology Education. Research* 13 (2014): 217; Nuray Zan, "Communication Channel between Teachers and Students in Chemistry Education: WhatsApp.," *Online Submission* 9, no. 1 (2019): 18–30.

<sup>13</sup> Anjar Priyono, "Improving Quality of Interactivity between Organisation and Customers with the Support of WhatsApp," in *Global Marketing Conference*, 2016, 969–81.

<sup>14</sup> Yilmazsoy, Kahraman, and Köse, "Negative Aspects of Using Social Networks in Education: A Brief Review on WhatsApp Example."

<sup>15</sup> Insook Han and Won Sug Shin, "The Use of a Mobile Learning Management System and Academic Achievement of Online Students," *Computers & Education* 102 (2016): 79–89; Shoorai Konyana and Modise Alfred Motalenyane, "A Changing World and a Changing Teaching Practice Model for Zimbabwe in a Post Covid-19 Context," *Journal of Culture and Values in Education* 5, no. 1 (2022): 43–58.

<sup>16</sup> George Siemens, "Connectivism: A Learning Theory Fir the Digital Age," 2005.

to support both synchronous and asynchronous learning.<sup>17</sup> Through these links, people may directly obtain trustworthy information from millions of sources, replicate, reproduce, and distribute it across their social networks, as well as remove, evaluate, and discard material that is erroneous, irrelevant, or untrustworthy.<sup>18</sup> Using a network of nodes that start with the teacher, connectivism describes how people use their internal processes to activate learning. Being mindful is a special internal process that can lead to involuntary learning and introspection. Learning is focused on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowing. Siemens describes connectivism as paving the way for a new learning model that is appropriate for the knowledge society.<sup>19</sup> Siemens' assertion that knowledge is produced at a level higher than that of individual human participants and is continuously evolving through the nodes is supported by the move to use WhatsApp as one of the communication channels between teacher educators and students. According to Nyamupangedengu et.al, learning in connectivism is information that can be put to use or actionable knowledge.<sup>20</sup> Using WhatsApp to conduct classes enables rapid resource sharing and communication between the instructor and students as well as between students.

## METHODOLOGY

### Research Paradigm

This study falls within the interpretive paradigm. Interpretive research is best suited to study human behaviors that are connected to sociocultural issues since it is predicated on the idea that social reality is created by human experience and social background.<sup>21</sup> The researchers opted for this paradigm because interpretivist scholars believe that the society they live in has common belief systems, they can use their varied perspectives on phenomena to not only describe things, people, or events but also to fully understand them in their sociocultural contexts. Additionally, by using the crucial technique of an interactive interview, which enables researchers to examine and trigger issues that we cannot see, the researchers were able to delve into lecturers' and student teachers' thoughts, values, prejudices, perceptions, perspectives, emotions, and viewpoints pertaining to the effectiveness of using whatsapp application in teaching and learning.<sup>22</sup> In line with the observations of Wellington and Szczerbinski, the researchers probed the participants' thoughts, values, prejudices, perceptions, perspectives, emotions, and perspectives.<sup>23</sup> Consequently, the valuable data gathered provided better insights for future action in terms of considering whatsapp platforms for online teaching and learning purposes.

### Research Design

The study adopted a qualitative approach. The qualitative approach allowed the researchers to address the questions on how and why lecturers and student teachers use the social media application whatsapp and understand their lived experiences in utilising whatsapp in their teaching and learning.<sup>24</sup> This approach enabled the researchers to explore the quality of relationships and activities involved in teacher education and the effectiveness of adopting the whatsapp application in teaching and learning. A case study design was utilised within the qualitative approach. A case study gave the researchers the opportunity to examine the subject in question in great detail and up close in relation to its real-world context. Taking advantage of the case study design, the researchers were able to closely investigate the

<sup>17</sup> Michelle Kathleen Dunaway, "Connectivism," *Reference Services Review* 39, no. 4 (November 15, 2011): 675–85, <https://doi.org/10.1108/00907321111186686>.

<sup>18</sup> Dorothy C Kropf, "Connectivism: 21st Century's New Learning Theory.," *European Journal of Open, Distance and E-Learning* 16, no. 2 (2013): 13–24.

<sup>19</sup> Siemens, "Connectivism: A Learning Theory Fir the Digital Age."

<sup>20</sup> Eunice Nyamupangedengu et al., "Mathematics and Science Teacher Educators Experiences of Using the WhatsApp Platform as a Tool for Supporting Teaching during the Covid-19 Pandemic," *Journal of Education*, no. 92 (November 7, 2023): 115–35, <https://doi.org/10.17159/2520-9868/i92a07>.

<sup>21</sup> N. Pervin and M. Mokhtar, "The Interpretivist Research Paradigm: A Subjective Notion of a Social Context," *International Journal of Academic Research in Progressive Education and Development* 11, no. 2 (2022): 419–28.

<sup>22</sup> Pervin and Mokhtar, "The Interpretivist Research Paradigm: A Subjective Notion of a Social Context."

<sup>23</sup> J. Wellington and M. Szczerbinski, *Research Methods for the Social Sciences* (London: Continuum, 2007).

<sup>24</sup> Jennifer Anne Cleland, "The Qualitative Orientation in Medical Education Research," *Korean Journal of Medical Education* 29, no. 2 (2017): 61; Md Asadul Islam and Faraj Mazyed Faraj Aldaihani, "Justification for Adopting Qualitative Research Method, Research Approaches, Sampling Strategy, Sample Size, Interview Method, Saturation, and Data Analysis," *Journal of International Business and Management* 5, no. 1 (2022): 1–11.

data on the use of whatsapp within the teacher education context. Taking a cue from Yin and Bloomberg, a small geographic area and a relatively small number of people were chosen as the study's participants.<sup>25</sup> In line with Creswell's views, the researchers chose a case study design because it is consistent with a naturalistic approach, enables them to gather comprehensive information about the phenomenon of interest, analyze documents and informants' detailed perspectives, and conduct the study in an authentic environment.<sup>26</sup> The study gathered data through whatsapp focused group discussions, individual online interviews, and participant observations since one of the researchers was a member of the institution at the time of research.

### **Population and Sample**

The population for the study comprised all student teachers in the ECD and general course programme and lecturers. From this population, Purposive sampling was utilised to produce a sample of one Head of Department (HOD), one Lecturer-in-Charge (LIC), five lecturers and twenty-four student teachers. Purposive sampling was suitable in this case because the researchers were seeking those informants perceived to possess rich information on the problem under study.

### **Data Gathering Instruments**

The study avoided strict and rigid adherence to one data-gathering method during fieldwork because that would be too confining. Therefore, the researchers utilized different methods of data gathering, so as to increase the authenticity of the findings. By complementing one another, these various methods of data gathering were meant to increase the reliability and validity of the results. The following instruments were used in this study: individual online interviews, focused group discussions, and participant observations. The HOD, LIC and lecturers responded to interviews pertaining to their choice of online learning applications for teaching and learning. Student teachers engaged in focus group discussions.

### **Data Analysis**

The discourse that lecturers and student teachers engaged in through a whatsapp platform was interpreted using a qualitative content analysis. To develop themes, patterns, meanings, and biases related to the use of the whatsapp platform by lecturers and students for online learning especially in situations where the availability of students at the teacher education institution was not guaranteed and when the student teachers were out in schools for Teaching Practice (TP), content analysis, in accordance with that of Creswell, was used to generate a systematic examination and interpretation of the data presented. Thematic analysis of the data was conducted using Creswell's open-coding techniques.<sup>27</sup> Data had to be systematically arranged and categorized before being described thematically as part of these methods. Themes were given codes to help organize the data into smaller, more digestible categories. Participating lecturers were given numbers in order to guarantee confidentiality in data reporting and for ethical reasons.

### **Ethical Consideration**

The authority to carry out the research was sought from the relevant ministry as part of the principal researcher's doctoral studies and was granted. The researchers sought "voluntary informed consent" from all the participants who took part in this study before data gathering. Confidentiality was guaranteed and the participating institution and the participants were kept anonymous. For anonymity, participating lecturers were given code names from L1 to L5. Student teachers FGDs were also given code names for STFGD 1 to STFGD 3. The researchers managed to maintain a formal but relaxed relationship with the participants throughout the data-gathering process. The researchers raised the participants' awareness about their neutral and unbiased position, taking cognisance of the fact that at the time of data gathering,

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<sup>25</sup> R. K. Yin, *Case Study Research and Applications: Designs and Methods*, 6th ed. (London: SAGE, 2018); Linda Dale Bloomberg, "Completing Your Qualitative Dissertation: A Road Map from Beginning to End," 2022.

<sup>26</sup> J W Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (SAGE Publications, 2014), [https://books.google.com.gh/books?id=4uB76IC\\_pOQC](https://books.google.com.gh/books?id=4uB76IC_pOQC).

<sup>27</sup> Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*.

one of the researchers was a member of the case institution. That helped to avoid misrepresentation of the truth and the fabrication of the findings.

## **PRESENTATION OF FINDINGS**

Through thematic analysis of the gathered data, three themes emerged which are: (1) Factors influencing the use of whatsapp applications for teaching and learning in teacher education, (2) factors constraining the use of whatsapp applications for teaching and learning in teacher education and (3) Effectiveness and reliability of using whatsapp application for teaching and learning purpose. Each of these themes and the evidence for them is presented below.

### ***Theme 1: Factors influencing the use of whatsapp application for teaching and learning in teacher education***

Both lecturers in the interviews and student teachers in their focused group discussions pointed out that whatsapp is cost-effective as compared to the other forms of online learning platforms. L4 (A female aged 49) indicated that:

*From the time of Covid-19 induced lockdowns when we needed online teaching and learning most, students had challenges in joining Google Class, Moodle and other online platforms which were recommended by the ministry and the institution. They cited challenges in meeting the cost of data bundles needed for these other platforms. However, with whatsapp, most students would join the groups opened for them and were participating in online learning through whatsapp.*

In support, students in their FGDs agreed that whatsapp data bundle from all service providers in Zimbabwe is affordable. To this effect, a student teacher in STFGD2 pointed out that;

*We prefer to use the whatsapp platform for teaching and learning because it is cheaper to buy a whatsapp bundle than to buy a proper data bundle. Some of us rely on daily data bundles so the cheapest you can get is a whatsapp bundle.*

In the same line of thinking, L1 (female aged 56) indicated that:

*While it is easier for us to be on any other online teaching and learning platform during the day, using institutional wifi, it is not the same when we leave work premises. We rely mostly on wifi to keep in touch with our students. It is difficult to keep in touch with students outside working hours when we are away from the wifi at work. Managing whatsapp data is cost-effective. So for a minimal amount, I can work from home through whatsapp, but for other platforms such as ZOOM, Microsoft Teams, and others, I really have to go to work to use institutional wifi. So whatsapp is cost-effective and affordable.*

The other factor promoting the use of whatsapp in education is that it is convenient. As elaborated by L3 (Male aged 55)

*Whatsapp is conveniently accessible to most student teachers. Most student teachers have smartphones that are whatsapp compatible. Furthermore, Student teachers' interest in using WhatsApp is around 90%. Therefore, it is the most convenient platform to use in educational contexts because it is "place and time independent" meaning it is accessible anytime and anywhere as long as the place has internet connectivity.*

Another major influencing factor for the use of whatsapp in teacher education has to do with its features. One student teacher in STFGD3 indicated that:

*Whatsapp's features such as group conversations, file sharing (word documents, PDF, images and videos, voice notes), and easy access to speech-conversation history make it a convenient platform for online learning.*

Another student teacher in STFGD2 pointed out that:

*Whatsapp is reliable in the sense that it has an end-to-end encryption feature which makes it impossible for other people outside the whatsapp group to get the shared information unless someone within the group shares it with outsiders.*

L2 (Male aged 51) indicated that:

*Using whatsapp in education allows student teachers to connect themselves to a virtual world and communicate with other student teachers and other educators through mobile devices.*

The issues raised by the participating lecturers and student teachers in this study are pertinent. The choice of whatsapp application in online teaching and learning hinges on the fact that it is cost-effective as observed by Calvo, Arbiol and Iglesias and Yılmazsoy, Kahraman and Köse that whatsapp gives value for money when used for educational purposes.<sup>28</sup> These findings confirm Souza's view that using WhatsApp in online teaching and learning contexts enables students to create groups and send unlimited messages and different types of media like text, images, videos and audio.<sup>29</sup> The findings resonate with UNESCO's observation that compared to communications delivered through other communication channels, messages sent via mobile devices are quicker, more dependable, and more effective.<sup>30</sup> There is also an additional benefit where messages can be verified as read or received when sent through whatsapp, which is a crucial indicator for instructional activities.

Despite its apparent benefits for educational purposes, whatsapp has drawbacks when utilised excessively. Even though such problems may be found in many social networks, whatsapp can be used as an example to better comprehend the key benefits and constraints of the platform. The next section presents the views of the participants pertaining to the limitations of whatsapp in teaching and learning in teacher education.

### ***Theme 2: Factors constraining the use of the whatsapp application for teaching and learning in teacher education***

A number of factors were presented as limitations in the use of whatsapp as an online learning platform. A startlingly high percentage of student teachers were found to be sending whatsapp conversations outside of class times or using inappropriate language. Additionally, it was observed that allowing students to use whatsapp during class involves a high level of responsibility to monitor every student's contact, look for any mistakes, and provide feedback for corrections in all of the messages sent or received by each student.

To this end, one lecturer L2 (Male aged 51) complained that:

*Student teachers at times use whatsapp even during class and do not concentrate. They get carried away by chatting with other people at the expense of following the lesson. It is not surprising to see student teachers sending messages after working hours and at times it is difficult to give feedback to all the questions asked on a whatsapp group.*

In their FGDs student teachers pointed to the addictiveness of whatsapp and a disturbing phenomenon. A participant in STFGD1 indicated that:

*Over-reliance on whatsapp is addictive. Some of us spend more time completing a task because we are always checking chats on our mobiles. We find it difficult to give up the whatsapp application while doing other activities. It is easy to get carried away by whatsapp chats which are not educational. Student teachers at times misuse online environments.*

Another student in STFGD3 added that:

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<sup>28</sup> Rocío Calvo, Alberto Arbiol, and Ana Iglesias, "Are All Chats Suitable for Learning Purposes? A Study of the Required Characteristics," *Procedia Computer Science* 27 (2014): 251–60.; Yılmazsoy, Kahraman, and Köse, "Negative Aspects of Using Social Networks in Education: A Brief Review on WhatsApp Example."

<sup>29</sup> Carlos Fabiano de Souza, "Aprendizagem Sem Distância: Tecnologia Digital Móvel No Ensino de Língua Inglesa," *Texto Livre: Linguagem e Tecnologia* 8, no. 1 (2015): 39–50.

<sup>30</sup> UNESCO, "#LearningNeverStops. COVID-19 Education Response."

*Whatsapp as a learning tool is affected by network connectivity. Some areas do not have strong internet signals, therefore, students in those areas may not get learning materials sent through whatsapp in time.*

Another constraint on the use of whatsapp as an online teaching and learning platform has to do with experience, as indicated by L3 (Male aged 55):

*Experience with creating unique content for whatsapp and utilising other software platforms that support the app is a prerequisite. Some of us lecturers are still struggling to get the expertise needed for online teaching and learning content.*

In addition, L2 (Male aged 51) pointed to issues of participation on whatsapp indicating that:

*Some students do not participate in the whatsapp group and it is difficult for us lecturers to know if they are learning or not. Personally, I think this whatsapp platform promotes laziness on the part of the students since some do not research and participate and only wait to copy and paste other students' work.*

In the same vein L2 (Male aged 51) indicated that:

*Student teachers are not always ready at the agreed whatsapp meeting time. They also send messages to groups or even individuals very late at night. Convening a whatsapp meeting and ensuring attendance is a challenge. Some students may fail to connect and others connect later while others do not connect at all.*

In their FGDs, student teachers noted that not all student teachers have smartphones that are compatible with the whatsapp application. As one student teacher from STFGD3 pointed out:

*While it seems every student teacher possesses a smartphone, the reality is that a few of us still do not have them and have to rely on friends who do have them.*

The constraining factors on the use of whatsapp as perceived by lecturers and student teachers in this study include less discipline, addiction, time consumption, poor internet connectivity, less concentration and a decrease in academic achievement. These findings resonate with the views of Fondevila-Gascón et.al. who opined that if WhatsApp is used continuously it can raise addiction.<sup>31</sup> In this study, it was underscored that the sensation of always waiting for calls or texts makes using whatsapp very susceptible to addiction. The majority of participants in the statistical study conducted on a certain target group were unable to stop using WhatsApp while engaging in another activity, and some even had obvious symptoms of addiction.<sup>32</sup> These findings are also in line with Yilmazsoy et al who noted that WhatsApp is only compatible with smartphones, while the majority of people still lack smartphones.<sup>33</sup> Additionally, instant messages can be read by others, and using the application actively always requires a steady, active internet connection. Students in a study by Rahman and Wahid pointed out that sometimes questions asked on whatsapp do not get immediate responses and are overshadowed by other students' questions on the WhatsApp group.<sup>34</sup> In addition, Yilmazsoy Kahraman and Baysan, observed that allowing students to use WhatsApp during class involves a high level of responsibility to monitor every student contact, look for any mistakes, and provide feedback for corrections in all of the messages sent or received by each student.<sup>35</sup>

### ***Theme 3: Effectiveness and reliability of using the WhatsApp application for teaching and learning purposes in teacher education***

Under this theme, the researchers present views of lecturers and student teachers on how the social networking platform WhatsApp, which was previously neutral, was taken and used as a serious teaching

<sup>31</sup> Joan Francesc Fondevila-Gascón et al., "Uses of WhatsApp in the Spanish University Student. Pros and Cons," *Revista Latina de Comunicación Social*, no. 74 (2019): 308–24.

<sup>32</sup> Fondevila-Gascón et al., "Uses of WhatsApp in the Spanish University Student. Pros and Cons."

<sup>33</sup> Yilmazsoy, Kahraman, and Köse, "Negative Aspects of Using Social Networks in Education: A Brief Review on WhatsApp Example."

<sup>34</sup> Rahman and Wahid, "Perception of Teacher and Students toward Whatsapp Use for English as Foreign Language Distance Learning."

<sup>35</sup> B Yilmazsoy, M Kahraman, and E Baysan, "Investigation of Student Opinions on the Use of Social Networks in the Education Process: The Case of WhatsApp," in *International Congress on Science and Education*, 2019, 137–48.

tool for pre-service primary teacher education, explaining why it is an effective platform in education. The HOD agreed that:

*Besides noted limitations, WhatsApp is a useful tool for teaching and learning because it is quick, easy, and convenient for texting, sharing images and videos, sending and receiving documents, and having private, secure conversations at any time. This is especially helpful when group members are spread out and communication is necessary for ongoing teaching or learning activities.*

In support, the LIC confirmed the effectiveness of WhatsApp in teacher education as a tool for teaching and learning as she pointed out that:

*Since the covid-19 induced lockdowns, teacher educators converted WhatsApp from a social media platform to one that aided instruction. Efforts to use other online platforms were met with resistance on the part of both lecturers and students. The rationale for the choice of WhatsApp as opposed to the other platforms was that it is relatively cheaper, it is fast and most student teachers could afford smartphones though a very small number still struggle to acquire a smartphone.*

Student teachers in their FGDs confirmed the effectiveness of WhatsApp in their teaching and learning. One participant in STFGD2 indicated that:

*WhatsApp is efficient especially when we are on Teaching Practice (TP) and want to get in touch with our lecturers at the teacher education institution. We also use it for homework and communicating with parents. It is quite effective since most parents are more conversant with it than other platforms.*

The observations of the participants in this study are in line with those of other authorities. Due to the fact that WhatsApp is available anywhere, at any time, and enables collaborative learning, Nguyen and Fussell, and Souza's claim that it can be a helpful teaching and learning tool.<sup>36</sup> The findings resonate with the views of Ujakpa et al that when there were scheduled power outages or other technical issues, WhatsApp helped the primary institutional learning management system.<sup>37</sup> According to the teacher educators' presentations, WhatsApp eventually developed into a productive tool for timely correspondence and instructional discussions. It also made it possible to record voice versions of passages during conversations in addition to written texts.<sup>38</sup> Furthermore, as one of the instant messaging platforms that are used in education, WhatsApp has the potential to enhance learning. Despite being first thought of as a pointless social media and informal platform, WhatsApp is today recognised as a highly beneficial and revolutionary teaching and learning tool.<sup>39</sup>

## Discussion Summary

The study has illuminated factors that make WhatsApp a preferred online platform for teaching and learning in teacher education despite it being viewed as a frivolous social media platform before the emergence of the COVID-19 pandemic. Factors influencing the use of WhatsApp in teacher education include the issue of cost, availability of smartphones for most student teachers, the fact that student teachers already have a vested interest in WhatsApp and that WhatsApp is readily available and can be accessed everywhere even when there are power cuts. The study also revealed a number of factors restricting the use of WhatsApp in teacher education which include the fact that the network may not be readily available to every student teacher, that WhatsApp is addictive and students find it difficult to let go off WhatsApp while they work on other activities, that some student teachers do not participate during

<sup>36</sup> Duyen T. Nguyen and Susan R. Fussell, "Effects of Conversational Involvement Cues on Understanding and Emotions in Instant Messaging Conversations," *Journal of Language and Social Psychology* 35, no. 1 (January 16, 2016): 28–55, <https://doi.org/10.1177/0261927X15571538>; de Souza, "Aprendizagem Sem Distância: Tecnologia Digital Móvel No Ensino de Língua Inglesa."

<sup>37</sup> Martin Mabeifam Ujakpa et al., "Using WhatsApp to Support Communication in Teaching and Learning," in *2018 IST-Africa Week Conference (IST-Africa)* (IEEE, 2018), Page-1.

<sup>38</sup> Ujakpa et al., "Using WhatsApp to Support Communication in Teaching and Learning."

<sup>39</sup> Nyamupangedengu et al., "Mathematics and Science Teacher Educators Experiences of Using the WhatsApp Platform as a Tool for Supporting Teaching during the Covid-19 Pandemic."

WhatsApp group discussions and that some lecturers do not have the expertise in preparing online teaching and learning content. Despite the constraining factors on the use of WhatsApp in teaching and learning in teacher education, participants emphasised that WhatsApp is the most effective and practically used online teaching and learning platform.

## RECOMMENDATIONS

This study investigated the use of WhatsApp for online teaching and learning in teacher education institutions, future studies may focus on the use of WhatsApp for institutional management. The study found that despite its merits in conveying educational messages, WhatsApp is still regarded as a mere social media application. The study recommends that the Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development (MHTEISTD) places WhatsApp at the same level as other online teaching and learning platforms. Teacher education institutions should also consider incorporating WhatsApp into teacher education institutes' learning management systems. Additionally, it might be incorporated into staff development programmes to encourage teacher educators to use it. The study participants, however, pointed out the addictive nature of using WhatsApp, thus the teacher education institutions, through their life skills programmes, and workshops should offer strategies for both student teachers and lecturers on the need to use WhatsApp responsibly.

## CONCLUSION

This study has investigated the use of WhatsApp for online teaching and learning in teacher education institutions. This study concludes that since learning has become more individualised and mostly conducted online, WhatsApp is a useful tool for lecturer consultation and quick lecture delivery, as well as for collaboration, engagement, discussion, and strengthening of student teachers' knowledge. This study has observed that factors influencing the use of WhatsApp in education outweigh the constraints and that the future of learning is virtually construed, WhatsApp platform being a player among the other online platforms. Emphasis should be made on the fact that lecturers and student teachers considered WhatsApp as playing a complementary role to other forms of learning (blended learning). Thus, if the recommendations are taken into consideration by the various stakeholders, WhatsApp would become an effective tool in teaching and learning.

## RECOMMENDATIONS FOR FURTHER RESEARCH

This study was qualitative and only involved one teacher education institution. Further studies could include more higher education institutions, secondary schools and primary schools to get a wider picture of how WhatsApp can be utilised in education.

### Declarations

**Author Contributions:** M.M.A: Literature review, conceptualisation, S.K: methodology, data analysis. S.K: original manuscript preparation. M.M.A review-editing. All authors have read and approved the final version of the article to be published.

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