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Short communication

Exploring the use of WhatsApp as a Platform for Conducting Online Classes and Facilitating Virtual Learning Experiences in Elementary Schools in Azad Kashmir

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A B S T R A C T

The research involved the use of WhatsApp as a tool for online classes and virtual learning experiences in the chosen elementary schools in Azad Kashmir. A mixed methods design was followed to collect quantitative and qualitative data from 100 participants, comprising 20 teachers, 60 students, 20 parents or guardians and 5 interviews. The quantitative data collection included teacher delivery logs, student participation logs and General Science pre-test and post-test scores, whereas the qualitative data collection included semi-structured interviews. The results revealed that WhatsApp facilitated the delivery of lessons, sharing of materials, explaining voice notes, submitting homework and communicating between teachers and their students. The mean score of students in General Science improved to 63.10, as compared to 52.40, and performance showed improvement following the use of WhatsApp to aid instruction. The research suggests educator education, parental oversight, a precise group framework and enhanced web access.

1. INTRODUCTION

The COVID-19 epidemic has disrupted traditional classroom instruction, and online and distance learning are commonplace. Elementary schools in Azad Kashmir have struggled to continue instructing their students despite school closures and other measures to isolate students, just like elementary schools worldwide. Nel and Marais (2020, p.629) examined how future teachers used WhatsApp to instruct students remotely during the COVID-19 outbreak, highlighting the usefulness of the technology for online learning. Khodabandeh (2023, p.617) looked at the effectiveness of integrating augmented reality

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games into the learning process using WhatsApp flipped and blended classrooms compared to conventional classroom settings. Aasi et al. (2023, p.64) emphasized the significance of WhatsApp in fostering open lines of communication and group work among students with various types of visual impairments in their case study on civility in the classrooms of visually impaired students. Ramdhani and Nandiyanto (2021, p.107) evaluated the use of WhatsApp to support online learning during the epidemic, showcasing its value in providing students with extra help and promoting independent study.

Aizenkot and Kashy-Rosenbaum (2021, p.550) found that exposure to cyberbullying in WhatsApp classmate groups harms pupils' sense of online belonging. As the educational landscape changes, it is crucial to comprehend the advantages and drawbacks of using WhatsApp as a teaching tool in Azad Kashmir's elementary schools. This research aims to assess the effectiveness of using WhatsApp for online classes in elementary schools in Azad Kashmir.

Literature review: This literature review aims to better understand how elementary schools in Azad Kashmir use WhatsApp to hold online lectures and give children opportunities for virtual learning. Nel & Marais (2020, p.629) looked at the usage of WhatsApp by preservice teachers to instruct pupils during the COVID-19 epidemic.

Khodabandeh (2023, p.617) investigated the effectiveness of augmented reality game-enhanced education using WhatsApp flipped and blended classes compared to conventional face-to-face classes. Players could fully comprehend the subject matter due to the augmented reality games' high levels of involvement and immersion. Aasi, Imtiaz & Shahzad (2023, p.65) investigated how WhatsApp affected visually impaired students' classroom behavior. Due to WhatsApp's text-based format, respectful and helpful discussions in the classroom were simple to have. Ramdhani & Nandiyanto (2021, p.108) looked into WhatsApp's potential as a social media medium for promoting online education during the COVID-19 pandemic.

Sumadi et al. (2022, p.184) used a literature study to examine the effectiveness of online learning in elementary schools during the pandemic era. Teachers could provide their pupils with tailored training and support due to WhatsApp's group discussions and file-sharing features, which support cooperative learning. Iqbal and Modood (2023, p.2087) looked into online students' learning motivation and cultural capital.

After students were exposed to cyberbullying in WhatsApp groups with their friends, Aizenkot & Kashy-Rosenbaum (2021, p.550) looked into how it affected students' sense of community. Creating rules and promoting polite interactions can build a safe and encouraging online learning environment. Dahdal (2020, p.239) investigated the potential of using WhatsApp for interactive instruction. According to the study's findings, employing WhatsApp promoted collaboration and student involvement.

2. MATERIALS AND METHODS

This study aimed to investigate how elementary schools in Azad Kashmir use WhatsApp to conduct online lectures and give students possibilities for distance learning. The study's participants, structure, and techniques for acquiring and analyzing data are all covered in the methodology.

Research Design and Data Collection

We integrated quantitative and qualitative techniques for this investigation using a mixed-methods approach. By including quantitative data and participants' subjective experiences, this method enables a thorough analysis of the research issue. The quantitative analysis focuses on usage patterns, interaction rates, and learning outcomes for online courses offered via WhatsApp. The qualitative section aims to learn about participants' opinions and experiences with WhatsApp-based online education through in-depth interviews and open-ended surveys.

Participants: Representatives from all of Azad Kashmir's elementary schools have been represented, including teachers, students, and parents/guardians. Participants with WhatsApp experience in a classroom environment were chosen using a stratified random sampling technique. The sample size was determined using the saturation principle, in which data collection is continued until no new findings or patterns appear. The sample size of 100 was chosen, which consists of 20 teachers, 60 students, and 20 parents or guardians. In the case of qualitative interviews, 5 participants were chosen among the main sample, including 2 teachers, 2 students and 1 parent/guardian to provide in detail their experiences of WhatsApp-based online learning.

Data Collection: The collection of the quantitative data was based on the teacher delivery logs, student participation logs and learning outcome tests. The teacher's log was filled in by 20 teachers following each WhatsApp lesson. It captured the date of the class, the subject, the duration of the class, the materials used in the class, voice notes, files, homework, feedback and technical issues. The student participation log was kept with 60 students, with the help of both teachers and parents. It documented attendance, viewing of materials, responses, questions, participation in discussions and submission of homework. The pre-test was given prior to WhatsApp-based teaching, whereas the post-test was given after completion of the lessons. This study has developed the test based on the textbook content and was reviewed by the subject teachers in order to make it clear and relevant.

The same content was used in both tests, but the order of questions was changed in the post-test. SPSS Statistics was used to analyze data. Usage patterns were analysed using frequencies and percentages, and the frequencies of usage of the pre-test and the post-test were compared using means, standard deviations and a paired sample t-test.

Qualitative Data Collection: Semi-structured interviews and an open-ended survey were used to collect qualitative data. Teachers, students and parents or guardians were interviewed who had a direct experience of WhatsApp-based online classes. The interviews took about 20-30 minutes each. Participant-centred interviews enabled the participants to elaborate on their own experiences, challenges and opinions in detail.

3. RESULTS

The investigation of how elementary schools in Azad Kashmir use WhatsApp as a platform for online classrooms and virtual learning experiences is summarized in this section. Quantitative and qualitative data from educators (n = 20), students (n = 60), and parents (n = 20) are reviewed to understand the impact and effectiveness of WhatsApp-based online classrooms properly.

Table 1. Teacher Delivery Log Results for WhatsApp-Based Online Classes

Teacher Delivery Indicator	Frequency	Percentage
Teachers who regularly conduct WhatsApp classes	17	85.0%
Educators who posted pictures or PDF documents.	18	90.0%
Those teachers who explained using voice notes.	16	80.0%
Those teachers who have given homework with the help of WhatsApp.	15	75.0%
Teachers who gave feedback using WhatsApp.	14	70.0%
Educators who claimed to have internet connectivity issues.	12	60.0%
Teachers who said that they were struggling to keep discipline.	9	45.0%

As indicated in Table 1, the majority of the teachers actively used WhatsApp to deliver online classes. The percentage of teachers who exchanged learning resources and voice notes is high, and it is evident that WhatsApp facilitated flexible content delivery. Nevertheless, 60.0% stated that they had a problem with internet connectivity, and 45.0% stated that they had a problem with discipline.

Table 2. Student Participation in WhatsApp-Based Online Classes

Student Participation Indicator	Frequency	Percentage
Students who were in WhatsApp classes on a daily basis.	54	90.0%
Students who viewed shared learning materials	56	93.3%
Students who have completed homework via WhatsApp.	48	80.0%
Students who posed questions in the classes.	42	70.0%
Students are involved in a group discussion.	45	75.0%
Students who reported technical challenges.	33	55.0%
Students who said that they were distracted by social messages.	26	43.3%

According to Table 2, the student attendance in online classes through WhatsApp was relatively high. The vast majority of students came to classes on a daily basis, and they looked at learning materials and provided homework. The implication here is that WhatsApp was useful in facilitating learning between the teachers and students. Nonetheless, over 50 percent of the students indicated technical troubles, whereas 43.3 percent of the students reported a distraction caused by social messages.

Table 3. Paired Sample t-test for General Science Pre Test and Post Test Scores

Test	n	mean	SD	MD	t value	df	P value
Pre test	60	52.40	11.28				
Post test	60	63.10	10.74	10.70	8.64	59	0.001

SD = standard deviation; MD = Mean differences

The comparison of the General Science pre-test and post-test scores of the students is indicated in Table 3. The average score of the pre-test was 52.40, and the average score of the post-test was 63.10. The paired sample t-test indicated that there was a statistically significant difference between the two scores, t (59) = 8.64, p =. 001. This implies that students were better behaved once WhatsApp was used in the teaching.

Qualitative Findings

Theme 1: WhatsApp Supported Communication, Access and Learning Continuity: The initial theme indicated that WhatsApp assisted the teachers, students and parents to continue learning in the disrupted school setting. Students said that the platform allowed them to share lessons, send voice notes, ask questions and get quick answers. WhatsApp was used by the teachers to send written instructions, pictures, worksheets and brief explanations. Students also noted that they were able to review the material they were sharing at home.

According to one teacher, *"WhatsApp allowed me to carry on with my lesson as I was able to send voice notes, pictures and homework even when my students were not physically present (Teacher, P1)."* One student described "*how he could listen to a note made by a teacher and listen again when he could not understand what he had learnt initially (Student, P2)."* One parent also reported that, "*with the help of WhatsApp, I was able to see what kind of homework was assigned and whether or not my child did it or not (Parent, P3)."* These answers suggest that WhatsApp enhanced the communication between school and home and assisted in maintaining the basic learning activity.

Theme 2: Technical Problems, Distraction and Online Class Management Challenges: The second theme revealed that WhatsApp-based learning also gave rise to a number of challenges. The interviewees cited low internet connectivity, use of shared mobile phones, low internet data, and inability to be disciplined during online lessons. The students also reported that they were interrupted in their learning because of the problems with connectivity. Parents reported that WhatsApp was helpful, but it also needed monitoring as children could easily leave learning messages and engage in social interactions.

One of the students said: "*Sometimes the internet became unavailable during the lesson, and I was unable to download the photos or voice recordings (Student, P4)."* One of the teachers said, *"The biggest issue is discipline when some students are responding late, sending irrelevant messages or failing to finish the assigned work on time (Teacher, P5).*" These quotes reveal that the efficiency of WhatsApp was based on the availability of the internet, the control and the correctness of the classroom regulations by the students. Thus, WhatsApp is a valuable addition to the background toolkit. Yet, it must be accompanied by the instruction and support of the teacher, as well as parents and proper management of the group to facilitate effective online learning.

4. DISCUSSION

The results indicate that WhatsApp was utilized as a viable means of online learning in a few elementary schools in Azad Kashmir. The majority of teachers frequently gave WhatsApp classes, shared pictures or PDF files, used voice recordings, set homework and gave feedback. These results are in line with Nel and Marais (2020, p.629), who concluded that WhatsApp helped to explain the subject matter to a remote user during the COVID-19 pandemic. On the same note, Ramdhani and Nandiyanto (2021, p.109) claimed that WhatsApp could support online learning in the sense that teachers will be able to share learning materials and constantly communicate with students. In addition, Sasabone et al. (2022, p.170) also concluded that WhatsApp promoted student interaction by facilitating communication and learning processes.

The mean score in the pre-test was 52.40, and the paired sample t-test indicated that the pre-test and post-test had a significant difference. The finding corroborates the argument that WhatsApp can be used to enhance learning when it is utilized as a means of delivering structured content and periodically giving feedback. Khodabandeh (2023, p.617) also discovered that WhatsApp facilitated learning when used together with interactive methods of learning.

According to the reports of teachers, students and parents, WhatsApp helped communicate, access materials and continue learning. These results are in accordance with Suárez-Lantarón et al. (2022, p.1), who observed the educational significance of WhatsApp in facilitating communication and learning interaction. It also revealed that WhatsApp may become significant in crisis situations since it enables the rapid exchange of information and communication. (Al Adwan et al., 2023, p.79).

Reported as having problems with internet connectivity were 60.0% of teachers and 55.0% of students, and also reported as having problems with distractions caused by social messages and online discipline problems were also common. The challenges are relevant to Ullah and Ali (2022, p.1085), who noted that digital inequality and access issues were among the problems faced by students in Pakistan during the pandemic. The issues of distraction and discipline can be related to Aizenkot and Kashy Rosenbaum (2021, p.551), who cautioned that WhatsApp class groups have the potential of posing risks such as cyberbullying, weak belonging and unsafe communication unless it is managed properly. The same was pointed out by Suparman et al. (2022, p.237), who also indicated that clear guidance, monitoring and classroom rules are necessary in digital learning tools.

Conclusion: In conclusion, this research also found that WhatsApp was a valuable auxiliary tool in terms of online classes and virtual learning in selected elementary schools in Azad Kashmir. The results revealed that teachers shared learning materials, explained lessons using voice notes, assigned homework and provided feedback using WhatsApp. Students were also active, aided by attending classes and viewing materials, asking questions and submitting work. The increase in the post-test scores in the General Science was an indication that the use of WhatsApp facilitated learning when it was used in an organized and meaningful manner. The qualitative results were that WhatsApp was useful in communication and continuity of learning, but the success of WhatsApp depended on the guidance of the teacher, support of parents and clear rules of the online classes.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTION

Sajid Ali Khan conceptualized the study, developed the research design, coordinated data collection, conducted analysis, and drafted the manuscript. **Naveed Anjum** assisted with school access, participant coordination, classroom logs, and interpretation of field findings. **Saima Asghar** supported literature review, qualitative interpretation, manuscript editing, and final approval of the submission version.

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