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WHATSAPP AS A COLLABORATIVE LEARNING TOOL FOR STUDENT TEACHERS AND ITS EFFECTIVENESS

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ABSTRACT

The main objective of the study to analyze the effectiveness of WhatsApp as a collaborative tool for learning among Student Teachers of B.Ed. colleges affiliated to Bengaluru North University, Kolar. For the study 200 Student Teachers were selected as samples. A quasi-experimental design was used for the study. Mean and the standard deviation was used in addressing the research questions while Z-test and t-test were used in testing the null hypotheses. The findings reveal a significant difference in the retention level of students taught with WhatsApp application and those taught using the conventional approach of teaching, also that there is no significant difference between male and female students who use WhatsApp for learning. Conclusion and recommendations were also made.

KEYWORDS : *Teacher Education, Teacher Training, Student Teachers, WhatsApp and collaborative learning.*

INTRODUCTION :

ICT Stands for Information and Communication Technology which individually has very Narrow Meaning but when they join together, they are able to bring the revolution in education system. The Information and Communication Technology generates the number of different ways of flow of instruction or sharing of information in particular field. It is the mean for flow of information. It is also a means of sharing of data or Knowledge of individual through technology or by means of technology. Education. as we know is instrumental in ensuring that future generation is well informed and competent. Therefore, the progress of any country depends upon the quality of education offered and its practices.

Presently, the world is experiencing communication revolution through technological advancement. The educational sector cannot be left out as learners utilized the opportunity through the use of social media applications like WhatsApp, Facebook, Imo app, Twitter, YouTube etc on their digital devices for learning. The influence of the new communication technology in the present 21st century has redefined how learners learn and the mode of instructional delivery by the instructors. Ike and Ihebereme (2008) [8] opined that the use of technology is believed will revolutionize teaching profession. This is because instructors can now reach out to learners using any available social media channels at their own pace.

WhatsApp has been seen as an effective communication and collaborative tool in the teaching and learning process due to its advantages over other forms of social media tools. Barhoumi (2015) observed that WhatsApp facilitate knowledge sharing among peers, improve learners' manipulative

skills, facilitate the learning process and foster evaluation process. WhatsApp is seen as an educational mobile tool with great potentials of helping students construct their own knowledge while making use of the digital mobile devices. WhatsApp application is specially designed for educational activities which enhance communication, creativity, critical thinking and problem-solving skills among learners. Therefore this study tries to find out the effectiveness of WhatsApp as a collaborative tool for learning among undergraduate students of University of Uyo, Akwa Ibom State. Do students actually use WhatsApp? How do they use WhatsApp for academic activities, since it has been observed that most students used WhatsApp as a collaborative tool for learning especially in this 21st-century system of learning.

This study is anchored on Activity theory of mobile learning by Vygotsky and theory of connectives by George Siemens. Activity theory of mobile learning was propounded by a Russian psychologist Lev Vygotsky (1978) [17]. The theory is a framework for quantitative analysis and understanding of how human interact through the use of tools and artefacts. The theory believes that human activity is carried out by actions with the use of tools. Activity theory sees human activity as always mediated from the artefact and never direct in its relationship with reality. Rember (2012) [13] opined that social media provides instructors with personalized learning environments for diagnostic and prognostic assessment of students' mastery of content and deep learning. The theory emphasizes on the role of mobile devices which act as a mediator between the instructors and the learners in the process of knowledge transfer. The theory involves three levels of activities which are; the technological level, the individual level and the community level in which all work together to facilitate knowledge creation. Applying this theory to this work implies that learners must be provided with a technology rich learning environment which is well equipped with technological tools that support teaching and learning so as to make learning interesting.

Theory of connective always known as a learning theory for the digital age by George Seiemen and Stephen Downes (2005) [16]. The theory lays emphasis on the role of social and cultural context in learning. Connectivist believes that learning is by contact through the use of various network nodes in connecting to people around the world. The theory emphasises that learning is a process of creating connections from one person to another using technology as the platform. Connectivism is a learning theory that explains how internet technologies have created new opportunities for individual

Becker and Cline (2005) [4] defined collaborative learning as an approach to learning in which learners are engaged in a common task where each individual depends on and is accountable to each other. Dennis (1996) opined that collaborative learning is a learning method in which learners are actively engaged in learning by exchanging, debating and negotiating ideas within their interest for learning. Collaborative learning occurs when individuals are actively involved in a community in which learning takes place through explicit or implicit collaborative effort.

OBJECTIVES OF THE STUDY:

The objective of this study is to find out the effectiveness of WhatsApp as a collaborative tool for learning among B.Ed. Student Teachers Specifically, the study seeks to;

1) Ascertain if there is a significant difference in retention ability of students taught using WhatsApp application and those taught using the traditional teaching approach.
2) Determine the differences in the academic performance of male and female Student Teachers who use WhatsApp application for learning.

RESEARCH QUESTIONS:

1) To what extent would there be a difference in the retention ability of Student Teachers who use WhatsApp application for learning and their counterpart who do not?
2) To what extent would there be a difference in the academic performance of male and female Student Teachers who use WhatsApp application for learning?

RESEARCH HYPOTHESES:

The following hypotheses guided the study;

1) There is no significant difference in the retention ability of students taught with WhatsApp application and those taught using the traditional teaching approach.
2) There is no significant difference in the academic performance of male and female students who use WhatsApp application for learning.

METHODOLOGY:

The design of the study was quasi-experimental design. The population for the study comprises of all the teacher training education students in the teacher training institutes, Two hundred Student Teachers of B.Ed. colleges affiliated to Bangaluru North University, Kolar were consider for the study. Purposive sampling technique was used in selecting the sample. The instrument for data collection was an achievement test which was designed by the researcher and validated by experts in the field of teacher education.

DATA ANALYSIS:

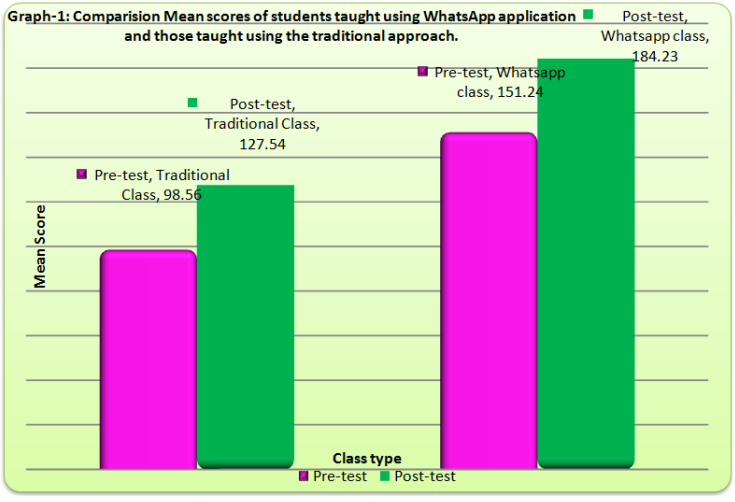
Since each research question has a corresponding hypothesis mean, standard deviation, t-test and z-test were the statistical tools used for the study.

Research question one: To what extent would there be a difference in the retention ability of students who use WhatsApp application for learning and their counterpart who do not?

Table 1: Mean and standard deviation scores of students taught using WhatsApp application and those taught using the traditional approach.

Variable	N	Pre-test		Post-test	
		Mean	S.D.	Mean	SD
WhatsApp class	100	151.24	10.72	184.23	10.76
Traditional Class	100	98.56	9.87	127.54	8.91

The results revealed that students taught with WhatsApp application had a mean score of 151.28 and a standard deviation of 10.72 during the pre-test while students that were taught using traditional approach had a mean of 98.56 and standard deviation of 9.87. After post-test, students taught with WhatsApp application had a mean of 184.23 and standard deviation of 10.76 while those taught using traditional approach had a mean score of 127.54 and standard deviation of 8.91. This data can be represented graphically as follows:

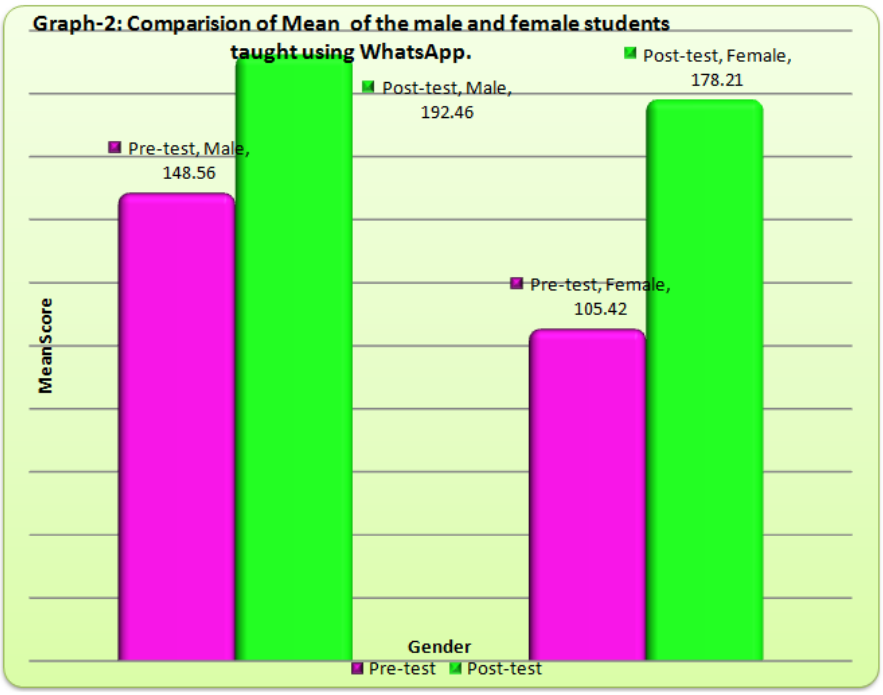


Research question two: To what extent would there be a difference in the academic performance of male and female students who use WhatsApp application for learning?

Table 2: Mean and standard deviation of the male and female students taught using WhatsApp.

Variable	N	Pre-test		Post-test	
		Mean	S.D.	Mean	SD
Male	100	148.56	10.46	192.46	5.42
Female	100	105.42	9.41	178.21	3.45

The results revealed that during the pre-test male students had mean scores of 148.56 and SD of 10.46, while female had 105.42 and SD 9.41. During the post-test male had mean scores of 192.46 with an SD of 5.42, while the female had mean scores of 178.21 with an SD 3.45. This data can be represented graphically as follows:

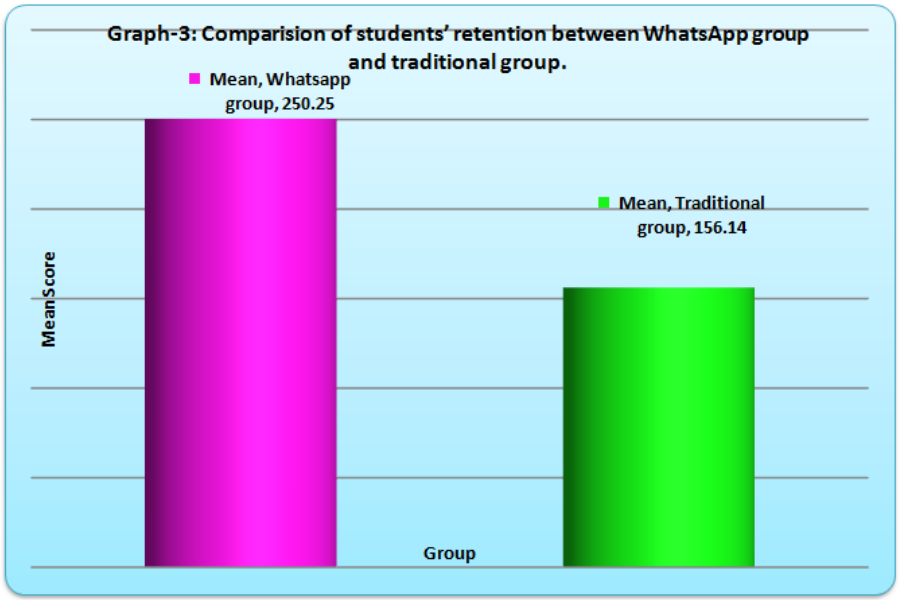


Hypothesis one: There is no significant difference in the retention ability of students taught with WhatsApp application and those taught using the traditional teaching approach.

Table 3: Z-test analysis of students' retention between WhatsApp group and traditional group.

Variable	N	Mean	SD	Df	Z-cal	Z-tab	Remarks
WhatsApp group	100	250.25	10..57	198	0.687	0.26	Significant
Traditional group	100	156.14	6.42				

Table 3 reveals that participants in the WhatsApp group had a mean retention scores 250.25 with SD of 10.57 while the traditional teaching approach group had a mean retention 156.14 with SD of 6.42. The Z-calculated value of 0.687 which is higher than the Z-tab value of 0.26 suggests that there is a significant difference in the retention ability of students taught with WhatsApp application and those taught using the traditional teaching approach. This data can be represented graphically as follows:

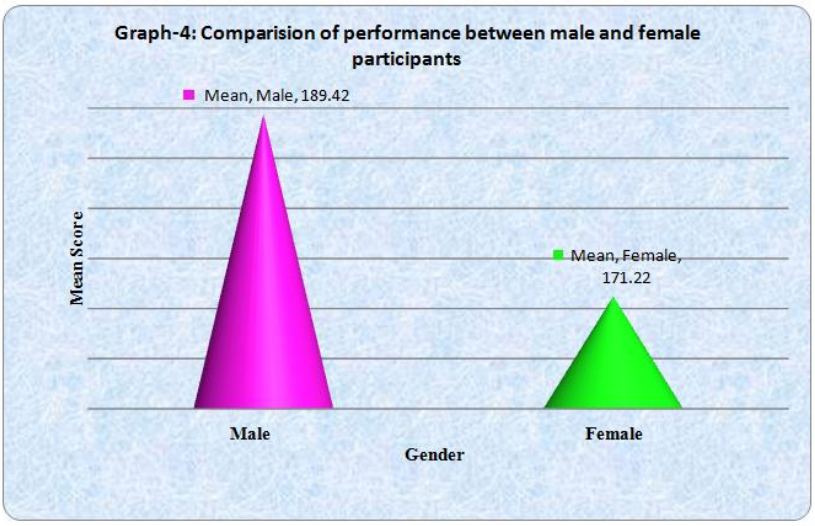


Hypothesis Two: **There is no significant difference in the academic performance of male and female students who use WhatsApp application for learning.**

Table 4: Analysis of performance between male and female participants.

Variable	N	Mean	SD	Df	t-cal	t-tab	Remarks
Male	100	189.42	9.821	198	4.812	2.00	Rejected
Female	100	171.22	10.248				

Table 4 reveals that male participants in WhatsApp group had a mean performance of 189.42 with SD of 9.821, while the female participants had mean participants of 171.22 with an SD of 10.248. When t-test was applied the t-calculated value of 4.812 which is less than the t-tab value 2.00 at a 0.05 level of significance and a df of 198. The null hypothesis two with respect to academic performance by gender was rejected. This implies that they are is significant difference in the academic performance of male and female students who used WhatsApp application for learning.



DISCUSSION OF FINDINGS:

The effectiveness of WhatsApp as a collaborative tool for learning among Student Teachers of B.Ed. colleges affiliated to Bangaluru North University, Kolar was investigated in this study. It was found out that there is a significant difference in the retention ability of students who use WhatsApp application for learning and those who learn with the traditional teaching approach. these findings are in agreement with that of Salechi and Ashiyan (2016) who opined that WhatsApp application as a learning tool enhances students' retention during learning. Tulika and Dhananjay (2014) also noted that WhatsApp as a learning tool foster students interaction and retention during learning. It was also found that there is significant difference in the academic performance of male and female Student Teachers who use WhatsApp application for learning. The findings are in agreement with that of Agus and Wasis (2007) who observed that there is no significant difference in the academic performance of male and female students who use social media for learning. However, the result disagreed with the findings of Lulu (2014) who opined that male students are significantly better off than their female counterpart in terms of academic achievement in the use of simple computer operations.

RECOMMENDATIONS:

Based on the result of this study, the following recommendations were made;

1. Whatsapp application should be adopted by both instructors and learners as a collaborative tool for learning in higher institutions.
2. Mobile learning should be encouraged among the undergraduate students.
3. Educational stakeholders should embrace and inculcate the 21st-century learning skills into classroom learning.

CONCLUSION:

Based on the findings of the study, it was realized that WhatsApp application is an effective collaborative tool which can be used for teaching and learn in this 21st-century system of learning by both students and instructors, WhatsApp was equally seen as an educational tool with the potential of making learning interesting.

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