

Utilization of Whatsapp and Students' Performance In Geography In Uyo Educational Zone, Akwa Ibom State

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Abstract – The Study sought to examine the effect of WhatsApp utilization on academic performance of geography students in secondary schools in Uyo Educational Zone, Akwa Ibom State-Nigeria. The study adopted the pre-test-post-test non randomised control group design. Two research hypotheses were formulated to direct the study. 180 geography students were drawn from two schools out of 13 public secondary schools in the study area and used for the study. Two research instruments namely; Geography Performance Test (GPT) and Teachers Attitude Towards the use of WhatsApp Questionnaire (TATWAQ) were used to gain data for the study. The instruments were validated by experts in geography and Measurement and Evaluation and had a reliability co-efficient of .72 and .86 respectively for (GPT) and (TATWAQ). The two experimental groups were treated with WhatsApp instructional module and the other two control groups were taught using expository instructional strategy. The analysis of data showed a significant effect of use of WhatsApp module on academic performance of geography students. The study also showed the Teachers attitude to the use of WhatsApp Instructional module affect students' academic performance in Geography. Based on the findings, it was recommended among others; teachers should be trained on the use of WhatsApp chat room in their lesson delivery and also that social media resource materials should be provided in schools for teachers and students to use chat rooms in teaching and learning.

Keywords – Use of WhatsApp Instructional module, Geography students' academic performance, Teacher's attitude on the use of WhatsApp chat room.

I. INTRODUCTION

The importance of education to mankind in whatever form cannot be over emphasized most especially in this scientific and technological era. In view of its relevance, Iloamus & Osuagwu (2009) described education as a major tool for national development. Their positions agree with the assertion of the National Policy on Education (FRN, 2013) which stresses that education is an important instrument of change. In this current situation of technological growth, Nigeria's dream of educational change will not be achieved without upgrading the state of our educational system at all levels. Aduwa-Olgigbaen and Iyamu (2005) noted that the tools of many professions are

changing at an incredible rate and that education is no exception. The impact of technology has led to increased use of devices for presenting information in many of today's classroom.

The world is ever changing due to the advancement in the realm of science and technology. Some of the most prominent technological innovations are smart phones, laptops and using the internet. They have greatly affected many aspects of our lives. Today the internet continues to grow day by day at an incredible speed. About 37% of the world's population has access to the internet (Howe, 2012). These days it seems hard to escape presence of technology. WhatsApp is one of the changes in technology that is commonly used on specific mobile phones and computers (Cohavi, 2013).

WhatsApp is a Smartphone application that operates on nearly all current types of devices and operating systems. The application has been on the market since 2010; the declared purpose of the developers was to replace the existing SMS platform for a system that is free of charge in ad-free environment. As a means of sending and receiving messages to and from individuals or groups, WhatsApp includes a variety of functions, such as text messages, attached images, audio files, video files and links to web addresses. Everyday an average of 31 billion messages are sent (Tzuk, 2013). According to Bere (2013), class WhatsApp groups are used for four main purposes: communicating with students; nurturing the social atmosphere; creating dialogue and encouraging sharing among students; and as a learning platform.

The abysmal performance of geography students has been linked to many variables such as poor teacher and students' relationship, teachers' teaching method, learning materials, teachers' and students' attitude and learning styles (Dikko, 2009). Aderogba (2012), vouched for effective teaching and learning about geography in Nigerian schools; and was quick to suggest to suggest the use of modern technologies. The use of WhatsApp in teaching and learning of geography in our secondary schools is not a luxury but seems to be a necessity.

Bere (2013) examined the performance of students' in a South African university when taught with WhatsApp. The students gave a positive feedback and claimed that it was an easier way to communicate with their teachers and the rest of the class and that is was also fun. Most of the students agreed that WhatsApp learning is a collaborative experience and it has increased their social interactivity with their peers and teacher. Overall students' shows a favourable attitude towards WhatsApp learning.

On teachers' attitude towards WhatsApp, Cohavi (2013) noticed that teachers get annoyed by the flood of irrelevant

messages sent by students. Educational difficulties may arise, such as incompatibility of language between students' assumptions that their teachers should be available on a regular basis. Although rapid growth in technology has already positively influenced the academic field, there is a lack of conformity on how technology should be integrated into the school curriculum and what students' should be taught using technological advancement. It is against this background of helping geography teachers to teach effectively as well as facilitating student's performance that this research work identified utilization of WhatsApp and Students' Performance in Geography in Uyo Education Zone is being investigated.

Most of our Nigerian teachers are used to the chalk-talk method of teaching and learning, thereby rendering the students to be passive learners. Over the years, geography in our secondary schools have been taught traditionally where teachers rarely expose the students to geographical facts, either because of non-availability of these technological tools in schools to use or inadequate exposure of the teachers to handle new technological equipment. Nigerian teachers also exhibit a scary personality that make their students scared of them thus resulting to a poor teacher and student's relationship.

One is not sure if WhatsApp application is properly integrated into the teaching of geography, teachers may be able to download geographical features that cannot be seen in the immediate environment for the students to see, there may be a strong teacher and students relationship and students may perform maximally both in internal and external examination. Many studies have been carried out with WhatsApp technology but little or no study is known on the use of WhatsApp and Academic Performance of geography students in Uyo Educational zone. This study is therefore aimed at finding out if WhatsApp could enhance effective way of teaching and learning of geography in our secondary schools to improve students' academic performance.

The study is set on dual-coding theory of cogitation by Allan (1971), learning communities and activity theory of Engestrom (1987). Dual coding theory postulates two distinct information processing strategies vis-à-vis verbal and visual information processing and that learning improves when both systems are employed. In this process, students learn better from processes that are sensory, visual induction and active especially when colours and diagrams are employed. The learning communities and active theory postulated the use of co-operative and collaborative learning strategies that encourages students active participation as supported by Cross (1998) and also for the construction and sharing of knowledge between groups and communities through collaborative learning activities (Bielaczyc & Collins 1999). This encourages active student's participation in online discussion.

II. METHODOLOGY

The study adopted the pre-test post-test non randomized quasi experimental design to postulate two hypotheses to

guide the study. This was to establish the effect of using WhatsApp on academic performance of geography students and geography teachers' attitude in the use of WhatsApp technology.

The study was carried out in Uyo Local Government Area of Akwa Ibom State-Nigeria. Uyo local government has 13 public secondary schools with beautiful landmark and topography including evergreen grass and forest background, mountains, swamp, resort areas and attractive topographical features that serve as community and phenomenal resources for the study of geography. 180 SS II geography students were used for the study and divided into experimental and control groups from four secondary schools that had graduate geography teachers and permission was sort for students to use their smart phones for the study.

The researcher developed two instruments and WhatsApp instructional chart module. The instruments were the Geography Performance Test (GPT) that had 20 multiple choice items with response type options a-d with only one correct answer. The test was scored under 100%. The second instrument was a 16 item Teachers Attitude towards WhatsApp Utilization Questionnaire (TATWUQ) for students to rate their teacher toward their attitude to use WhatsApp for lesson delivery. The instrument was developed on a four point Likert type scale responses of strongly agree, agree, disagree, strongly disagree. The instruments were face and construct validated by two experts. One in the department of Geography and Regional Planning and another in Measurement and Evaluation, Educational Foundation Department all in the University of Uyo, Uyo-Nigeria. Their comments formed the final instruments used for the study. Test-retest strategies was adopted on 20 geography students that were not part of the main study but equivalent in all respects with the ones under study. Their scores were treated to Pearson Product Moment Correlation Co-efficient. The result 'r' values were converted using Spearman Browns' Prophetic formula to have reliability co-efficient of .74 for the test instrument and .86 for the questionnaire instrument. The instruments therefore were considered suitable for the study.

WhatsApp Instructional Chart Module (WICM) was designed using constructivism and behaviourism learning model; Briggs and Gagne (1974) and the engagement model of Kearsley and Shneiderman (1999). The models highlight increased attention, knowledge acquisition, memory retention, interest, motivation and productivity. The aim was to treat the experimental group to observe the effect on their academic performance. Each of the two schools had experimental and control groups of 45 geography students making a total of 180 students used for the study. They were pretested using the geography performance test. The experimental groups in each school were then treated with WhatsApp Instructional Chart Module (WICM) prepared on location, size and topography of every state in Nigeria drawn from SSII geography Curriculum. The control groups were taught the same lessons using the conventional expository teaching strategy. After due permission from the school authorities

and subject teachers' that were trained as to treat the experimental and teach the control groups as research assistants. After the treatment that lasted for two weeks, the two groups were post-tested using geography performance test (GPT). Their scripts were marked and scores used for analysis.

The Teachers Attitude towards WhatsApp Utilization Questionnaire (TATWAQ) was distributed to the same students to rate their teachers attitude towards use of WhatsApp technology in lesson delivery. The completed copies were retrieved on the spot. Their scores were also rated and used for analysis using analysis of co-variance

(ANCOVA). The result of the analysis is as shown on tables I and II.

III. DATA ANALYSIS AND RESULTS

Hypothesis 1

There is no significant difference in students' academic performance in geography when taught with WhatsApp and without the use of WhatsApp. The analysis is as shown in table I.

Table 1: Summary of Analysis of Covariance (ANCOVA) of students' Post-Test performance by treatment groups with pre-test as Covariate.

Source of Variation	sum of squares	df	Mean square	f-cal	Sig.	Decision at p<.05 level
Covariate: Pre-test	.199	1	1.99	.001	.970	Not sig.
Main Effects:						
Instructional Strategy	*28827.35	1	28827.35	20.63	.000	Significant
Residual	25431.62	177	143.68	-	-	-
Total	55146.11	179	-	-	-	-

@ P=< 0.05 level of significance

Table 1 shows that there is a significant effect of use of WhatsApp instructional module performance in geography with the F-cal of 20.63 and df 179 at .05 level of significant. Therefore the hypothesis is rejected. This means that there is a significant difference between the performances of students taught using WhatsApp instructional module and those taught with conventional instructional strategy.

Hypothesis 2

Teachers' attitude towards the use of WhatsApp does not significantly affect students' academic performance in geography when taught using Instructional module. The analysis is as shown in table 2.

Table 2: Summary of Analysis of Covariance (ANCOVA) of students' Post-Test performance by treatment groups and Teachers Attitudes level.

Source of Variation	sum of squares	df	Mean square	f-cal	Decision at <.05 level
Covariate: Pre-test	.004	1	.004	.00	Not significant
Main Effects:					
Instructional Strategy	28915.04	1	28915.04	200.06*	Significant
Teachers' Attitude	6.75	1	6.75.047		Not significant
2-way interaction:					
Instructional Strategy*					
Teachers' Attitude	131.50	1	131.50	1.98	Significant
Residual	25293.05	175	144.53	-	-
Total	55146.11	179	-	-	-

@ P=< 0.05 level of significance

The result of the analysis as shown on table 2 indicates that teachers' attitude towards the use of WhatsApp Instructional module affect students' academic performance in geography. The calculated ratio of 1.98 is seen to be greater than the critical F-value of 1.32. The hypothesis is therefore rejected. This means that teachers' attitude towards the use of WhatsApp instructional modules significantly affect academic performance of geography students.

IV. CONCLUSION

WhatsApp instructional chat room enhances students' performance and improves teacher and students' relationship better than traditional method and teachers' attitude towards the use of WhatsApp is a significant determinant of students' performance in geography. Today's educators have to learn how to insert themselves into a student's life. A messaging solution such as WhatsApp is a perfect means of doing that because it utilizes a medium and a technology that students use every day. By using WhatsApp, a teacher can integrate the classroom and the real world and make education part of the students' lives.

Recommendations

Based on the findings of the study, the following recommendations are put forward:

1. WhatsApp is more effective than the traditional teaching method; therefore it should be incorporated as one of the medium of teaching and learning.
2. WhatsApp encourages a positive teacher and students' relationship therefore it should be encouraged to choose it as a medium of instruction.
3. Government should assist students' that cannot afford smart phones with one so that all the students can be carried along and thus enhance learning. The cost of getting data should be subsidized for the students.
4. Teachers should strive in developing positive attitude towards the use of WhatsApp chat room for effective lesson delivery.
5. Internet resource materials should be provided by stakeholders in education to facilitate the use of chat rooms in teaching and learning.

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