The Use of the Mobile Phone Technology as an Instructional Tool

for Lesson Delivery at Abura Asebu Kwamankese District

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Abstract

Technology has evolved over the years from being simple machines to complex ones which are making work easier and faster than usual. Despite the influx of the mobile technology with its functions into the Ghanaian society, most people are still stuck to its voice call and other basic functionalities neglecting the economic and productivity enhancement ones. It is for these reasons that this is being carried out to find out the educational benefits of teachers using their phone technology to teach, the cost benefits that major stakeholders stand to gain when teachers use their mobile phone technology to teach and last but not the list streamline ways by which teachers can effectively use their mobile phone technology in their lesson delivery.

The study used the descriptive research design adopting the mixed-method approach. The research adopted the use of survey questionnaire and interview guide. Major findings made from the study showed that about 92% of teachers used smart mobile devices but just for personal reasons. The teachers did not use the functions of their mobile phone devices to support their teaching process. They, however, saw the educational and cost benefits of using their mobile phones technology to teach. They, therefore, needed training workshops to equip them to make adequate use of their mobile phone technology to enhance their teaching. The study however recommended to the government through the ministry of education to develop a basic school's mobile app to help arouse the interest of teachers coupled with reduced tariffs from telecommunication networks operators.

Introduction

The academic success at the foundation or basic level of the academic ladder is much dependent on how best the teacher prepares and delivers the lesson. A lesson which is not properly planned is most likely to end with no change in the learners' behaviour. But a planned and well-delivered lesson with all other things being equal is guaranteed learning to take place. At the planning and delivery stages, teaching and learning aids are pivotal to ensure success and learning to take place. These teaching aids range from real objects to abstract drawings or charts. Teachers are always quick to blame the poor performance of their students to lack of teaching and learning aids in our schools. The mobile phone can ease that burden by proving all the aids that they need at a little or no cost. The mobile phone could contain any relevant material needed to help the teacher plan and deliver a lesson that could cause a major improvement in learners' success. This study is going to expose teachers to how to effectively use the mobile phone as teaching and learning material in their everyday world of work.

Mobile phones (smartphones) have entered the Ghanaian market to the extent that almost every teacher in Ghana has at least one. A smartphone could be described as one that has an operating system to run applications (e.g. windows, OS, blackberry, android), allow for installation of new applications apart from the default (GPS locator, Wi-Fi locator), has the QWERTY keyboard, receive and send electronic mails as well as connect the World Wide Web which the ordinary phone did not have. This study seeks to explore how these functionalities of the smartphone could help teachers plan and deliver lessons that would increase educational outcomes. Much emphases would be on the teacher and a few times would include the learner. This is because of the planning and delivering of lessons is done by the teacher.

Mobile phones have come in with new features built-in them. The mobile phone has gotten almost all the functions of a computer. One can, therefore, say it is a computer in one's pocket. Teachers in the developed world tend to make use of this device to aid in their teaching process. Only few teachers in the developing world try to use the functions to teach but not all. The issue now is what policy document is put in place in Ghana to direct the few who use the devices to teach as well as the majority who do not even apply them in their field?

The policy will help to curb the abuse in the use of mobile phones by some teachers thus those who leave their tones on while teaching, receiving phone calls during lesson deliveries just to mention but a few. One major cry of a typical Ghanaian teacher when blamed for the poor performance of their students is that there are no teaching and learning materials (instructional materials) at their disposal meanwhile almost all teachers own a mobile phone (smartphone). These reasons teachers give for the poor performance of their students has made most teachers not applying modern-day technology to improve their pedagogical skills and hence go to the class not fully prepared even sometimes not prepared. They end up teaching their students with abstract concepts (abstract teaching).

Mobile phone applications if used correctly by teachers in the school setting could make it possible to have every type of information at students and teachers fingertips and could be used in the classroom to reinforce learning (T. Miller, 2015). Teachers need to be trained on how to use mobile technology at their disposal because it is almost certain that the students have a better grasp on the capabilities of mobile devices than classroom teachers (T. Miller, 2015). MLearning (mobile learning) allows a method of educational delivery that could be more cost-effective than eLearning methods, not to mention that the ubiquity of mobile phones means that many people are already familiar with mobile phone applications (Motlik, 2008).

The mobile phone is seen as a social technology, learning technology, and interactive technology (Koole, M. L., 2006). The purpose of this article is therefore meant to establish guidelines on how basic school teachers can use their mobile phone's technology to enhance their lesson delivery and how that can cut the cost of printing and supplying teaching and learning materials such as syllabi and teachers' handbooks.

This article aimed at identifying the educational benefits from teachers using their mobile phone technology in lesson delivery and finding out the cost benefits from teachers using their mobile phone technology in teaching as compared to hard copies of textbooks and other tangible teaching and learning materials;

This article aimed at establishing how mobile phone technology can be used by teachers to improve effective lesson delivery.

The researcher seeks to answer the following research questions in this study, a). What are the educational benefits of teachers using their mobile phone technology in their lesson delivery?
b) What are the cost benefits involved when teachers use their mobile phone technology in their line of duty as compared to other systems?
c) How can teachers use their mobile phone technology to ensure effective lesson delivery?

Literature Review

This section is broken into three parts which will include how teachers can use mobile phone applications effectively to enhance their lesson delivery. It will also review the educational benefits that could come out from teachers using mobile phone applications. Lastly, the chapter will review the cost benefits involved in the use of mobile phone applications in their lesson delivery. This review is focusing on how teachers could explore and use their mobile devices through their respective applications to improve their works at school. The review will be focused also on getting stakeholders to buy into the idea of integrating mobile phone application in the training of teachers. For the purposes of this study, a holistic framework of mobile learning will be used. This comes with the FRAME model. It is an adaption of Koole's, M.L. (2006) model. The FRAME model takes into consideration various aspects of mobile devices ranging from technical, social and learning characteristics of the device Koole (2006). This model refers to concepts similar to those as found in psychological theories such as Activity Theory (Kaptelinin and Nardi 2006) – as well as about Vygotsky's (1978) work on mediation and the zone of proximal development. The model uses the set theory laws which consists of a three-circle Venn diagram comprising the Learner aspect (L), the Social aspect (S) and the Device aspect (D). Figure 1 gives a pictorial description of the model.
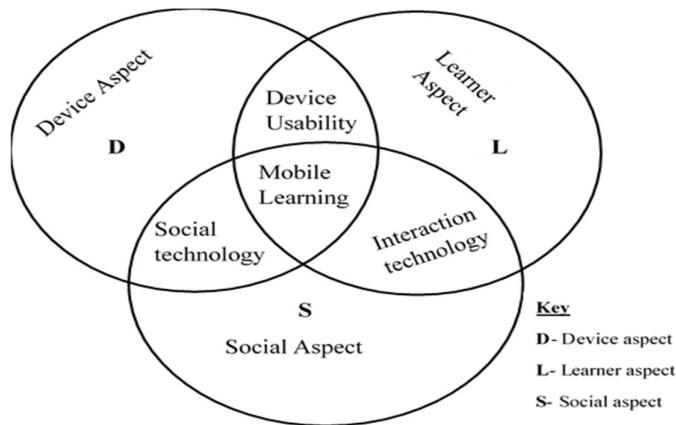
Figure 1: FRAME model of mobile learning using a Venn diagram

Source: Author's construct, 2019

The overall set theory revolves around the intersection of the three circles thus the three aspects made up of the device, the social and the learner makes the mobile learning. The mobile phone is seen to be a device that mediates, give access to information and used for knowledge navigation. Vygotsky (1978) thinks that the nature of the interaction itself changes as learners interact with each other, their contexts, tools, and information. Siemens (2005) thinks that "When knowledge is subject to paucity, the process of assessing worthiness is assumed to be intrinsic to learning. When knowledge is abundant, the rapid evaluation of knowledge is important". For purposes of this work, learners are replaced with teachers as users. A remodel of the model was used but the core value remaining the same. Figure 2 gives the new model used in this study.
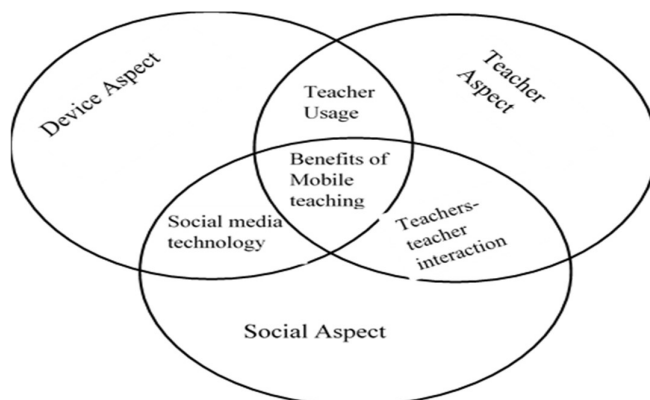

Figure 2: Remodel of FRAME model of Mobile Learning

Source: Author's construct, 2019

How Mobile Phone Applications can be used to enhance Lesson Delivery
Preparing for lesson delivery: Basic school teachers in Ghana must prepare a detailed lesson plan as a document which they will use to teach their respective lessons. This forms part of the professional competence of a Ghanaian teacher. Teachers write out a design on how they want their lesson to be delivered.

Teachers usually rely on the textbooks given to them by the Ministry of Education through the Ghana Education Service. Some teachers do not have these books because of their location and those who have to rely solely on only those. It is for these that the mobile phone applications come in. There are applications on mobile phones (smartphones) that could help the teacher gather enough content or information relating to a planned lesson at the preparatory part of the delivery process. (P. Aubusson et al., 2016) in their research titled Mobile learning for teacher professional learning: benefits, obstacles and issues echoed the fact that mobile learning is a potential process that could change the face of education but had their reservations on the timing not appropriate yet. They, however, support the fact and recommended that teachers could use mobile technology to construct knowledge and share with their students. (Y.-T. Sung et al. / Computers & Education 94 (2016)) also, attest to the fact that mobile devices have certain features and these features may be able to enhance the effects of certain pedagogies,

such as self-directed learning, inquiry learning, or formative assessment. The focus here is inquiry learning where teachers can do that to access certain information about their lessons. Teachers will be able to review other people's content from different jurisdictions to be able to get the best of content for their students.

During lesson deliveries: this is the point at which the teacher delivers the lesson to his students in the classroom after preparing. Teachers sometimes have to use illustrations, charts, multimedia and others just to get their student to decode a mental picture of what is been taught. In a typical Ghanaian classroom, the readily available material that could enhance the lesson delivery is the student's textbooks. These books largely have text with few images which does not get a majority of students understanding what is been learnt. There are mobile phone applications that could help the teacher download images and videos about the lesson for students to watch and give their views.

Recording tool for review: teachers in a typical classroom only rely on exercises given at the end of a lesson to make reviews, self-assessment as well as methodology assessment. When students sometimes become used to voices of their teachers they fill boredom. It is for these reasons that teachers can take the opportunity of certain mobile phone applications to help them. Applications such as the audio recorders and podcast could be used to record a class session without students knowing what exactly is going on. These recordings could later be played by teachers in their free time for review purposes. J. Rikala (2013) in his study found out that most mobile devices and their applications are most used by teachers during field trip lessons, nature walks as well as games. Teachers especially language teachers can take the opportunity of the mobile phones to record and a news bulleting and play to students later in class for them to review and use that to develop their language skills. Just like Jenni Rikala (2013), the camera and video functionality of the mobile phone can be used to take pictures and videos of student's craftwork which could be printed later for class magazines.

Meeting the needs of special Students: government and other educational stakeholders are working hard to get the All-Inclusive Educational Policy to force. This is to ensure that all student despite their special challenge gets access to equal education. This policy will see those with special certain special needs integrated and taught in the same classroom as their colleagues in a regular classroom. Though teachers are trained during their Teacher Training era at the Colleges of Education on how to involve those students with specialty just as the regular, there is the problem of equipment. The challenge teachers have to go through to get the content delivered so that all manner of persons understand becomes enormous. The teacher can, however, rely on mobile phone applications to get their objectives achieved. In the case where there are visually impaired students in the class, teachers can record the lesson in audio form and play to the class where each member of the class will get the benefit of the lesson no matter their status. A lesson could be recorded and send electronically to the parents of those with multiple disabilities for their parents to continue the teachings at home to improve the learning needs of their wards. Those in a regular class could have their class participatory recorded and sent to the phones of their parents for them to see their improvement or otherwise. This makes students alert and attentive when they are in class. (T. Hasselbring, C. Glaser et al., 2000) in their research on the use of technology to help students with special needs concludes in their findings that a lack of adequate training of teachers in technology has led to the exclusion of students with special needs in their classroom but could be changed if the teacher is trained on which technology to use in their classes. They, however, did not highlight the use of mobile technology in isolation for which the researcher seeks to relate his work too. (Sanchez-Gordon & Luján-Mora., 2016) asserts that mobile technology could be retrofitted to meet the learning needs of all individuals. Their assertions were backed by (Bausch, Ault & Hasselbring., 2015) who says mobile technology could be created to meet the learning needs of students with special needs. (Puccini, Puccini, & Chang., 2013; Reid, Strnadova, & Cumming., 2013) thinks that mobile technology can provide multi-sensory learning opportunities for students with varying needs.

The mobile applications as interactive tools: The traditional classroom of a Ghanaian teacher makes the environment local champion situation where a teacher is the master of his class and that all he knows is what is regenerated for every year group of students. Teachers do not have an avenue where ideas are shared regarding their class activities. They are always in their comfort zones not ready to explore more challenging areas that could help in the style of delivering their lessons. (Clement and Vanden- Berghe 2000; Burbank and Kauchak 2003; Aubusson et al., 2007) explain this as collaborative learning which they say is critical to the professional learning of teachers. Their study saw teachers' collaboration as a way of making them active in the production of knowledge. The knowledge produced and shared by teachers with colleagues all contributes to the professional development of teachers as seen by Noddings and Witherell (1991). For these reasons, the mobile phone application is a suitable tool that could enhance the collaborations among teachers which is a driving tool for teacher professional development. Mobile applications such as facebook, WhatsApp, Twitter, Viber just to mention but a few are common applications that when used properly could help teachers interact more often. These applications allow teachers to record and share their teaching, have conference calls during reflection times to try and share out their

thoughts on contents posted on their platforms. (P. Aubusson, S. Schuck & K. Burden 2017) concluded in their study that learning with mobile phone applications provide the teachers with an unrealized opportunity for them to facilitate their observation, critique and sharing of activities in their respective classroom.

The Educational benefits of Teachers using Mobile Phone Applications in Lesson Delivery
The use of mobile phone applications has several educational benefits that could help stakeholders get value for their effort being made to improve the performance and standard of education. Some of the benefits are

General Improvement in the Academic Performance of Students: The educational mobile phone applications like text video players allow the teacher to download and play out videos relating to the content of study instead of trying every means to get the student to learn by rote means.

*Improvement in the pedagogical and professional competencies of teachers using them***:** The methodology used by teachers can improve as well as decrease the performance of their students. The primary purpose of teaching at any level of education is to bring a fundamental change in the learner (Tebabal & Kahssay, 2011). Students are to be tasked for accomplishment rather than being asked to remember or memorize. The approach that the teacher will use is very key for them to accomplish those tasks. The mobile phone application is needed mostly to address this issue. The mobile phone can help the teacher access the appropriate teaching method to adopt for a particular lesson.

Increases in productivity of teachers: Aside from student performance and teacher's professional development increase teacher work output is also a benefit that mobile phone application will bring to the educational system. Every employer expects the best from their employees thus the expect them to put up their best for the overall goal of the organization to be met.

*Give teachers access to a variety of information and content***:** Teachers in the classroom as said earlier rely only on the textbooks given as their instructional materials which they rely on to teach their students. The coming of the mobile device comes with various features which could help individuals explore to solve challenges of life. An application could be specially designed for all basic school teachers to download and install onto their phones which will boost them to give up their best given the availability of resources.

Cost benefits of using Mobile Phone Technology as compared to other Educational Interventions by Stakeholders
The use of mobile phone applications has a lot of benefits to stakeholders of education as it saves cost

Printing of teacher's textbooks and syllabi versus mobile applications: all teaching textbooks in Ghana has to be printed and sent to the regions who intend sent them further to the districts who then goes for the materials for teachers to use. Mobile phones have applications such as Portable Document Format (PDF), office suite just to mention a few. The PDF is a way of storing the file such that they not easily edited.

*Cost of transporting printed materials to their destination***:** printed hard copies of textbooks are done at the national level and later distributed among the regions who later dispatch the to the various district directorate for onward distributions. District directors of education sometimes complain of lack of funds to further transport the materials to the various schools and hence the cost is left upon the shoulders of heads of schools.

*Time of accessing new materials***:** just as the cost of transportation, time of accessibility is another hindrance which will need mobile applications to solve. With materials being delivered at the various district for onwards distributions, certain school are unable to pick them up in time and by the time they are picked up some students elsewhere might have received and used the materials for their studies. This is unfair as they will all sit for common nation examination regardless of who received their materials in time.

METHODOLOGY
The problem of inadequacy of teaching and learning materials at the basic level of education in Ghana has resulted in the falling standard of education. This has led to teachers delivering the lessons mostly in abstract and has caused most students to poorly perform at the end of their basic levels.

Research Design
The research is descriptive thus it is descriptive research which will involve the use of the Mixed Method approach to collecting data for analysis.

Descriptive research was chosen over other research designs because this research involved the use of a mixed-method approach that encompasses both quantitative and qualitative approaches. Thus, it gathers data from a variety of methods which include surveys, case studies and observations all of which are used in this research. Other advantages of descriptive research are their ability to give a holistic understanding of a research topic due to the variety of data gathered. The data is being gathered from the natural environment of the sampled population in descriptive research. This ensures that the data gathered will be honest and highly relied on. The survey, for instance, can reach a large number of participants even electronically and received the same without having to travel.

Population
The research targeted all public basic school teachers in Abura Asebu Kwamankese. This includes teachers from the kindergarten, lower primary, upper primary and the junior high levels respectively. The research could have covered all basic school teachers from both public and private school but the researcher wanted to get teachers who have at least a Diploma in Basic Education.

The population included teachers of both sexes as well as ages ranging from 20 to 59 who are in active service. The accessible population was basic school teachers from the Moree Circuit in the AAK distric t in the central region of Ghana. The AAK District Education Directorate has a total of 107 public basic schools and 1300 teachers in these schools. Moree circuit under the district was the main focus. This is because the Moree circuit is the nearest area of proximity to the researcher. The accessible population was 184 teachers, with 13 headteachers and one District Training Officer were involved in the study making a total population of 198.

Sample and Sampling Technique
This study made use of probability sampling, specifically the Stratified Sampling procedure was adapted. This is a method of sampling that involves the division of a population into smaller groups known as the strata. In stratified random sampling, the strata are formed based on members shared attributes or characteristics. A random sample from each stratum is taken in a number proportional to the stratum's size when compared to the population. These subsets of the strata are then pooled to from a random sample. (2019) http://www.allresearchjournal.com
The stratified random sample aims to reduce the potential for human bias in the selection of cases to be included in the sample. As a result, the stratified random sample provides us with a sample that is highly representative of the population being studied, assuming that there is limited missing data. Since the units selected for inclusion in the sample are chosen using probabilistic methods, stratified random sampling allows us to make generalizations (i.e. statistical inferences) from the sample to the population.
For the interview session, the researcher went in for the non-probability sampling and specifically the purposive or the judgmental sampling procedure. In purposive sampling procedure, the researcher chooses the sample based on who he/she thinks would be appropriate for the study.
The target group was all the public basic school teachers in Moree Circuit. Moree circuit is made up of three major towns namely Moree, Amosima, and Brafoyaw. The number of trained teachers for the entire public schools in the circuit to be one hundred and eighty-four (184). Out of the 184 teachers, 125 of them were chosen to be part of the study as a sampled group. All 13 headteachers were engaged in the interview as well as the District Training officer. A total of 139 made up the sample size. The sample chosen from the 184 teachers to respond to the survey was based 95% confidence level with a 5% margin of error. A sample size calculator online was used to find the sample size Hotjar, (2019) sample size calculator.

Data Collection Instruments
This study was a mixed-method approach to getting data. Thus involved more than one form of data-gathering instruments. For this study, the survey questionnaire and the interview were used. The survey questionnaire was the main source of primary data to be collected and to form the basis of the interview session. The survey questionnaire was meant for the teachers in the 13 public basic schools the Moree Circuit whereas the interview was for all the 13 headteachers of those schools together with the District Education Training Officer (DETO).
The survey questionnaire was developed by the researcher and sent to the supervisor for editing and to be made. The survey was then administered on a pilot base for 35 teachers made up of the curriculum leaders for the participating schools and their kindergarten teachers who were attending a training workshop at the circuit centre. They were to answer the questions as well as check for further corrections. The questions set for respondents to respond to were crafted from the research questions being a guide.

An interview guide was administered to the heads of the schools in Moree circuit. The purpose for that interview was to get the heads to confirm or otherwise some of the questions answered by the teachers on the usage of mobile phone for teaching. The heads were in the best position to determine since they were the supervisors of the teachers

and monitors their works at school. The questionnaire was coded into SPSS and tested for reliability and the outcome of the Cronbach's Alpha was 0.817 with 39 items.

Data Collection Procedures
Data was collected from two main sources that are from primary and secondary sources. The researcher gathered the primary data mainly from surveys (questionnaire), interviews were used to support the results of the questionnaire. The questionnaire was administered to the sampled teachers from Moree circuit in Abura Asebu Kwamankese (AAK) District in Central region of Ghana. Teachers were scheduled to answer the questionnaire at their schools. Some of the secondary sources for this research work are newspapers (e.g. The Business and Financial Times thebft, April 10, 2017) on the influx of smart mobile phones in to the Ghanaian economy; the Central Intelligence Agency (CIA) statistics on Mobile phone subscriptions as compared to the population of Ghana as at July, 2016; The effectiveness of teachers during lesson delivery as echoed by (R. Coe, C. Aloisi, et al., 2014).

Data Processing and Analysis
The data collected from the survey questionnaire were analyzed using the SPSS software as a tool. As the study was descriptive, the study made use of the descriptive statics during the analysis stage. The tools that were reported included the mean, mode and standard deviations. The study also made use of percentages. The overall results of the analysis were represented on frequency tables.

For the research question 1, the mean and standard deviations were used to report the results as well as the research question 2. For research question 3, most of it was a content analysis of the interview guide. The interview session with the DETO was recorded electronically and later played for transcribing. Results from the questionnaire formed the basis for the interview guide that was administered to the headteachers of the 13 basic schools of the survey participants as well as the District Education Training Officer of the Abura Asebu Kwamankese District.

RESULTS AND DISCUSSION
A total of 125 teachers were selected from all the basic schools in the circuit to be part of the survey. All 13 headteachers of the various schools were also selected to respond to an interview session. One other official (The District Training Officer) from the district was chosen to also respond to another interview. Amosima Methodist Basic School was chosen as an observed school. This made up a total sample of 139 participants. Out of the number, the majority were females, 55 were males whereas 84 were females. The gender of the respondents of the survey is summarized in table 3.

Table 1: Age of Respondents

Age	Frequency	Percentage
20 - 29	11	8.8
30 - 39	71	56.8
40 - 49	39	31.2
50 - 59	4	3.2
Total	125	100.0

Source: Field Survey (2019)

Table 2: : What are the educational benefits of teachers using mobile phone applications in their lesson delivery? (Part 3)

S/N	Statement	N	Mean	Standard Deviation
1	Mobile phones used in class helps in understanding by students	125	4.16	1.003
2	Internet content serves as a supplement to textbooks from GES	125	4.14	0.922
3	Variety of teaching materials helps in improving teacher professional competences	125	4.27	0.937
4	Collaboration between teachers on a platform before lessons helps develop teaching methods	125	3.79	1.117
5	Access to a variety of content increases productivity	125	4.31	1.011
6	The Internet provides more information as compared to textbooks	125	4.06	0.998
7	Mobile phone stores more information than textbooks	125	3.76	1.110
8	Mobile phones can create collaboration between teachers and parents	125	3.91	0.880
9	Mobile phones can be used to send students assignments to parents during holidays	125	3.72	1.082
10	Mobile phones can help teachers receive up to date materials from curriculum developers	125	4.29	0.850
	Valid N (listwise)	125	4.041	0.991

Source: Field Survey, 2019

This part of the questionnaire saw a mean of means to be 4.041 (4) and an average standard deviation of 0.991. A mean of 4 indicated that the majority of teachers thought the mobile phone could be used by the teacher to increase performance during the teaching and learning process.

The mean of means of the ten statements of part four of the questionnaire was calculated and the results as shown in table 14 indicated 4.16875 which is approximately 4. The mean of four meant that teachers on average agreed to all the ten statements in part four of the question.

Results from Interview with Head Teachers
Based on the responses given by teachers on the questionnaire, the researcher did a follow up to interview the head teachers of the various basic school whose teachers took part in the survey. They were asked 9 questions of which they were to confirm "Yes" otherwise "No". Though most of them supported the idea of the mobile phone being beneficial to their teacher, they had their reservation and consistently express the need for proper measures to be put in place to avoid abuse and misuse of the mobile phone. This prompted another interview session with the District Training Officer for the AAK district to find out how and what measures could be put in place to ensure that the mobile phone could be put to good use which can improve on the quality of education at the basic level.

Table 3 : What are the cost benefits of teachers using their mobile phones to enhance lesson delivery over other systems? (Part 4)

S/N	Statement	N	Mean	Standard Deviation
1	Syllabus in soft copy is cost-effective than hard copies	125	3.73	1.328
2	Teacher's guide and syllabus in PDF format on my mobile phone	125	3.95	1.007
3	The cost of transporting books and materials is costive than emailing softcopies	125	4.12	1.029
4	GES should develop its mobile application to have all the materials	125	4.43	.817
5	There is a delay in delivery of materials via transport	125	4.36	.846
6	Certain subject area textbooks have not received any consignment aside the first one	125	4.21	.978
7	Some subject areas lack the requisite teaching and learning aids	125	4.20	1.070
8	The remoteness of certain areas make it difficult to access and supply them with textbook	125	4.35	.873
9	The use of mobile phones to teach is cost-effective than supplying teachers with laptops	125	3.18	1.392
10	The mobile phone can be used to organize INSET on conferencing platforms	125	3.87	1.164
	Total(Mean of means)/Deviations	125	4.17	1.050
	Valid N (listwise)	125		

Source: Field Survey, 2019

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This research work was aimed at finding out and establishing guidelines by which basic school teachers could adapt their mobile phone as a tool to enhance their lesson deliveries. The results were to help cut the cost of printing teaching and learning aids. Research questions were posed to give direction to the research process.

The researcher concluded the study with a wrap of some findings that were deviating from initial anticipation. Some of which included some headteachers not endorsing teachers to use their mobile phone technology in their teaching. This they claimed will make room for teachers to abuse the usage.n the contrary, the DETO thought otherwise but rather enumerated effective ways that could help teachers adopt the usage of their mobile phone technology in their lesson delivery.

This study has brought to light the perception that teachers have about their mobile phones to the line of work. Whereas most teachers had smartphones they felt reluctant using them in their line of duty. This may be due to them having little knowledge about the educational benefits of their mobile phone or due to their negative perception of the destructive nature of the mobile phone being put in the public.

Teachers were indecisive as to whether to opt for them using their mobile phone technology to teach or receiving laptops from the government. This might have been due to the teachers' unawareness of the teachers on the functionality of the smartphone and that of the laptop to almost be same and even the mobile phone being functionally better than the latter.

The study recommends to the government through MOE to partner with MOC to develop a common mobile app for basic school curriculum in the country for teachers to download and use to enhance their teaching. The study also recommends that the government subsidies the sale of smartphones for teachers specifically to buy and could help every teacher have access to a smart mobile set.

The study recommends to the government to find other sources of electrical power to all rural areas in the country for teachers to keep charging their mobile phones. It could be solar panels or wet battery technology.

Recommendation to Policy Implementers (GES)

The study recommends to the GES to organize a nationwide training workshop for teachers on the educational benefits of using their mobile phone's technology to enhance their lesson deliveries. The study recommends to the GES to create subject social media platforms for teachers based on their subject area or level of teaching to enable them to share problems on challenging topics and seek diverse solutions. The study recommends the NACCA to and Colleges of Education to adopt the mobile phone's technology as part of ICT tools which would properly be taught in the cause of training on teachers.

Recommendations to the Telecommunication Networks

The study recommends to the various Telco's to make downloading from educational websites free to encourage teachers to take up more research works on the internet. The study recommends to Telco's to extend their network coverage to every part of the country to enable equal opportunities to all teachers in accessing digital information. Recommendations to N.G.O.s

The study recommends that various Educational N.G.Os should partner with academia to undertake more research works to how the mobile phone's technology could be of immense help to the teacher and society.

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