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DEVELOPING LEARNING AND TEACHING: TRAINING TEACHERS IN RURAL NIGERIA USING MOBILE TECHNOLOGY

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Abstract

The study investigated developing learning and teaching, training teachers in rural Nigeria using mobile technology. The sample comprised of 1,200 in-service training teachers purposively drawn from the National Teacher Institute (NTI) Kaduna offering teacher education programme in Kaduna state respectively. Data were collected using a questionnaire whereas mean and t-test statistics were used to analyse the data. The result of the study showed that the mobile technology can be an effective mode for teacher training as it has great impact on the classroom improvement and enhances the self-image, confidence, motivation, and professionalism of teachers. Based on the findings, it was recommended among others that government should procure ICT facilities to aid teaching and government should improve the orientation programme by providing more effective training on the use of phone features.

Keywords: Developing, Learning, Teaching, Training, Teachers, Mobile Technology

Introduction

The United Nations Development Programme 1991 describes development as a process that goes beyond the improvement of quality of life: It encompasses better education, high standards of health and nutrition, poverty reduction, cleaner environment, increasing access to and quality of opportunity, greater individual freedom, and the facilitation of a richer cultural life, which are truly desirable ends in themselves. Education is a key to this human development and progress, as it brings about changes in attitudes, values and behaviour. Similarly, Information and Communication Technology (ICT) have become within a very short time, one of the basic building blocks of modern society. Many countries now regard

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understanding ICT and mastering the basic skills and concepts as part of the core of education alongside reading, writing and numeracy. Teaching and learning can successfully take place through the application of electronic communication facilities between teachers and students. But, most teachers at all sectors of the education system have minimal or no ICT skills and hardly use existing opportunities to develop them. Can this generation survive the challenges posited by the contemporary social realities with this level of ignorance and information paranoia of teaching force? It is against this background of developing learning and teaching that this study attempts to situate the concepts of ICT at the centre of training teachers in rural Nigeria using mobile technology such as smart phones. It is a modern and exciting approach, as opposed to the traditional approach and so will be more interesting to trainee teachers. What will be the lesson learned while using mobile technology in teacher education in Nigeria? This call for are thinking of strategies.

The economy depends on education. A major problem exists with the quality of education in Nigeria. The major problem lies in teacher education. LEARNING NEVER STOPS: Teaching is never static. As technology develops, it shapes and changes the teaching environment, much to the advantage of the teacher and pupil (Mxolisi, 2011). ICT can provide an answer in delivering on-site education to teachers, but requires overcoming teacher resistance.

The Government of Nigeria has made education a priority, seeing it as a way to encourage social and cultural transformation on issues such as poverty, disease, child-marriage, corruption and adult illiteracy.

In 1976 the government announced the introduction of Free Primary Education, and in September, 1999 the government once again announced the introduction of Universal Basic Education. This led to nearly one million new pupils enrolling in primary school. In individual schools the number of pupils increased by up to 25%, which placed great demands upon the Federal government through the Ministry of Education. Overcrowded classes and under-trained teachers meant that many students soon dropped out. A major challenge was to rapidly increase the numbers of trained teachers (UNESCO World Data on Education, 2011).

The Federal Government, having identified the teacher as the key actor in the education delivery process, recognised that no educational system surpasses the quality of its teachers. It therefore mounted aggressive programmes to enhance the status, raise the morale and welfare of teachers through improved salary structure, training and re-training as well as professionalization of teaching. It also committed itself to salvaging the ailing educational system by ensuring that all the identified problems are properly and adequately addressed within a reasonable period. The government is fully focused and committed to meet with all these educational challenges.

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The National Policy on Education has prescribed that, the new minimum qualification required for teaching in the primary school will be the Nigeria Certificate in Education (NCE). The NCE (three-year programme) is also the qualification required for teaching in junior secondary schools and technical colleges.

The usual avenue for in-service training of teachers is through programmes, seminars and workshops during vacation periods. These usually cover educational planning, administration and management. Refresher courses continue to be arranged for teachers to strengthen their pedagogical skills, as well as to increase their competence in handling continuous assessment data. The need for teachers to acquire this skill has gained urgency, because the issuance of secondary school certificates has become the sole responsibility of each principal nationwide.

The scope of UBE implies that 40,000 teachers will be required per annum for the next nine years to cope with the massive increase in enrolment as well as quality delivery of instruction and quality learning. The main innovative strategies include: the pivotal teacher training programme (PTTP); the establishment in 2002 of the Teachers Registration Council; the establishment of the Federal Teachers Corps; the restructuring and reinforcement of the National Teachers Institute (NTI) in Kaduna, through significant capacity building and partnership.

Furthermore, the Federal and State Education Inspectorate Services, with the assistance of UNESCO, are being restructured and reinforced including the production of guidelines for School Inspection in Nigeria, which highlights the parameters, performance indicators and benchmarks for improved quality control and uniform standard for schools.

The regulation of the teacher education curriculum by the National Commission for Colleges of Education (NCCE) extends to the pre-NCE programme (i.e. the remedial programme). Standards are also prescribed in detail for instructional factors; staffing, physical facilities, administrative leadership, discipline and funding. The NCCE enforces these standards through periodic accreditation visits.

Teacher capacity building is taken seriously and teachers are expected to avail themselves of training and professional development opportunities provided by government, professional associations and the wide range of seminars and workshops that the Nigerian Educational Research and Development Council (NERDC) organizes in the area of curriculum/syllabus review, educational material development, and innovative teaching and learning strategies. In July 2004 the NCCE embarked on a nation-wide capacity building of lecturers in colleges of education in each of the 6 geopolitics zones of Nigeria (UNESCO, 2010).

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The question now is what is the potential for using mobile communication technology in the potential development of teachers in the rural north?

Similarly, a school empowerment programme can be developed to train secondary school teachers. This is a distance learning programme which trains teachers as they work. It makes use of information technology such as video cassettes, mobile phones, audio cassettes and radio broadcasts, as well as printed materials. This showed the potential of using mobile phones and SMS (text messaging) as part of the learning process. SMS is a system for sending messages as short typed texts on a mobile phone.

The benefits of using SMS: Conventional methods of sharing information are limited due to: Poor roads and poor postal services; remote rural areas, poor landline telephone networks, poor access to electricity from the national grid; little or no internet access outside one or two major cities, few modern computers, and little or no user expertise, especially in smaller towns and rural areas.

SMS has great advantages: such as: Good mobile phone networks; the potential for using solar power to charge mobile phones; high levels of mobile phone ownership and usage; teachers will show interest and acceptance of using SMS for learning; the use of SMS to share information will be well established. However, its use in supporting teaching and learning based around discussion will be more exciting and challenging.

For teacher training programme, SMS can be used for delivering: Study guide material and week-by-week support; highlighting the important issues to focus on; content such as hints; tips; outlines; lists; summaries; revision; reminders about future assessments, assignments or meetings; discussion in the form of feedback; questions and answers support and encouragement; urgent messages about errors, cancellations and changes (Traxler, 2005).

The system is free to authorised teachers who use an individual identity code. At a local level, study groups of registered participants can use the system to chat about their work and encourage each other.

Statement of the problem

With the introduction of e-learning, teachers can be admitted in distance education programmes. The concept of brick schools has to be replaced with click technology. Good education demands good teachers. But many countries have too few teachers, or teachers who have themselves had only a limited or outdated education. Teacher quality is an issue in most universities in Nigeria. Many teachers are untrained or under qualified or teaching subjects in which they are not qualified or trained. Majority of teachers who join teaching profession have inadequate skills to engage in e-learning.

The World Wide Web and advances in Open Source Software have led to an eLearning Revolution, where teachers can

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access a plethora of learning materials, easily and conveniently. This has been propelled by the Hardware Industry where the processing power of computers is doubling every 18 months. All these advantages have not trickled to the majority of the population in developing countries. Many developing countries don't have high speed internet access, due to a myriad of factors including, use of expensive low bandwidth satellite technology, inadequately trained personnel and internet access is less than 10% in Africa alone.

Similarly, another challenge for implementing eLearning is training of academic staff in the use of ICTs to deliver online training. As academic staff are over burdened by large student numbers, the introduction of mobile technology is prone to face stiff resistance. Several academic staff members are not conversant with the use of computers, even for basic tasks like word processing. To expect staff members to deliver online training using mobile technology they are not familiar with is no mean feat.

This technology has to be rolled out through use of blended learning and an incentive structure is paramount. Teachers in remote areas need dedicated mobile technology centers that can convert learning materials into digital formats. Such a facility can provide training to academic teachers and students who don't have the skills in eLearning. Teachers need to be trained in Foundation ICT courses before starting their main course programmes. ICT foundation courses should be mandatory for teachers, who don't have the basic computing skills that include Word Processing, Email & Internet.

Research Questions

1. Can mobile technology be an effective mode for teacher training?
2. Is mobile technology a suitable mode to reach the rural teachers and disadvantaged groups?
3. What are the impediments factors in the use of mobile technology?

Hypothesis

1. There is no significant difference in the use of mobile technology between the rural teachers and disadvantaged groups.

Methodology

The study adopted a survey design. This design is appropriate because a survey reveals conditions and shows need for change (Nworgu 2006). The study was carried out in rural north in Kaduna. The population of the study consisted of 1,200 teachers on in- service training in the area of study National Teacher Institute (NTI) Kaduna. 1/3 of the population for the study constituted the sample of the study. 1,200 in-services training teachers became the sample. The Sample was obtained using purposive sampling technique.

The instrument for data collection was the questionnaire. A 21 items questionnaire arranged in a 4 point likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and strongly Disagree (SD). The instrument had two parts: part one was on bio data of the respondents, while the second part had items on developing

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learning and teaching: Training teachers in rural Nigeria using mobile technology.

The instrument was given to two experts in the department of measurement and evaluation for validation. Their comments, suggestion and corrections were incorporated before the instrument was administered. Cronbach Alpha was used to obtain internal consistency co-efficient of 0.82. One thousand two hundred copies of the questionnaire were administered by the researcher to the respondents. Permission of the coordinator was sought before the administration of the instrument. The distribution, completion and retrieval of the questionnaire were carried out on the same day. The research questions were answered using mean scores and the hypothesis was tested with t-test statistic at 0.5 level of significance. The Criterion for decision rule was 2.50, which implied scores of 2.50 and above are considered as agree and below as disagree.

Results

Table 1: Mean responses on mobile technology as an effective mode for teacher's training.

	Items	$\bar{X}$	SD
1.	Mobile technology support teacher education	3.79	0.25
2.	Mobile technology has a significant impact on the self-image, confidence and professionalism of teachers	3.50	0.60
3.	It is a potential to use buck SMS messages to support in-service training	3.69	0.39
4.	Mobile Technology enhances communication motivation and multimedia delivery	3.58	11.19
5.	It an effective mode for teachers training and improvement in class-room practice	3.69	0.36
6.	It is a support for traditional distance learning with print based self-learning materials and active learning technique.	3.50	0.58

Table 1 showed that in- service training teachers agreed with items 1-6 as an effective mode for teacher training using mobile technology. They had mean scores of 3.79, 3.50, 3.69, 3.58, 3.69 and 3.50 respectively.

Table 11

Mean responses on mobile technology as a suitable mode to reach rural teachers and disadvantaged groups.

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S/N	Items	$\bar{x}$	SD
7.	Mobile technology support teaching and learning in rural areas, because it allowed teachers to remains in the school and with families during the training period	3.62	1.096
8.	It allows participation in the training programmes without disruption to students, school and family life	3.75	0.35
9.	It allows the trainee to immediately apply the concepts in the class-room	3.55	0.61
10.	It requires responsibility between the trainer and trainee ie it cannot be a passive learning experience	3.42	0.58
11.	It saves time and money both for the trainee's and the training providers	3.69	0.37
12.	It enables female teachers to participate in training courses more readily because they are not required to leave their homes and families to face training courses.	3.46	0.54

Table 2 showed that in- service training teachers agreed with all the six items identified in the study as the benefits of using mobile technology as a suitable mode to reach rural teachers and disadvantaged groups. The items are: 7, 8, 9, 10, 11 and 12, with high mean scores of 3.62, 3.75, 3.55, 3.42, 3.69 and 3.46 respectively.

Table 111: Mean responses on the impediment's factors to effective use of mobile technology

S/N	Items	$\bar{X}$	SD
13.	No technical support staff and when phones are broken down, it take a longer period to repair them	3.91	0.11

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14.	Class-room teachers do not have opportunity for professional development and feel frustrated with the least challenge	3.69	0.32
15.	Poor electric supply	3.80	0.22
16.	Poor emphasis on the use of mobile technology for instruction	3.82	0.17
17.	Inadequate personnel	3.77	0.19
18.	Insufficient facilities	3.73	11.46
19.	Poor knowledge of mobile technology	3.62	0.37
20.	lack of training workshop	3.72	0.42
21.	Some teachers are not comfortable with the alphabet	3.60	0.49
22.	Problems with SMS due to the language barrier as messages could only be written in English.	2.22	0.76

Table 3 reveals that one factor: problem with SMS due to the language barrier as messages are written in English was not perceived as an impediment factor to the use of mobile technology with mean of 2.22; SD O.76. Each of the other nine items whose means ranged from 3.60 to 3.82 was agreed as an impediments factor to effective use of mobile technology.

Table 4

Hypothesis: There is no significant difference in the mean scores of rural teachers and disadvantage groups on the use of the mobile technology as a suitable mode for teacher training.

Respondent	N	$\bar{X}$	SD	DF	t-cal	t-crit	Prob.	Decision

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In service training teachers	I,200	3.42	0.58	20	0.53	1.96	p→05	Accepted

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Table 4 showed that the t- calculated valued of 0.55 is greater than the t-critical value of 1.96 at 20 degree of freedom at 05 level of significance. Therefore, the null hypothesis is accepted. This means that there is no significant difference between rural teachers and disadvantaged groups on the use of mobile technology as a suitable mode for teachers training.

Discussion

The findings of the study in table one showed that the in-service training teachers agreed that mobile technology support teachers education; mobile technology have a significance impact on the self –image; confidence and professionalism of teachers; mobile technology enhance communication; motivation and multimedia delivery; and it is an effective mode for teacher training and class-room improvement. The finding in table one agreed with Olakulehin (2007) statement that pedagogy through the application of information and communication technology (ICT) has the advantage of heightening the motivation; helping recall previous learning; providing new instructional stimuli; activating the learners responses; providing systematic and steady feedback; facilitating appropriate practice; sequencing learning appropriately and providing a viable source of information to enhanced learning. In order word, teachers who are trained with this system of instructional strategy would be able to kindle in the hearts of the learners a desirable attitude towards ICT tools in their entire way of life. The concept of training refers to the development of skills and a skill as we know is a well-coordinated psycho-motor activity.

Similarly, this finding was supported by the National Policy on ICT in Education (FME, 2010) which identified the critical role of ICT in the attainment of the millennium Development Goals (MDGS) and Education for All (EFA). The challenge of training new and existing teachers of EFA has calls for more school-based teacher education and professional development (Dladla and moon, 2002; Lewin and Stuart, 2003). For example Ghana started a distance programmed that aims to give 24,000 untrained teachers the opportunity of studying a diploma in basic education. The potential of ICTS to improve teaching and learning is explored through an analysis of the Enlaces project in Chile with the aim of improving quality and equity of education through integrating ICT as learning and teaching resources for all students and teachers in the eleven thousand Chilean public schools (Hinostroza, et al; 2003).

Table two showed that the in-service training teachers agreed that the six items identified in the study are benefits of mobile technology to rural teachers and disadvantage groups. Traxler (2005) stated that the benefits of using SMS on rural teachers and advantaged groups are due to poor roads and poor postal mobile phone networks; the potential for using solar power to charge mobile phones; high levels of mobile phone ownership and usage and among others. Again, Shibeshi, (2006) found that schools in remote areas are vulnerable to under-staffing at the same time that there is a surplus of unemployed teachers in large cities, and that disparities in deployment of female teachers tends to be greater as it is generally accepted that married women should not be separated from their husbands, and families are

reluctant to see young unmarried woman move to distant locations perceived as unsafe (Bennel, 2004). In consequence, the finding is that teachers are highly in favour of the mobile technology (SMS) through distance learning because it allowed them to remain in the schools and with families during the training period.

The findings of the study in tables three showed that the in-service training teachers agreed to the nine factors as the impediments to the effective use of mobile technology. Only item 21 received low responses by the in-service training teachers with a low mean score of 2.22 and SD at 0.76 respectively. However, for the agreed impediments factors to effective use of mobile technology, Ivowi (2011) stated that there is no sufficient infrastructure like electricity and man power in such rural places for their operations. Such rural places may not readily generate and maintain their own electrical energy for the operations because of the associated running costs.

Subsequently, there are a deluge of challenges confronting the application of ICTS in teacher training and in the educative process in general. These challenges include: lack of information and information illiteracy in teachers and teachers trainers; inadequate learning materials; attitudes of teachers-trainees; inadequate functional telephone lines and other infrastructural facilities needed to support the efficient and effective introduction and development of the technology.

Table four showed that t- calculated value of 0.55 was less than t- critical value of 1.96. The null hypothesis was accepted. This showed that there is no significant difference between rural teachers and disadvantaged groups on the use of mobile technology as a suitable mode for teachers training. This finding was in agreement with Sarah (2007) when she noted that trainers and trainees are very receptive to the idea of training at a distance with support of smart phones, and adopted easily to the constraints encountered such as the lack of adequate training to use technology; occasional technical failure of phones, rigid conference timing and insufficient number of phones. Based on the finding of this study, participants noted the benefits of using this new modality of training for professional development to including:

- Convenience- easy access to training from their work place.
- Not being separated from their families or having to take leave from school.
- Participants strongly prefer training that allows them to remain in their homes and class-room.
- Opportunities for ongoing communication with the trainer and fellow trainees at other schools.
- It is a modern and exciting approach as opposed to the traditional approach, so was more interesting to trainee teachers.
- Increased face-to-face interaction between teachers and school administrator at the school level, due to the school-based nature of the professional development training courses.
- Fostering of collegiality due to the need to work together and provide feedback to one another.
- Participating trainees have discovered a learning community within their own school and have realized that they can learn through group discussion and self-directed method.

Conclusion

Given the emphasis on technology integration in the education system, the use of mobile technology-based pedagogy is strategic for sustainable education development. The integration of mobile technology in instructional delivery is still an illusion in teacher trainee programmes. However, some mobile technology modes were identified as effective for teacher training. The paper also establishes mobile technology as a suitable mode to reach rural teachers and disadvantaged groups. Hence, there are some impediments factors to effective use of mobile technology.

Recommendations

On the basis of the findings, the following recommendations were made:

- To ensure that teachers have access to the phones at all times, including taking responsibility for them after school hours, if phones must be shared.
- Administrators should organize regular retraining workshop for teacher's trainers in the use of ICT in teaching and learning for quality assurance.
- Class-room teachers should be practically oriented with ICT devices such as mobile phones, computer, audio and visual aids which would enable the teacher trainers to participate actively in learning process.
- Experts in ICT technology should be employed to handle frequent breakdown of ICTs equipment.
- Government should procure more ICT facilities to aid teaching.
- Government should provide generator as an alternative source of electric supply.
- Government should improve the orientation programme by providing more effective training on the use of the phone features, and developing a trainers manual that specifically suggests how and when they might use the phones to prompt discussion, provoke reflection and assess progress etc. Experienced trainers could be called upon to develop this manual.
- Government to ensure that the trainers take the lead with features advanced use of the phone features, so that the trainees can concentrate on the course content and not the use of the technology.
- To ensure trainers can make use of SMS and MMS features of the phones to send content and instructions to the trainees even if trainees only respond through traditional person-to-person calls.

References

Bennell, P. (2004). Teacher Motivation and Incentives in Sub-Saharan Africa and Asia, (Brighton, Knowledge and Skills for Development

Dladla, H. and Moon, B. (2002). Challenging the Assumptions about Teacher Education and Training in Sub. Saharan African: A New Role for Open Learning and ICT, Pan-Common Wealth Forum on Open Learning (International Convention Centre, Durban, South African, Open University, pp. 19.

Federal Ministry of Education (FME) (2010). National Policy on Information and Communication Technologies (ICT) in Education, Abuja: FME, April.

Hinostrza, J. E; Hepp, p; Cox, C. and Guzman, A. (2003). Policies and

Practices on ICT in Education in Chile: Enlaces. In Angeline B. et al, (2007) Initiatives to Improve the Quality of Teaching and Learning. A review of recent literature. UNESO, pp. 18.

Ivowi, M.O. (2010). The Role of ICTs in Teacher Training Programmed being a paper presented at the 2nd Annual International Conference on Collaboration of Education Faculties in West Africa (CEFWA) on Teacher Education. Trends, Innovations and Integration, Held at Akoka, Lagos, pp. 1-7.

Lewin, K.M. and Stuart, J.S. (2003). Researching Teacher Education: New Perspectives on Practice, Performance and Policy, Multi-Site Teacher Education Research Project (MUSTER) Synthesis Report, (London, Department for International Development), pp. 19.

Mixolisi, M. (2011). Teachers Influence the Leader of Tomorrow www.goolge.com retrieved 1 December, 2011, pp. 1-2.

Nworgu, B.G. (2006). Educational Research: Basic Issues and Methodology (Revised and Enlarged Edition). Nsukka: University Trust publishers, pp. 66.

Olakulehin, F.K. (2007). Information and Communication Technology and Professional Development in Nigeria. www.goolge.com retrieved 15 November, 2009, pp. 135-137.

Sarah, L. P. (2007). Training Secondary Teachers in Rural Bangladesh Using Mobile Technology internet: retrieved 4 August 2010, pp. 86-94.

Traxler J. (2005). Using Mobile Phones: Training Teachers with Text Messages. Internet: accessed 4th October, 2011, pp. 1-3.

UNESO, (2010). World Data on Education, 6th Edition – Nigeria. Internet: accessed 19 July, 2011, pp. 1-13.

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