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## **E - Learning in Achieving Millennium Development Goals (MDGs) for Sustainability: Pre-Service Teachers Perception**

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### **Abstract**

*In spite of various advantages eLearning has over the conventional learning approach, the diffusion of eLearning is rather slow. One of the reasons for this is the lack of information and negative perception among pre - service teacher Teachers' education in Nigeria is booming since the last couple of decades. In spite of the large number of higher Institutions offering graduate and Post Graduate programmes, there still exists a demand - supply gap. The second area of concern is the quality of output. Application of Information and Communication Technology (ICT) or e learning is the only solution to address the twin concerns – Quantity and Quality. Research study was carried out with the following objectives in mind: To ascertain the perceptions of Pre – Service Teachers towards eLearning; To ascertain their perceptions towards prevailing learning environment and; To ascertain the Computer and Internet Skills level amongst pre –service teachers. It*

*was found out that a the knowledge of computer / internet by pre service teachers does not directly affect their attitude towards acceptance of computer as a tool of delivery but has a strong influence on their perceptions about the learning environment.*

Internet has made its entry in almost all the domains of human endeavor, be it Commerce, Literature, or Technology- all these areas have been dramatically transformed due to the impact of Information and Communication Technology (ICT) in general, and Internet in particular. Education is no exception to this phenomenon. Internet as the media has got the potential of making educational process truly “student centric”. This is the technology which has the capability of nullifying the constraints of conventional educational delivery and evaluation system. This is the tool for making education available any time, any place. Besides, the learner can learn and get evaluated at their pace. Things that were unthinkable before the advent of Internet are very much possible today in this Digital Age.

Though the number of pre – service teacher graduates and postgraduates produced every year is on the increase, there is a great deal of concern with regards to quality. On one extreme, there are premium brands, the finest quality of teachers with the best ratings, while the majority is at the other extreme –those that come in substandard category. One of the reasons for such a variation is lack of uniformity in quality of academic inputs at various higher institutions. Internet can be used to offer a high quality and uniform input for the pre - service teachers of different institutions so that the quality of the pre - service teachers passing out can be enhanced.

In spite of its obvious advantages over the conventional mode of education, the speed with which the new technology is getting adopted and assimilated is rather slow. Chete in Yerokun (2009) said e learning in teacher education is still in the nascent stage of development in Nigeria. One of the factors for the slow pace of its adoption is the attitude of the pre - service teachers towards internet as a tool of education. This research work aimed at ascertaining the perceptions and attitudes of the pre – service teachers towards the Internet as an educational delivery and evaluation tool

## **Background**

E- learning is a word coined from the use of electronic media, specifically the internet as a means of educational delivery. Okonta, Iyawa and Ugboh (2006) defined it as a teaching and learning situation in which the instructor and learners are geographically separated and therefore rely on electronic devices through internet technology for instructional delivery.

In year 2005, the federal government of Nigeria rolled up a set of long-term plans and objectives famously known as the Millennium Development Goals (MDGs). One of the goals is that by the year 2020, every Nigerian would be educated and the

government has invested so much in the pursuance of this goal. One of the major breakthroughs in technology is the Internet, in the recent years there has been a spurt in the research work in the area of Internet Based Education. Mitra and Steffensmeier (2000) concluded that networked learning institutions where pre - service teachers have access to Computers could foster positive attitude towards the use of Computer Aided Education.

Liu, Macmillan and Timmons (1998), perceived integrating of computers into learning system as a complex instructional system in which student learning is imparted by Pre - service teachers, Teachers, Administrative and Technical Staff, Computer Hardware/Software and Class setting.

Pre service teachers are defined by Green in Aurasian (2000) as college students finishing a teacher education programme. For the purpose of this study, college students still undergoing teacher education programme are inclusive in the researchers' definition of pre service teachers. The main focus here is the fact that this set of teachers is still regarded as trainees, because they have not fully entered the classroom as paid employees.

According to Marzano and Pickering (1997), pre - service teachers' attitudes and perceptions will have impact on the learning they achieve. A study by Daley, Watkins, Williams and Courtney (2001), supported that assertion and extended that to online environment. However there exists a research gap with regards to nature of pre - service teachers' attitude towards using Internet for Teachers Education, especially in Nigeria context. This paper attempts to fill that identified gap.

### **Problem Definition**

This study was carried out with the following in mind:

1. To ascertain the perceptions of pre – service teachers towards e learning;
2. To ascertain their perceptions towards prevailing learning environment and its relation with the attitude of the pre – service teachers towards online learning?
3. To determine the computer and internet skills level amongst pre –service teachers and its relation with the Attitude towards e learning.

### **Research Questions**

1. What is the attitude of pre – service teachers towards e learning?
2. What is the perception of the prevailing learning environment?
3. What is the level of computers and internet skills of the pre – service teachers concerned?

### **Methodology**

The study employed a survey research design. The population of the study consists of the entire pre - service teachers from Colleges of Education, Azare, Bauchi State and Federal College of Education (Technical), Asaba Delta State. The total population of pre service teachers in the two colleges of education is about 410. One

hundred and forty (140) were randomly selected- seventy (70) from each college – representing 33% of the total population, using Quota Sampling Technique.

The Instrument, a 20-item piece questionnaire was designed by the authors and validated by two computer science educators, senior colleagues of the authors, to validate the appropriateness of the items. The questionnaire was in four sections:

**Section I:** Seeking personal data such as gender, level, specialization, etc.

**Section II:** Seeking the competence level of the pre - service teachers with respect to ICT.

**Section III:** Seeking the availability of necessary infrastructure and environment for e learning with respect to Content Delivery and Evaluation Process.

**Section IV:** Ascertain the attitude of the pre – service teachers with regards to e learning.

The analysis was carried out using F- Test.

**Results:**

**I. Pre –Service Teachers' Attitude towards Online Learning**

There were seven statements measuring pre- service teachers' attitude towards the use of internet for learning. For each statement the responses were rated from 1 for Strongly Disagree to 5 for Strongly Agree.

Thus the scores of each pre – service teacher on seven statements range from 7 to 35.

| <b>Attitude</b> | <b>Frequency</b> | <b>Scores</b> |
|-----------------|------------------|---------------|
| Negative        | 00               | 6.5-17.5      |
| Neutral         | 22               | 17.5-26.5     |
| Positive        | 106              | 26.5-35.5     |

**Table No. 1- Frequency and Classification of the Attitude of Pre Service Teachers**

It is found that 82.28 %, which is more than majority of respondents have positive attitude towards eLearning (Use of Internet in Education). No response came in Negative attitude category while 17.75 % of the population have Neutral attitude towards e learning.

**2. Relationship between Pre - Service Teachers' Basic Knowledge of Computers/Internet and Attitude Towards Elearning/Using Internet for Education**

Seven statements measured pre - service teachers' basic knowledge of Computers and Internet. For each statement responses were coded 1 for Strongly Disagree to 5 for Strongly Agree.

**Table No.2- Frequencies and Classification Based on Computer/Internet Knowledge**

| <b>Computer/Internet Knowledge</b> | <b>Frequency</b> | <b>Scores</b> |
|------------------------------------|------------------|---------------|
| Poor                               | 02               | 6.5-17.5      |
| Average                            | 28               | 17.5-26.5     |
| Good                               | 98               | 26.5-35.5     |

More than seventy percent of the respondents have very good knowledge of computer and use internet facilities to enhance their learning. While a negligible portion of the sample population have poor knowledge of the computer and does not use internet at all, twenty eight respondents are actually making use of the internet at an average level but promising to improve progressively.

**3. Relationship Between Pre - Service Teachers' Perceptions of Prevailing Learning Environment at their Institute with their Attitude Towards Use of on Line Learning:**

Seven Statements measured pre - service teachers' perceptions of prevailing learning environment. For each statement responses were coded 1 For Strongly Disagree to 5 for Strongly Agree.

**Table No. 3- Frequencies and the Classification Based on Pre - Service Teachers' Perceptions of Learning Environment**

| <b>Perception of Learning Environment</b> | <b>Frequency</b> | <b>Scores</b> |
|---|------------------|---------------|
| Unfavorable                               | 72               | 6.5-17.5      |
| Neutral                                   | 50               | 17.5-26.5     |
| Favorable                                 | 06               | 26.5-35.5     |

Seventy two respondents out the one hundred and twenty eight (returned) strongly perceive that the learning environment is not very favorable, about fifty are indifferent while just six are of the bright opinion of a favorable environment.

### **Discussion of Findings**

From the results in table one, it is revealed that pre - service teachers of both Colleges of Education, are generally inclined positively towards internet as educational delivery tool. They are mostly positive about the use of internet as a tool for education delivery and the authors can justifiably assert that pre service teachers all embrace computer to enhance their knowledge in their various specializations.

From table 2, a correlation between Computer/Internet Knowledge and Attitude towards e learning was established. There is weak a relationship between the pre - service teachers' basic knowledge of Computers/Internet and Attitude towards the use of Internet for educational delivery. On comparing Pearson's `r' Value (0.21034) with `P' Value (<0.05) it is evident that there is a positive but weak relationship between them. Subsequently, this study has confirmed that the knowledge of computer does not have any direct effect on the attitude of pre service teachers about computer.

In the same vein, a correlation was established between perceptions of the pre - service teachers regarding prevailing learning environment and their attitude towards e learning. It is gathered that there is general perception of learning environment to be unfavorable with very small percentage of the sample population finding it to be favorable for e learning. A positive and strong relationship is therefore established between pre service teachers' perception about the learning environment and attitude towards computer and internet as a tool for delivery of education.

### **Summary and Conclusion**

In view of all the findings above, it will be safe to say that there is definitely a long way still to go in the achievement of the MDGs, especially with respect to education. Even though there is a positive attitude of the pre service teachers towards e learning, there is still a weak relationship between them. That means despite all the opportunities that internet has offered educators, they are still lagging behind. This is due to the general perception of the teachers about the internet as being unfavorable for learning. The educators are to take the full advantage of internet opportunities to equip themselves and measure up to their colleagues all over the world.

### **Recommendations**

It is recommended that:

1. Functioning computer infrastructures supporting all-round internet facilities should be made available in all offices and classrooms, to provide favorable environment for pre service teachers to embrace e learning.

2. Pre service teachers should seek to expend all provisions to achieve the highest possible standards in all their professional work, internet inclusive.
3. Pre service teachers should be trained periodically on how to maximize the potentials of the internet and periodically update them on most recent developments.
4. The federal government should widen the scope of sponsorships to include e learning and its accompanying examinations.
5. Study centers should be encouraged in all campus communities to make learning, studying and researching easy for teachers.
6. Computer appreciation should be made practical in class, not just introduction and the theoretical lessons currently prevalent in colleges.

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