

Pre-service Teachers' Attitude and Utilization of ICT Tools for Learning in Ahmadu Dayyama Rufa'I College of Education, Legal and General Studies Misau

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Abstract

The use of ICT tools in teachers training can equip pre-service teachers with the capability of integrating these technologies in learning, curriculum and instructional activities. The study examined the pre-service teachers' attitude and utilization of ICT tools for learning in Ahmadu Dayyama Rufa'I College of Education, Legal and General Studies Misau. The study also examined the level of utilization of ICT tools for learning among pre-service teachers, pre-service teachers' attitude to ICT tools for learning and influence of pre-service teachers' gender on attitude to ICT tools for learning. All NCE II pre-service teachers of 2023/2024 were the population of the study. One hundred (100) NCE II pre-service teachers were purposively sampled. Researcher-designed questionnaire was used for data collection. Descriptive and inferential statistics was used to analyse the data. The hypothesis was tested at 0.05 level of significance. The findings revealed that pre-service teachers were frequently utilizing ICT tools for learning, pre-service teachers had positive attitude to ICT tools for learning there was no significant difference between male and female pre-service teachers' attitude to the use of ICT tools for learning. Based on the findings of the study it was recommended that pre-service teachers should be trained on the use of various ICT tools and lecturers should incorporate ICT tools in teaching to make learning effective and to motivate the pre-service teachers among others.

Keywords; pre-service teachers, ICT tools, attitude, utilization

Introduction

Information and Communication Technology (ICT) has positive effect on the way lecturers carry out the functions of teaching, learning and research, more especially on the creation, dissemination and application of knowledge. Application of ICT in education is a ground for achieving the stated aims of education. ICT can be described as a technological tool and resources used to create, organize, disseminate, store, retrieve and manage information. Issa, et al. (2020) defined ICT as the means of attaining, processing and distributing of information by combining computers and telecommunication skills and procedure. The use of ICT tools has a profound impact on shaping the educational system globally and in producing dynamic changes in society.

ICT tools are information handling tools, applications and services that are used to produce, store, process, distribute and exchange information. Similarly, ICT tools are technologies used for collecting, storing, editing

and dissemination of information in various form (Issa, et al. 2017). These tools cover communication devices that include computers, televisions, radios, networks, satellites and internet among others. ICT tools constitute a valuable channel for knowledge dissemination, help both independent and collaborative learning and help learners to identify areas where they need assistance and support. In addition, the use of ICT tools create powerful learning environment and transformed the learning and teaching processes in which students deal with knowledge in an active, self-directed and constructive ways (Ameen, et al. 2019).

Teaching is one of the profession that is faced with challenges as a result of the dynamic nature of the society. Teachers are vital link in this profession and play important role in teaching and learning process. Because of that, intending teachers need drill through pre-service programme to develop their pedagogical skills, content knowledge and other practices related to the profession. Similarly, the training of teachers is intended to give sensitive, hardworking, extroverted and highly motivated teachers that can handle students efficiently and effectively with a professional approach to get the best educational attainment (Azhar, et al. 2022). Furthermore, attainment of enhanced learning is highly dependent on the abilities, attitudes and competencies of the teachers in performing their duties (Owolabi & Owolabi, 2015).

The teacher education institutions such as the colleges of education should play a leading role in this regard by equipping pre-service teachers with the necessary skills needed for utilization of different ICT tools in teaching and learning. Studies revealed that pre-service teachers used ICT tools very often (Singh & Subramaniam, 2014). Similarly, Huda, et al. (2018) revealed that pre-service teachers used smartphone, laptop and desktop regularly to assist their learning activities.

Pre-service teachers are teachers on training in an institution accredited by relevant authorities to train teachers. Pre-service teachers can also be referred to students who are taking training which they need to undergo before they begin teaching. The aim of teacher education programme is to provides teachers with knowledge, skills and aptitude to be familiar with the art and science of teaching that in turn give them confidence to carry out their task (Oparah, et al. 2017). Having ICT tools in schools will not guarantee their effective use, the key to the used of these tools the teachers right attitude.

Attitude consists of cognitive and behavioural reactions that individuals display towards an object or by the surrounding based on their experience. Attitude can also be referred to the psychological state of readiness, organized through experience, exerting a dynamic influence upon the individual's response to all objects and situations with which it is related (Issa, et al. 2020). Gyamfi, (2017) submitted that teachers gain much needed skills and develop attitudes toward ICT usage during their pre-service teacher training programmes. This

suggests that, pre-service teachers' institutions play a fundamental role in changing teachers' attitude because the successful utilization of ICT tools depends on teachers' attitudes towards these tools.

Yusuf and Balogun, (2011) submitted that lack of adequate training and experience is one of the main reasons why teachers do not use technology in their teaching and this also leads in teachers' negative attitude towards computer and technology. Other factors such as lack of skills, workload and lack of support from institutions impede teachers from using these technologies. However, for teachers to continue developing their knowledge and skills in using emerging technologies for teaching, teacher training institutions could perhaps design and develop more relevant professional development courses for teachers (Amosun, Falade, & Falade, 2015). Study revealed that pre-service teachers' attitudes towards the use of ICT was positive and there was no significant difference between attitude of male and female pre-service teachers toward the use of ICT (Alasela, et al. 2016). However, Adediran and Kehinde, (2013) reported that gender affects the use of Internet by pre-service teachers.

Since attitudes are closely related to usage, teachers' having positive attitude towards ICT tools seems important. In addition, when the attitude is viewed from the perspective of teacher education, understanding the dimensions affecting pre-service teachers' attitude towards ICT tools seem necessary in developing effective teacher training programs which aimed to prepare teachers who can overcome challenges posed by the information age. Therefore, investigating pre-service teachers' utilization and attitude towards ICT tools for learning emerges as a vital issue in helping us to predict their behaviours in the future concerning ICT tools. The main purpose of this study was to investigate pre-service teachers' attitude and utilization of ICT tools for learning in Ahmadu Dayyama Rufa'I College of Education, Legal and General Studies Misau, Bauchi state. Specifically, the study:

1. Examined the level of utilization of ICT tools for learning among pre-service teachers.
2. Investigated pre-service teachers' attitude to ICT tools for learning.
3. Investigated the influence of pre-service teachers' gender on attitude to ICT tools for learning.

The following research questions were raised to guide the study:

1. What is level of utilization of ICT tools for learning among pre-service teachers?
2. What is the attitude of pre-service teachers to ICT tools for learning?
3. What is the influence of pre-service teachers' gender on attitude to ICT tools for learning?

The following hypothesis was tested in the study:

H₀₁. Pre-service teachers' gender did not significantly influence their attitude to ICT tools for learning.

Methodology

Descriptive research design of survey type was used in the study. The population for the study comprised of 150 all NCE II pre-service teachers of 2023/2024 session. One hundred (100) pre-service teachers were purposively selected across the three schools in the institution. These schools are School of Primary, Early Childhood Care and Adult and Non-Formal Education, School of Arts and Social Sciences and School of Secondary Education (Languages). Researcher-designed questionnaire divided into three sections was used for the study. Section “A” contained the demographic information of the respondents; Section “B” contained information on the level of utilization of ICT tools for learning the keys to the response were: Frequently Utilized (FU), Seldom Utilized (SU), and Not Utilized (NU) while Section “C” accessed pre-service teachers’ attitude towards ICT tools for Learning the responses were: Strongly Agree - (SA), Agree - (A), Disagree - (D), and Strongly Disagree - (SD). The method that was adopted in the analysis and interpretation of the data obtained was both descriptive and inferential statistics. The hypothesis was tested at 0.05 level of significance.

Data Analysis and Results

The analysis and interpretation of data obtained during the course of this study.

Table 1: Demographic Information of Respondents

| GENDER | FREQUENCY | PERCENTAGES |
|--------|-----------|-------------|
| MALE | 52 | 52% |
| FEMALE | 48 | 48% |
| TOTAL | 100 | 100% |

The demographic information of the respondents given in Table 1 revealed that 52% were male while 48% were female.

Q1. What is level of utilization of ICT tools for learning among pre-service teachers?

Table 2. Analysis of result on the level of utilization of ICT tools for learning among pre-service teachers.

| SN | Question Items | FU % | SU % | NU % | Mean | Std. Deviation | N |
|----|----------------|------|------|------|------|----------------|---|
|----|----------------|------|------|------|------|----------------|---|

| | | | | | | | |
|-------------------|-----------------------|---------------|---------------|---------------|--------------|--------|-----|
| 1 | Desktop computer | 20 (20.0%) | 42 (42.0%) | 38 (38.0%) | 1.8200 | .74373 | 100 |
| 2 | Laptop computer | 58 (58.0%) | 16 (16.0%) | 26 (26.0%) | 2.3200 | .86316 | 100 |
| 3 | Printer | 51 (51.0%) | 28 (28.0%) | 21 (21.0%) | 2.3000 | .79772 | 100 |
| 4 | Projector/Photocopier | 37 (37.0%) | 37 (37.0%) | 26 (26.0%) | 2.1100 | .79003 | 100 |
| 5 | Scanners | 30 (30.0%) | 43 (43.0%) | 27 (27.0%) | 2.0300 | .75819 | 100 |
| 6 | E-mail | 34 (34.0%) | 24 (24.0%) | 42 (42.0%) | 1.9200 | .87247 | 100 |
| 7 | I-pad/tablet | 10 (10.0%) | 50 (50.0%) | 40 (40.0%) | 1.7000 | .64354 | 100 |
| 8 | Smartphone | 71 (71.0%) | 25 (25.0%) | 4 (4.0%) | 2.6700 | .55149 | 100 |
| 9 | Flash disc | 33 (33.0%) | 30 (30.0%) | 37 (37.0%) | 2.0300 | .79715 | 100 |
| 10 | Internet facilities | 83 (83.0%) | 15 (15.0%) | 2 (2.0%) | 2.8100 | .44256 | 100 |
| Grand Mean | | | | | 21.71 | | |

Table 2, revealed the level of utilization of ICT tools for learning among pre-service teachers. The revealed that, pre-service teachers were frequently utilizing ICT tools for learning because 2.171 aggregate mean was greater than 2.0 the decision mean.

Q2. What is the attitude of pre-service teachers' towards the use of ICT tools for learning?

Table 3. Analysis of result on the pre-service teachers' attitudes to the use of ICT tools for learning.

| S/N | Question Items | SA | A | D | SD | Mean | Std. Dev. | N |
|-----|--|-------------|-------------|-------------|-----------|--------|-----------|-----|
| 1 | ICT tools make learning effective | 64 (64%) | 15 (15%) | 16 (16%) | 5 (5%) | 3.3800 | .92965 | 100 |
| 2 | Utilization of ICT tools increase my interest in learning | 59 (59%) | 24 (24%) | 13 (13%) | 4 (4%) | 3.3800 | .86199 | 100 |
| 3 | I prefer using ICT tools for learning than the traditional approach | 80 (80%) | 20 (20%) | 0 | 0 | 3.8000 | .40202 | 100 |
| 4 | Use of ICT tools have positive impact on my academic achievement | 70 (70%) | 18 (18%) | 10 (10%) | 2 (2%) | 3.5600 | .75639 | 100 |
| 5 | ICT tools enables me to access online materials for assignment/project easily | 66 (66%) | 24 (24%) | 7 (7%) | 3 (3%) | 3.5300 | .75819 | 100 |
| 6 | Utilizing ICT tools make learning permanent | 71 (71%) | 25 (25%) | 4 (4%) | 0 | 3.6700 | .55149 | 100 |
| 7 | ICT tools allow me to share ideas with others within and outside the classroom | 65 (65%) | 27 (27%) | 6 (6%) | 2 (2%) | 3.5500 | .70173 | 100 |
| 8 | Use of ICT tools increase my participation in learning | 66 (66%) | 28 (28%) | 6 (6%) | 0 | 3.6000 | .60302 | 100 |
| 9 | Utilizing ICT tools afford self-paced learning | 67 (67%) | 22 (22%) | 11 (11%) | 0 | 3.5600 | .68638 | 100 |

| | | | | | | | | |
|-------------------|---|-------------|-------------|-----------|---|--------------|--------|-----|
| 10 | Use of ICT tools for learning increase my computer literacy | 69 (69%) | 24 (24%) | 7 (7%) | 0 | 3.6200 | .61595 | 100 |
| Grand Mean | | | | | | 35.23 | | |

Table 3 revealed the attitude of pre-service teachers' towards the use of ICT tools for learning. From the Table it can be deduced that, pre-service teachers had positive attitude towards the use utilization of ICT tools for learning because 3.2 the grand mean average was greater than 2.5 the decision mean.

Hypothesis Testing

Ho1. Pre-service teachers' gender did not significantly influence their attitude to ICT tools for learning.

Table 4 the analysis on the result of the differences between pre-service teachers' attitude towards the utilization of ICT tools for learning.

| Gender | N | Mean | SD | Df | t-cal | Sig. |
|--------|----|---------|---------|----|-------|------|
| Male | 52 | 21.9808 | 2.42123 | 98 | 1.183 | .240 |
| Female | 48 | 21.4167 | 2.34142 | | | |

From the table 4 above, the analysis established that the: $t = 1.183$ with p -value of $.240 > 0.05$ alpha level. It can be deduced that there was no significant difference between male and female pre-service teachers attitude towards utilization of ICT tools for learning. The hypothesis was accepted. This implies that there was no significant difference between male and female pre-service teachers' attitude towards the use of ICT tools for learning.

Discussions

The potentials of ICT tools as an educational tool in teacher education had been well established by several studies. This study investigated the pre-service teachers' utilization and attitude of towards of ICT tools for learning in Ahmadu Dayyama Rufa'i College of Education, Legal and General Studies Misau, Bauchi state, Nigeria. Results from this study revealed that pre-service teachers utilized ICT tools frequently for learning. The result agreed with the findings of Singh and Subramaniam, (2014) which reported that pre-service teachers used ICT tools very often and Huda, et al. (2018) which reported that pre-service teachers used smartphone, laptop and desktop regularly to assist their learning activities.

The study further revealed that pre-service teachers had positive attitude toward the use utilization of ICT tools learning. This finding is consistent with the findings of previous study that revealed that pre-service teachers' attitude towards the use of ICT was positive (Alasela, et al. 2016). The study also revealed no significant difference between pre-service teachers attitude attitude towards ICT tools based on gender. This finding also agreed with the finding of Alasela, et al. (2016) which reported that there was no significant difference between attitude of male and female pre-service teachers toward the use of ICT. However, the finding disagreed with the finding of Adediran and Kehinde, (2013) which reported that gender affects the use of Internet by pre-service teachers.

Conclusions

Information and Communication Technologies (ICTs) offered countless benefits in enhancing the quality and quantity of teaching and learning in tertiary institutions. Their utilization will not only transform teaching and learning in tertiary institutions, rather they will stimulate the development of students' utilization and attitude towards these technologies irrespective of their gender. In this study, it was discovered that pre-service teachers utilized ICT tools for learning frequently. This frequent utilization of ICT tools for learning is an indicator and first step for effective utilization of these tools in teaching and learning process. Having positive attitude by the pre-service teachers is important because attitude determine the future use and integration of ICT tools by pre-service teachers. In addition, pre-service teachers' gender had no influence on their attitude towards the utilization of ICT tools.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Pre-service teachers should be trained on the use of various ICT tools.
2. Lecturers should incorporate ICT tools in teaching to make learning effective and to motivate the pre-service teachers.
3. Institutions should provide ICT training environment and equipment for pre-service teachers.
4. Pre-service teachers should be encourage to use ICT tools in learning irrespective of their gender.

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