



Assessment of the Application of Microsoft Power Point Skills among Science Teachers of College of Education, in Bauchi State

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ABSTRACT

A survey research design was used to assess the application of Microsoft power point presentation skills of the science teachers of school of science, Aminu Saleh College of Education Azare, Bauchi State Nigeria. Four research questions guided the study. The population comprised of one hundred and one teachers of the school. Proportionate stratified random sampling was used in the selection of thirty four teachers for the study. Five point Likert scale type questionnaire was developed by the researchers, validated by experts and used for data collection. The instrument collected information on the teachers' sex, teaching experience, educational background, possession of microsoft power point skills and application of the skills in teaching and learning process. Mean, standard deviation, correlation and regression analysis were used to analyse the data. The findings revealed that Science teachers of Aminu Saleh College of Education Azare have Microsoft power point skills but do not use it every time they deliver their lectures. The study found that gender has no influence on the application of Microsoft power point skills while level of education was found to have influence it at $P = 0.05$ level of significance. It also revealed challenges faced by the science teachers as: lack of good projectors, adequate electricity supply and adequate training. It was recommended among others based on the findings that the government should embark on a massive ICT training program for teachers and provide ICT gadgets as well as supply constant electricity to schools.

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INTRODUCTION

Microsoft power point presentation skill is one of the Information and Communication Technology (ICT) Skills. Other ICT skills are Word processing (Microsoft word) skills, Spread sheet (Microsoft excel) skills, Internet Usage skills and projector/interactive projector multimedia board (IPMB) usage skill. What

then is ICT? According to Giles (2018) ICT means Information and Communication Technology and refers to the combination of manufacturing and services of industries that captures, transmit and display data and information electronically. Tay (2012) opined that it comprises the storage, retrieval, conversion and transmission of information. The author further said that



ICT is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. Information has to be generated and shared. He also asserts that, such information must be digital or electronic. Linways (2017) defined ICT as diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information. These technologies include computers, the Internet, broadcasting technologies (radio and television), and telephones.

ICT skills refer to one's ability to converse with people through various technologies. It is similar to information technology (IT). ICT refers to technology use for regular, everyday tasks: sending an email, making a video call, searching the internet, using a tablet or mobile phone, and more as reported by New Horizons Learning Center (NHLC, 2018).

According to NHLC (2018). ICT skills could also include the ability to use older communication technologies such as telephones, radios, and televisions. Typically, ICT experts are called upon to integrate old communication technology with the new technology. Almost every job requires some ICT skills, and many require hybrid skills a skill set that is a mix of technical and non-technical skills.

NHLC (2018) listed and explained five ICT skills in Nigeria as shown below:

Graphic Designing: A graphic designer is a visual communicator, someone who creates visual concepts by hand or by using computer software. They communicate ideas to inspire, inform, or captivate consumers. These skills are very important in an organization that deals with product marketing.

Digital Marketing: A digital marketer is a professional who markets products and services using new media or digital technology to achieve marketing goals.

Software development: A software developer is someone who develops softwares. The ability to write codes using various programming languages like C#, Java, Python and a whole lot to create and implement computer softwares. This is one of the leading ICT skills in 2018 because of its complexity, thereby creating a huge gap in the supply level of programmers. Once you acquire this skill, there is a guarantee, your chances of being picked up a top-level firm.

Web Design and Development: Thanks to the internet, the world as we know it, is becoming increasingly interconnected. Nowadays, companies use sites to project their brand to the global community. Knowing how to setup a website is a plus, as most companies prefer using their workforce for jobs like these. You could also improve your knowledge of Search Engine Optimization (SEO) because many companies spend a fortune optimizing their websites for search engines. Equipping yourself with skills in website building and SEO will improve your value in the eyes of potential employers. You could help them save funds that would have been spent elsewhere with your knowledge.

Networking: Networking standards are global. That means your skills and certifications are recognized anywhere in the world your career takes you. Cisco-certified professionals have worked their way up through global corporations in places all over the world. They live in every sized community, supporting small businesses, schools, and social services in every location where someone connects to the Internet.

Jimoh, Kazeem and Folorunso (2014) reported that ICT can be used to create various jobs such as Internet café,



Computer business centre, Computer training institute, Computer maintenance and repairs, Mobile phone maintenance and repairs, Recharge card business, Mobile phone vendors etc

ICT IN EDUCATION

Information and Communication Technology (ICT) in education is the mode of education that uses information and communications technology to support, enhance, and optimise the delivery of information. ICT have become one of the fundamental building blocks of modern society. You must have Basic ICT skills in order to teach or learn with ICT (Linways, 2017). ICT can lead to an improved student learning and better teaching methods. A report of investigation made by the authors proved that an increase in the use of ICT in education with integrating technology to the curriculum has a significant and positive impact on students' achievements. The results specifically showed that the students who are continuously exposed to technology through education has better knowledge, presentation skills, innovative capabilities, and are ready to take more efforts into learning as compared to their counterparts.

Ahmadi, Keshavarzi and Foroutan (2011) reported that rapid progress of information and communication technologies is considered as one of the key factors of change in humankind society. They maintained that the main impact of ICT in education can be seen in improving the capabilities of instructors, changing the educational structure, creating opportunities for greater and more comprehensive learning, enhancing educational quality and improving teaching skills.

Recently, the development of ICT gradually replaces the traditional teaching pedagogy. Face to face classroom interaction is getting replaced by on-line

communication, traditional white or blackboard is getting replaced by interactive whiteboard, and books or printed resources are getting replaced by on-line resources. It is believed that technology can bring our education sector from the Dark Age to the light age. This is because the implementation of ICT in schools can bring about some potential benefits (Suryani, 2010).

Palagolla and Wickramarachchi (2019) observed that ICT is widely used to enhance teaching and learning in modern education. In this digital age, young people need to be highly skilled in the use of ICT and there is a growing body of evidence that use of ICT in the classroom can enhance learning (Meiers, 2009). The effective integration of ICT in the school and classroom can both transform pedagogy and empower students. It is important that teachers are able to successfully weave technology into learning projects.

It is essential that the contemporary teacher has good ICT skills and is able to integrate ICT into the teaching and learning processes. Production of quality teachers can be achieved and improved with the help of ICT (Ovwigho and Elesho, 2014). The authors further stated that ICT has impacted on the quality of teaching, learning and research in traditional and distance education institutions. ICT can enhance teaching and learning through its dynamic, interactive and engaging content, and it can provide real opportunities for individualized instruction. Adebukola (2014) found out that teachers knowledge of ICT promote effective teaching and learning of Biology.

Problems of Implementing ICT in Education

According to Suryani (2010) implementing ICT in classroom is not an easy and simple matter. There are many issues which should be addressed. Those issues range from the school culture,



teachers barriers, finance, leadership, curriculum, and ethical issues. Those problems are experienced by both developed and developing countries.

Tsakatsa, Oyedele, Chikwature and Oyedele (2019) said that in many institutions desktop computers, laptops and data enabled cell phones are available but at times they are not being fully used for teaching and learning purposes. They noted that in schools there is a problem of conservatism. This is resulting in a situation whereby some people do not quickly embrace technology.

Okebukola (2014) showed that in both public and private Secondary Schools, less than 1% have Personal Computer (PC) to pupil ratio of 1: 30. Even when PCs are available, an insignificant few (less than 0.1%) use the equipment for teaching, learning and school management. Okebukola (2014) also reported that power supply is a major challenge to ICT use, and that an insignificant percentage of teachers in public primary and secondary schools have training in the use of ICT to deliver instruction.

The use of Microsoft Power Point (Presentation Skills) in Teaching

Power Point refers specifically to using a Microsoft office program which enables a person to create slide based presentations. Power Point can be used as a tool for teachers to create visually content rich presentations with multimedia. Teachers can use Power Point in many applications in their classroom. Teachers have a choice for how much or how little they would like to apply this technology to their classrooms (Real, 2014). The author showed how Power Point can be used by teachers and students as seen below:

Teachers can use Power Point to produce: Notes and Lessons, Images, Daily routines, Classroom or student showcase, Meeting agendas, Videos and multimedia

presentations, Graphs, charts and Audio. Power point presentation skill can therefore be used to deliver effective lessons in large classes. Power Point can be used in the classroom in many ways. Students can learn how to use Power Point and apply their knowledge in many ways. When students learn Power Point they also gain valuable technological skills. How students can use Power Point: Creative writing classes, Poetry, Visual interpretations, presenting information to the class, creating graphs, creating instructions, creating self quizzes, creating games, displaying student work, slideshows of class events and activities.

The National Commission for Colleges of Education admission guideline of 2012 stipulates sixty to forty (60:40) percent ratio of science to art students' admission. This means that more science teachers are needed. To meet this demand, science teachers will have to use various ICT skills in the training of the students in order to produce large and quality science teachers needed. It was against this background that this study was undertaken to assess the application of Microsoft power point skills by Science teachers of Aminu Saleh College of Education Azare (ASCOEA).

Objectives

- i. To identify acquired Microsoft power point skills (MSPPTs) of science teachers of Aminu Saleh College of Education, Azare (ASCOEA)
- ii. To assess the level of usage of Microsoft power point skills among science teachers of ASCOEA
- iii. To determine the influence of gender on the usage of MSPPTs among the science teachers of ASCOEA
- iv. To find out if level of educational attainment can influence the teachers usage of MSPPTs



Research Questions

- i. What is the level of Ms Power point skills acquired by science teachers of ASCOEA?
- ii. To what extent do science teachers of ASCOEA use Microsoft Power point during their lesson delivery?
- iii. Can gender influence the use of Ms Power point in teaching science?
- iv. What is the influence of educational attainment on the use of Microsoft Power point skills of science teachers?

Research Hypothesis

- i. Science teachers Lack skills on Microsoft Power point
- ii. Science teachers do not use Microsoft Power point skills during their lectures
- iii. Gender has no influence on the usage of MS Power point skills in teaching science
- iv. Educational attainment has no influence on the application of MS Power point skills

METHODOLOGY

School of Science (SOS) Aminu Saleh College of Education Azare was the place of study and the Lecturers of the school were the target population. The School has seven departments from which thirty four (34) Lecturers were selected out

of the total population of one hundred and one through proportionate stratified random sampling. This is in line with the report of Nworgu (1991) who suggested that one third of a population can be a fair representation of the total population.

Structured questionnaire duly validated by experts was used for the collection of relevant data. The questionnaire was divided into three sections A, B and C. Section A dealt with personal information of the respondents while sections B and C were five point Likert scale reflecting the ASCOEA Science teachers Microsoft power point presentation skills and their ability to use microsoft power point to deliver classroom lessons.

The respondents were asked to give their appropriate response/opinion using: SA = Strongly Agree, A = Agree, NEU = Neutral, D = Disagree, SD = Strongly Disagree. Values were attached to the responses as follows: SA = 5, A = 4, NEU = 3, D = 2 and SD = 1.

Data collected were analysed using mean, standard deviation, correlation and regression analysis. The software used for the statistical analysis was SPSS version 25. Table 1 below shows the composition of staff of School of Science.

Table 1: The composition of academic staff of School of Science, ASCOE Azare

Item	Department							TOTAL
	BIO	CHE	COM	ISC	MATH	PHE	PHY	
No. of Acad. Staff	12	17	12	08	16	21	15	108
Proportion	0.12	0.17	0.12	0.08	0.16	0.21	0.15	1.01
No. selected	4	6	4	3	5	7	5	34

SOURCE: Office of the Dean SOS, ASCOE Azare

Note: BIO = Biology, CHE = Chemistry, COM = Computer, ISC = Integrated Science, MAT = Mathematics = PHE = Physical and Health Education, PHY = Physics



RESULTS AND DISCUSSION

Table 2: Level of acquired Microsoft Power Point skills among Science teachers

S/NO	Item	Total Responses	Mean	Interpretation
1.	Ability to start the computer	160	4.7	Agreed
2.	Ability to open Microsoft power point (PPT) env.	141	4.1	Agreed
3.	Ability to create slides in Microsoft power point (PPt) for lecture	141	4.1	Agreed
4.	Ability to open existing slides	142	4.2	Agreed
5.	Ability to save created slides	148	4.4	Agreed
6.	Ability to format created slides	140	4.1	Agreed
7.	Ability to change theme colour for slides	148	4.4	Agreed
8.	Ability to copy text from Microsoft word and paste in Ms PPT	141	4.1	Agreed
9.	Ability to use drawing object function to create shapes/objects	123	3.6	Agreed
10.	Ability to use Ms power point to record narrations	130	3.8	Agreed
11.	Ability to apply different animations on slides	123	3.6	Agreed
12.	Ability to change slide style in Ms Power point	138	4.1	Agreed
13.	Ability to add slide to existing slides	136	4.0	Agreed
14.	Ability to use slide show to view prepared slides	139	4.1	Agreed
15.	Ability to close Microsoft power point window	157	4.6	Agreed
Aggregate mean score			4.1	

Table 3: Application of Microsoft Power Point (Presentation skills) by Science Teachers

S/NO	Item	Total Responses	Mean	Interpretation
1.	I create Ms PPT every time for my lectures	89	2.6	Dis agree
2.	I always download or copy available PPT from internet to teach	122	3.6	Agreed
3.	Power point is able to attract students' interest	133	3.9	Agreed
4.	I prefer using power point than conventional chalkboard	130	3.8	Agreed
5.	I am able to deliver material easily by using microsoft power point	154	4.4	Agreed
6.	PPT presentation is good multimedia to engage students learning	148	4.4	Agreed
7.	The facilities in my department/school support this method	119	3.5	Agreed
8.	I often face difficulty in creating interesting design of PPT	112	3.3	Agreed
9.	My department/school lack good projector	105	3.1	Agreed
10.	. Electricity supply is one of the problem I frequently encountered	138	4.1	Agreed
Aggregate mean score			3.7	Agreed



Table 4: Influence of Gender on the application of Microsoft Power Point Presentation skills

Gender	No. of responses	Mean	Std deviation	P value	Decision
Male	29	3.6552	0.58651	0.708	HO accepted
Female	5	3.7600	0.45601		
Total	34	3.6708	0.56436		

Table 5: Influence of Educational Level on the application of Microsoft Power Point Presentation skills

Edu. Level	No. of responses	Mean	Std deviation	P value	Decision
BSc/HND	16	3.4750	0.52217	0.013	HO rejected
MSc/M.Ed	16	3.7625	0.50318		
Ph.D	2	4.5000	0.70711		
Total	34	3.6708	0.56436		

Table 6: Summary of Regression Analysis

Source of Variation	Sum of squares	Df	Mean Square	P value	Decision
Regression	1.874	1	01.874	0.013	HO rejected
Error	8.837	32	0.270		
Total	10.511	33			

Tables 2, 3, 4 and 5 answered questions 1, 2, 3 and 4 respectively. The results in table 2 showed that science teachers of ACOEA have microsoft power point skills as they agreed to all the items on the possession of Microsoft power point presentation skills. Table 2 also shows the mean score of responses of Science teachers on the possession of MSPPt skills. The aggregate mean score of 4.1 was obtained which is greater than the acceptance mean of 3.00. This implies that science teachers have Ms PPT skills.

The teachers dis agree on item number one in table 3 that says: I create Microsoft power point every time for my lectures. They agreed to all other items in table 3 which pertains the application of Microsoft point presentation skills during their lesson delivery. Their dis agreement to item one means they do not always or constantly apply the skills during classroom lessons. Their response to item seven

indicates that they often face difficulty in creating interesting design of Power Point hence this could possibly be one of the reasons for not using the skills always. Lack of sufficient training on ICT and Conservative nature of the teachers are other reasons as pointed out by Tsakatsa, Oyedele, Chikwature and Oyedele (2019) who said that in many institutions desktop computers, laptops and data enabled cell phones are available but at times they are not being fully used for teaching and learning purposes. They noted that in schools there is a problem of conservatism. This is resulting in a situation whereby some people do not quickly embrace technology.

The teachers agreed that lack of Projectors and constant Electricity supply are they major problems they encountered. This portion of the findings is in line with the report of Okebukola (2014) who reported that power supply is a major challenge to ICT use, and that an



insignificant percentage of teachers in public primary and secondary schools have training in the use of ICT to deliver instruction. Table 3 above is a mean score of responses of Science teachers on the application of MsPPT skills. The aggregate mean score of 3.7 was obtained which is greater than the acceptance mean of 3.00. This implies that science teachers do apply Ms PPT skills in their lectures.

In table 4 the P value of 0.708 is greater than the significant level of 0.05 hence the null hypothesis that gender has no influence on the application of microsoft power point skills in teaching is accepted. The result in table 5 showed that education has influence on the application of Microsoft power point that is the null hypothesis that educational level has no influence on the application of Microsoft power point presentation is rejected since the P value of 0.013 is less than the significant level of 0.05.

The results of regression analysis recorded in table 6 revealed that the influence of education on the application of Microsoft power point skills is significant (P value of $0.013 < 0.05$ level of significance). The post hoc analysis using Least Significant Difference (LSD) indicated that the difference lies between BSC/HND and Ph.D with a P value of 0.013.

CONCLUSION

Based on the findings of this study, the following conclusions were drawn:

1. The teachers of School of Science ASCOEA have Microsoft power point skills.
2. The study found that science teachers of ASCOEA do apply MSPPT skills during their classroom lesson delivery even though not regularly. Lack of projectors and regular electricity supply are some of the challenges faced by science teachers in the application of Microsoft power point skills.

3. Gender has no influence on the use of Microsoft power point.
4. Educational attainment has significant influence on the application of MSPPT skills

RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

1. Science teachers should be adequately trained on the various ICT competencies especially on the use of Microsoft power point to enable them effectively handle the large science class size.
2. Science teachers should be motivated and/or compel by their employers to embrace the Technology called ICT.
3. Science teachers to willingly and regularly attend seminars, workshops and conferences especially those on ICT.
4. Since educational attainment has significant influence on the use of MSPPT skills, Science teachers should be provided with opportunity to further their education.
5. Electricity supply, functional projectors and other relevant teaching ICT gadgets should be provided by the Government, College, Departments, NGOs and individual donors

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