



LECTURERS' PERCEPTION OF THE SKILLS REQUIRED FOR MOVING FROM ON-GROUND TO ONLINE TEACHING AND LEARNING IN POLYTECHNICS IN NORTH-CENTRAL ZONE, NIGERIA

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Abstract

The study examined the lecturers' perception of the skills required for moving from on-ground to online teaching and learning in Polytechnics. Two research questions were raised for the study. Descriptive survey research design was used for the study. A sample of 329 respondents made up of lecturers was selected. Lecturers' Perception of the Skills Required for moving from On-ground to Online Teaching and Learning Questionnaire (LPSROOTLQ) questionnaire which was duly validated with a Cronbach alpha reliability coefficient of 0.77 was used to gather data for the study. A total of 329 copies of the questionnaire administered were retrieved and used for the study. The data collected to answer the research questions were analyzed using mean and standard deviation. Two hypotheses were formulated. The hypotheses were tested using independent t-test and ANOVA. The study found among others that technical, internet; keyboarding, software skills, and communication skills are all germane to successful online teaching and learning. Based on the findings, the following were recommended among others: that lecturers should be ready to play their own part through the acquisition of personal and technological skills required for moving from on-ground to online teaching/learning. The study also recommended that polytechnics management should train lecturers with appropriate skills needed to move from on-ground to online teaching and learning.

Keyword: Lecturers', Perception, skills, On-ground, Online, Teaching, Learning

Introduction

The world is moving at an unimaginable speed in the area of information use and dissemination. According to Olaniyi (2006), the use of Information technology, knowledge and information can be transferred and cross fertilized in real time. Hence, the need to pay attention to the way information technology has changed the way things are done especially in the educational sector. The internet has made the use of information sharing very easy in the educational setting. Online teaching and learning has been described as one of the educational challenges of the modern age. Current achievements in the field of computer and communication technologies have offered tremendous opportunities for learning by electronic means (Rozina, 2002). The use of new multimedia technologies and the Internet in teaching/learning is seen as a means to improve accessibility, efficiency and quality of teaching/learning by facilitating access to information resources and services as well as remote exchanges and collaboration. Online teaching and learning has become a new paradigm and philosophy in education with a mission to serve as a development platform for present-day society based on knowledge. It is evident that the concept of online teaching/learning is considered to be very attractive as a new learning model whose



effect will be a positive one to the development of education in developing countries especially Nigeria, with all its potentialities. One can say that the growth in human population and technology advancement has revolutionised the process of teaching and learning. Hence the 21st century is referred to as a global village where knowledge acquisition has gone beyond the confine of a classroom. Therefore, will have different word like e-learning, distance learning, online learning etc.

Online teaching and learning is a course delivery method that is provided in an asynchronous mode through internet technologies. Online is a type of student-centered learning approach to teaching that is becoming more and more encouraged and utilized in all levels of education. Online learning has become a popular method for students to access educational courses. This method of student-centered learning maximizes rather than minimizes an instructor's ability by allowing instructors to employ a variety of teaching methods versus one single method as in the case of on-ground (face to face). This approach to teaching and learning through the use of a variety of methods shifts the role of the instructor from giver of information to facilitator of learning. It gives students the opportunities to take control of their learning environment. Online learning refers to a method of learning that uses technological tools (Moule, Ward, & Lockyer, 2011) while connected to the Internet and includes the incorporation of devices (e.g., iPads, Clickers) and Internet websites (YouTube, Podcasts, Blackboard, WebEx) to enhance learning and to share information (Rollag & Billsberry, 2012). Technological tools, not limited to Web 2.0, social networking sites, cloud computing, wikis and those mentioned above, have presented new opportunities for higher education institutions (Schulte, 2010). Online learning has become a viable option for many students (Kerr, 2011). According to Allen and Seaman (2013) as at 2011, there were more than 6.7 million learners enrolled in at least one online class and enrollment in online classes continues to grow. Online learning is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online. The Internet is a powerful tool that instructors can access for teaching and learning, it actively engages students in their learning (Chametzky & Shaw, 2009; Snyder, 2009). Technological tools have also assisted students to transit from passive to active learners (Turcsanyi-Szabo, 2012). Despite the numerous benefits of online teaching/learning polytechnic institutions are now faced with the challenge of ensuring that face-to-face instructors are properly prepared to teach online (Shattuck, Dubins, & Zilberman, 2011). Online teaching is a situation when an instructor/teacher uses the online format as the primary method of instruction.

There are many terms used to describe learning that is delivered online, via the internet, ranging from Distance Education, to computerized electronic learning, online learning, internet learning and many others. Online learning are courses that are specifically delivered via the internet to somewhere other than the classroom where the professor/lecturer is teaching. It is interactive in nature in that students can also communicate with the teachers, professors or other students in the class. Sometimes it is delivered live, where students can "electronically" raise hand and interact in real time and sometimes it is a lecture that has been prerecorded. There is always a teacher



or professor interacting /communicating with the students and grading their participation, assignments and tests. It has been proven to be a successful method of teaching and learning; also in training and educating a large number of citizens across the globe.

The benefits of online learning are numerous to count. The students can cover the material when they have time, go over it as often as they need, all without traveling to the classroom. There are no parking problems or expenses, transportation fees, athletic fees, housing and food service fees, plus the students can take the class from any location with internet access. There have been many studies showing that online learning students retain the material to a significantly greater degree than face-to-face instructor led classes. The content delivery is consistent and can be easily repeated if needed to gain a better understanding. In most online courses, the students must keep up with the scheduled course work. Courses are instructor led and follow the same semester schedule as traditional courses. Picianno (2006) indicated that the instruction has expanded beyond traditional face-to-face classrooms utilizing technology-based delivery. Online instruction is emerging as a viable replacement to traditional classroom instruction for many colleges and universities. Timmons (2010) opined that the option of online/distance learning might be the key to an institution's survival. Timmons suggested that online education offers an institution the ability to reallocate services and recruit more students. Mercado (2008) *stated that teaching in an online course involves more than replicating classroom strategies in a different form. It requires a different approach—one that focuses less on the amount of time students spend together in a particular place, and more on facilitating a distance community and on activities designed for students working individually. In spite of the great advantages of online teaching/learning polytechnics still operate the on-ground teaching and learning method.*

On-ground teaching and learning is a (face-to-face) traditional classroom delivery model used in typical programmes in higher education. This is a synchronous method of instruction where students attend regularly scheduled classes in campus or satellite (off-campus) meeting rooms. On-ground courses are courses that are not taught online but rather in a face-to-face setting (Fabry, 2009). On-ground course also known as traditional, classroom-based, or face-to-face (F2F) courses, this course delivery format does not require an online component. The students and lecturers meets in a classroom, with content delivered orally and in writing. The interaction between the teacher and the student(s) and among student has been most of the time a physical mode of course delivery.

If polytechnics continue with the on-ground teaching/learning it means they will not be able to tap into the benefits of online teaching and learning in this 21st century. It is as a result of this background that this study was undertaken to determine lecturers perception of the skills required for moving from on-ground to online teaching and learning in polytechnics in North-Central Zone, Nigeria.



Statement of the Problem

Technology has redefined the process of teaching and learning in this 21st century. It will continue to evolve and have its ways in the educational system. Advances in technology and internet have brought a lot of opportunities that can be embraced by educational institutions. One of which is online teaching and learning that can be used to reach more students irrespective of their location on the globe. Online courses are those that are offered partially or entirely over the Internet through the World Wide Web. Online programs have the potential to increase the access to and availability of educational opportunities for students who require flexibility within their schedules. (Champion, Cole, Gillett, Kingsbury, & Munski, 2003).

However, there exists a growing audience of learners who are interested in furthering their education but who, for a variety of reasons, cannot enroll as full time students in a traditional educational setting (Leonard & Guha, 2001). These individuals are often non-traditional students who work full time, have family obligations, and/or live a considerable distance from college campuses. This implied that, the Polytechnics can seek to reach more students; many of which are unable to participate in regular on-ground classes due to family obligations or work schedules. Polytechnic institutions have funding problems especially at this recession time, and here exist an opportunity to make more fund by moving from on-ground to online teaching and learning which has the capacity of greater students' enrolment. More enrolment means more funds for polytechnics. This is an opportunity to generate more funds at a relatively cheaper cost but yet the polytechnics are not making the most of the opportunity. It is this reason that makes the researcher to be curious to find out the lecturers' perception of the skills required for moving from on-ground to online teaching and learning in polytechnics in North-Central Zone, Nigeria.

Purpose of the study

The general purpose of the study is to examine lecturers' perception of the skills required for moving from on-ground to online teaching and learning in polytechnics in North-Central Zone, Nigeria. The specific purposes of the study are to:

1. examine lecturers' perception of the personal skills required for moving from on-ground to online teaching and learning in polytechnics
2. ascertain lecturers' perception of the technological skills required for moving from on-ground to online teaching and learning in polytechnics.

Research Questions

The following two research questions guided this study:

1. What is lecturers' perception of the personal skills required for moving from on-ground to online teaching and learning in polytechnic?
2. What is lecturers' perception of the technological skills required for moving from on-ground to online teaching and learning in polytechnic?

Hypotheses

In line with the research questions the researcher tested the following null hypotheses at 0.05 level of significance.



- H1:** There is no significant difference in the mean perception of lecturers’ of the skills required for moving from on-ground to online teaching and learning in Polytechnic based on their years of teaching experience.
- H2:** There is no significant difference in the mean perception of male and female lecturers’ on the skills required for moving from on-ground to online teaching and learning in Polytechnics.

Method

Descriptive survey design was adopted for this study. The population of the study comprised two thousand two eighty five lecturers in both Federal and State polytechnics in North-Central Zone, Nigeria. According to research advisor 2007 the researcher selected 329 lecturers as sample for the study. The researcher used purposive sampling to select one polytechnic from a state where there are two schools. The instrument for data collection was a structured questionnaire tagged Lecturers’ Perception of the Skills required for moving from On-ground to Online Teaching and Learning Questionnaire (LPSROOTLQ). The instrument was face validated by three experts from Polytechnics. The Cronbach Alpha reliability test was used to determine the internal consistency of the instrument which yielded reliability co-efficient of 0.77. The researcher with the help of research assistants administered 329 copies of the questionnaire to the lecturers in the Polytechnics. The 329 copies of the questionnaire administered were all retrieved. Mean and standard deviation were used to analyze the data collected to answer research questions. Independent t-test and ANOVA were used to test the hypotheses. The mean rating of 2.50 was used for decision regarding the research questions. This was calculated based on the 4 point rating interval used in the study. Items with mean values of 2.50 and above were considered as agreed while items with mean values below 2.50 were considered as disagreed. For the Ho, if the observed p-value is less than the fixed p-value, the Ho was rejected, if otherwise, the Ho was not rejected.

Results

Research Question One

What is the lecturers’ perception of the personal skills required for moving from on-ground to online teaching and learning in Polytechnics?

Table 1: Mean Rating and Standard deviation of lecturers’ perception of the personal skills required for moving from on-ground to online teaching and learning in Polytechnics

S/No	Item Statement	\bar{X}_1	SD	Remark
1.	Expertise skills in the field of study is required for moving from on-ground to online teaching and learning environment	3.21	0.76	Agree
2.	Collaboration skills is needed for on-ground to online environment	2.97	1.21	Agree
3.	Leadership skills is important for online teaching/learning	3.00	1.02	Agree
4.	Reading, and writing skills are important for online teaching and learning	3.12	0.89	Agree



5.	Listening and speaking skills is needed for moving from on-ground to online environment	3.67	0.61	Agree
6	Learning-by-doing skills are required for on-ground to online teaching/learning.	3.45	0.79	Agree
7	Prioritizing skills is germane to online teaching and learning	3.71	0.57	Agree
8	Time management skills are vital for moving from on-ground to online environment.	3.09	0.82	Agree
9	Communication skills is key to moving from on-ground to online teaching and learning	3.51	0.66	Agree
10	Adaptability skill is required for on-ground to online teaching and learning	3.77	0.55	Agree
11	Problem solving skill is needed for moving from on-ground to online environment	3.89	0.45	Agree
12	Critical observation is important skill needed for moving from on-ground to online environment	3.01	1.01	Agree
13	Discipline skills to be successful and take responsibility for teaching is required for moving from on-ground to online teaching and learning	3.4	0.78	Agree
14	Positive Attitudes skills of respect to learners are necessary for online environment.	3.76	0.56	Agree
15	Mutual understanding skills between the students and lecturers are required for moving from on-ground to online environment.	3.42	0.8	Agree
16	Organization skills- is important for success in online environment	3.34	0.92	Agree
17	Subject matter skills is needed for effective online teaching pedagogy	3.38	0.97	Agree
18	Active participation skills in online discussions, respond to students, and return assignments quickly is required for moving from on-ground to online environment	3.28	0.89	Agree
19	Teamwork skills are required for moving from on-ground to online teaching and learning	3.61	0.62	Agree
Aggregate mean and standard deviation		3.40	0.79	Agree

Source: Field Survey, 2017

Table 1 reveals that the respondents were unanimous in their responses to all the constructs in the Table, as they all agreed to all the constructs. This agreement was very evident as all the mean scores are well above the fixed decision value of 2.50. The standard deviation ranged from 0.45 to 1.21 which indicated low variability in the respondents' responses. This was also signified by the aggregate mean and standard deviation of 3.40 and 0.79 respectively. The implication is that lecturers' perception of the personal skills required for moving from on-ground to online teaching and learning in Polytechnics did not differ. This is because they perceived the personal skills as prerequisite for moving from on-ground to online teaching and learning in Polytechnics.



Research Question Two

What is the lecturers’ perception of the technological skills required for moving from on-ground to online teaching and learning in Polytechnics?

Table 2: Mean Rating and Standard deviation of lecturers’ perception of the technological skills required for moving from on-ground to online teaching and learning in Polytechnics

S/No	Item Statement	\bar{X}_1	SD	Remark
1.	Technical skills are essential for effective moving from on-ground to online teaching and learning	3.01	1.01	Agree
2	Trouble shooting skill to rectify minor technical challenges are necessary for online environment	3.00	1.02	Agree
3.	Installation skill to install, connect, assemble devices and machines for online environment are needed for online teaching and learning	3.12	0.89	Agree
4.	Keyboarding skills are basic technological practical skills required for moving from on-ground to online teaching and learning	3.67	0.61	Agree
5.	Internet skills for research, use the school's interface, like web browser, send/receiving e-mails are necessary for online environment	3.45	0.79	Agree
6	Software skills to upload and download file are required for moving from on-ground to online environment	3.71	0.57	Agree
7	Social media skills to connect with students using different social media platform are important to move from on-ground to online teaching and learning.	3.09	0.82	Agree
8	Application packages skills are needed to prepare lectures using different application program for online environment	3.34	0.92	Agree
9	Storage media skills are necessary for moving from on-ground to online teaching and learning.	3.38	0.97	Agree
10	Telecommunication skills are needed for moving from on-ground to online environment	3.28	0.89	Agree
11	File and folder management skills is a key to move from on-ground to online teaching and learning	3.61	0.62	Agree
Aggregate mean and standard deviation		3.34	0.83	Agree

Source: Field Survey, 2017

From Table 2, it is revealed that all the respondents agreed in their responses to all the constructs in the Table. This agreement was very evident as all the mean scores are well above the fixed decision value of 2.50. The standard deviation ranged from 0.57 to 1.02 which indicated low variability in the respondents’ responses. This was also signified by the aggregate mean and standard deviation of 3.34 and 0.83 respectively. This implied that lecturers’ perception of the technological skills required for moving from on-ground to online teaching and learning in Polytechnics did not differ. This is because they perceived the technological skills as important requirement that must be possessed by lecturers for moving from on-ground to online teaching and learning in Polytechnics.



Hypothesis One

The null hypotheses were tested at 0.05 level of significant.

Ho₁: There is no significant difference in the mean perception of lecturers' of the skills required for moving from on-ground to online teaching and learning in Polytechnic based on their years of teaching experience.

Table 3: Summary of One-way Analysis of Variance of difference in the mean perception of lecturers' of the skills required for moving from on-ground to online teaching and learning in Polytechnics based on their years of teaching experience

Years of Experience	N	\bar{X}_i	SD	F-cal.	P-value	Decision
0-5	59	2.92	0.88			
6-10	44	3.02	0.76	1.75	0.176	NS
11-15	65	2.90	0.82			
16-20	72	2.89	0.80			
20 years and above	89	3.00	0.73			

Source: Field survey, 2017

The data presented in Table 3 reveal that 59 lecturers with years of experience from 0-5 years had mean score and standard deviation of 2.92 and 0.88 respectively. 44 lecturers with the years of experience ranging from 6-10 years had mean score of 3.02 and standard deviation of 0.76. The Table also revealed that 65 lecturers with 11-15 years of experience had mean score and standard deviation of 2.90 and 0.82 respectively. 72 lecturers with 16-20 years of experience had mean score of 2.89 and standard deviation of 0.80 while 89 lecturers with 20 and above years of experience had mean score of 3.00 and standard deviation of 0.73. The calculated value of F is 51.75 ($F_{4,324} = 51.75$). The observed p-value is 0.176 which is greater than the fixed p-value of 0.05 ($P > 0.05$). Since the observed p-value is greater than the fixed p-value, ($F_{4,324} = 1.75$, $P = 0.176$), the null hypothesis which states that there is no significant difference in the mean perception of lecturers' of the skills required for moving from on-ground to online teaching and learning in Polytechnic based on their years of teaching experience was therefore not rejected. This implied that there lecturers did not differ significantly in their perception of the skills required for moving from on-ground to online teaching and learning based on their years of teaching experience.

Hypotheses Two

Ho₂: There is no significant difference in the mean perception of male and female lecturers' on the skills required for moving from on-ground to online teaching and learning in Polytechnics.



Table 4: Summary of t-test of the difference between the mean perception of male and female lecturers of the skills required for moving from on-ground to online teaching and learning in Polytechnic

Gender	N	Mean	SD	t-cal	p-value	Decision
Male	184	3.10	0.76	1.33	0.132	NS
Female	145	3.04	0.89			

Source: Field survey, 2017

The data in Table 4 reveal that there are 184 male and 145 female lecturers as respondents for the study. Male lecturers had mean perception of 3.10 and standard deviation of 0.76 ($\bar{X} = 3.10$; $SD = 0.76$) while female lecturers had mean perception of 3.04 and standard deviation of 0.89 ($\bar{X} = 3.04$; $SD = 0.89$). The calculated value of t is 1.33 ($t_{327} = 1.33$). The observed p-value is 0.132 which is greater than the fixed p-value of 0.05 ($P > 0.05$). Since the observed p-value is greater than the p-value ($t_{327} = 1.33$; $p = 0.132$), the null hypothesis that stated that there is no significant difference in the mean perception of male and female lecturers' on the skills required for moving from on-ground to online teaching and learning in Polytechnics was therefore not rejected. This implied that male and female lecturers did not differ statistically significantly in their perception of the skills required for moving from on-ground to online teaching and learning.

Discussion of findings

The study found that there was no significant difference in the mean perception of lecturers' of the skills required for moving from on-ground to online teaching and learning in Polytechnics based on their years of teaching experience. The evident from the study showed that lecturers are not differ significantly in agreement that expertise, collaboration, leadership skills are important skills needed to move from on-ground to online teaching and learning. Also communication, time management, discipline, problem solving skills are equally necessary skills required for moving from on-ground to online teaching and learning. This finding agreed with Bair and Bair (2011) who stated that moving from on-ground to online teaching and learning requires adequate personal and technological skills for success in an online environment.

The study further found that technical, trouble shooting, keyboarding skills are all needed for moving from on-ground to online teaching and learning. This was agreed with Turcsanyi-Szabo (2012) who stated that technological skills will assist lecturers to transit from on-ground to online teaching and learning. It was also found from the study that internet, application packages, social media, file and folder management among others are important skills for moving from on-ground to online teaching and learning. This was also supported by Schulte (2010) who stated that technology, social networking sites, cloud computing and wikis presented new opportunities for higher education institutions.



Conclusion

Based on the findings of the study the researcher concluded that, moving from on-ground to online teaching and learning require adequate training that will assist lecturers to cope and tap to the opportunities of online teaching and learning. Moving from on-ground to online will present new opportunities for polytechnic education. Polytechnic needs to tap and embrace online teaching and learning. This will enhance and boost their financial position at this period of economic recession.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. lecturers should be ready to play their own part by acquisition of personal and technological skills required for moving from on-ground to online teaching and learning.
2. Management of Polytechnics should embrace and key into the training of lecturers to acquire skills to move from on-ground to online teaching and learning in order to tap into its numerous opportunities and benefits.

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