ONLINE INSTRUCTIONAL DELIVERY AND ACADEMIC STAFF PRODUCTIVITY IN PUBLIC UNIVERSITIES IN CROSS RIVER STATE, NIGERIA

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Abstract

This study sought to investigate the relationship between online instructional delivery and academic staff productivity in public Universities in Cross River State, Nigeria. To achieve this purpose, one composite research question was raised and later transformed to research hypothesis to guide the study. Ex-post factor design was adopted for the study. The population of the study was made up of all the academic staff that participates in online instructional delivery in the two Universities in the study area. Accidental sampling technique was adopted in the study. A Sample of 100 academic staff that delivered instructions using online method in the two public universities in the study area. The researcher self-developed questionnaire titled "Online Instructional Delivery and Academic Staff Productivity in Universities Questionnaire (OIDASPUQ) was used for data collection. The instrument was validated and subjected to reliability test using Cronbach Alpha reliability statistics. The result of the reliability test yielded an index of 0.72 which was adjudged well enough for data collection. Multiple regression statistics was used for data analysis at 0.05 level of significance. The results of the study revealed that online instructional delivery is anchored by some web-based applications: YouTube, Zoom, Google meet, Skype and Microsoft team which jointly predict academic staff productivity in public Universities in Cross River State, Nigeria. It was concluded that online instructional delivery predictive variables jointly predict academic staff productivity in universities. Base on the findings, it was recommended among others that, management of universities should improve on online instructional delivery architecture in collaboration with National University Commission via building of strong web-based applications and effective assessment to promote academic staff productivity in universities.
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Introduction

Online education has emerged as a popular alternative to face-to-face classroom instruction. It provides educational opportunities to individuals with geographic, time, or other constraints that make higher education difficult or impossible to pursue and another option to those who prefer online learning's flexibility and instructional delivery method. Many institutions also view online instruction as a viable method to provide quality instruction at a reduced cost (Garbett, 2011). Findings revealed that online instructions are more successful than traditional instructions, (Angiello, 2010) recently determined that 90% of 2-year and 89% of 4-year public institutions offered online education options.

Further, online course offerings are increasing at a faster rate than traditional course offerings, with online higher education courses nearly tripling between 2000 and 2010 (Beck, 2010), and almost 100% of public institutions report online instruction as a critical part of their long-term plans (Major, 2010).

Given this strong contemporary attention to online instruction, academic staff must become familiar with research-based methods for effective online teaching. Many academic staff however, have had little training in pedagogy for online instruction (Gabriel & Kaufield, 2018) and might be less likely to participate in online teaching due to a perceived unsettled nature of pedagogy for distance learning efforts. To help address this need for greater information, this review of literature summarizes effective practices in online pedagogy.

Instructional delivery is a set of activities carried out by the teacher in the classroom to promote effective learning outcomes of the learners. Okon (2016) averred that instructional delivery are the teaching activities designed to take place in the classroom including lesson preparation, lesson presentation, classroom management, development of ideas and promotion of students' learning. According to the author instructional delivery refers to the interaction among the students, the teacher, the content and the knowledge in a formal leaving atmosphere for student to collaborate with others in a diverse society and rapidly changing world. It is also a big idea that provides deeper meaning and gives students better understanding of the content. According to him, the process of instructional delivery involves applying a repertoire of instructional strategies to communicate and interact with students around academic contents, and to support students' engagement.

According to Greyson and Lewis (2015), a delivery method in which students gain knowledge and skills by investigation and responding to a real-world complex question, problem or challenge is called project-based learning. This implies to a dynamic classroom approach in which students actively explore real world problems and challenges and acquire a deeper learning. He also considered another method of instructional delivery where students' access concept and skills prior to class, often through video or online learning, then spend class time in a dynamic, interactive learning environment as they apply concepts. He summarizes methods of instructional delivery into project-base, blended, flipped and on line as the basic methods used for instructional delivery in schools.

Wegel, Kamanowski and Hartman (2018) studied academic staff compliance to online instructional delivery and staff productivity in Universities. The study was conducted in Switzerland. The survey among university employees were conducted online. The population consisted of 2977 employees. The link to online survey was sent to 1329 academic staff as the sample size, while 735 of them completed the questionnaire. The data obtained from the questionnaire administration were analyzed using facto analysis. The result showed that academic staff compliance to online instructional delivery had positive impact on academic staff productivity in University of Applied Science in Switzerland. The study concluded that the university set up policies and engage in the implementation of the policies in connection to compliance to online instructional delivery and academic staff productivity.

A related study was carried out by Silay (2014) on online instructional delivery and its relationship with academic staff professional development. The study was conducted in Faculty of Education, University of South Dakota. The participants were 33 academic staff in the faculty and the study also centered on the reviewed and analysis of already-conducted studies. The analysis of the review revealed that online instructional delivery has positive impact on academic staff professional development. The researcher concluded that online instructional delivery and academic staff professional development are highly interrelated variables that have very similar goals. This implies that online instructional delivery significantly predict academic staff professional development and as such needs to be carried out spontaneously in universities so as to install academic staff professional development optimally.

Digitization is the process of creating a digital image and then presenting it on a computer, local area network or the Internet. The process basically involves taking a physical object and captured documents using a scanner or digital camera and converted to digital format that can be stored

electronically and accessed via a computer. Digitization simply, is an electronic process of converging information from an analogue format to the digital format. Digitization has no doubt changed our education system, but we cannot say that it has diminished the value of our old time classroom learning. The best part about the digitization of education in the 21st century is that it is combined with the aspects of both; classroom learning and online learning methods. Walking hand in hand both act as a support system to each other, which gives a stronghold to our modern students. Digitization in education has also proved to be the right method for saving resources. Online examination platforms have restricted the frivolous usage of paper, directly confining the cutting down of cost in knowledge production (Baba, 2020).

The common saying has it that the development of any nation depends on its educational system (Shaheen, 2020). As higher education is obviously regarded as the peak of the educational system, and by virtue of its nomenclature. Boulton (2018), affirmed that the university remains and has provided an almost universal model for higher education. The university has created a unique recognition for itself, as it is considered a source of radical thought and social progress in societies where they have been introduced. As the principal location for national research base, they have led the way into developing the cross disciplinary concepts that are increasingly imperative, if we are to address myriads of complex challenges to national and global societies. Universities, through their role of creating, discovering and disseminating new knowledge through teaching and research, have become vehicle for economic and social development as well as equipping individuals with advanced knowledge and skills required for lifelong living.

In Nigeria, as it is stated above, the university system occupies the pinnacle of the higher education system. It is regarded as the basic think tank of the society (Ogbodu, 2017) maintained that universities, whether public or private undoubtedly have come to be regarded as the apex of the Nigerian educational system. According to the National Policy on Education (NPE, 2004), the goals of the university shall be to contribute to national development through high level relevant manpower training, developing the intellectual capacity of the individuals to understand their local and external environment, to acquire both physical and intellectual skills which will enable the individuals to be self-reliant and useful members of the society (Ekundayo, 2019).

Hence, one of the core missions of research institutions is to advance, create and disseminate knowledge through research and provide service to the community. Through research, Universities contribute to innovation for mobilisation of resources in the country. However in many African countries including Nigeria, research is faced with numerous challenges (Njuguna, 2020). These includes research capacity financial constraints, other resources (physical development of research institutions) research and policy, relevance publication of findings, social, political and cultural context in which research processes occur, as well as information technology.

Consequent upon the above, it is also very important for every academic staff to show appreciable levels of productivity, this is an indication of its trends, contribution to development and researchers' preferences for university outputs. Print and Hattie (2017) defined productivity as the totality of performance by academic staff in universities and related contents within a given time period. Williams (2018) noted that productivity could be defined as product and effort of which academic staff produces via teaching, research and community service. Productivity in this study therefore covered the aspect of instructional delivery, evaluation/supervision of students, academic staff research, and dissemination of research findings, administrative duties and community related services performed by academic staff in the university circle. Therefore, publications published by academic staff in the Universities including books, journal articles, chapters in books, conference papers and proceedings, technical reports, scientific peer- review bulletin, occasional papers, monographs, co-authored books, theses/dissertations are good examples of academic staff productivity in the face of other related community services.

Online instructional delivery has many benefits such as portability, ease of access, reduced need for physical infrastructure, lowered costs and greater flexibility (Ajai, 2020). Thus, online instructional

delivery cannot occur in a vacuum. Consequently, wen-based application are therefore utilized as mid-wives in the successful operation of the online instructional delivery. In this study, some web-based applications are selected which anchor the activities of online instructional delivery in universities. These include: YouTube, Zoom, Google meet, Skype and Microsoft teams.

The education industry generally and university system particularly was one of the worst hit by the Covid-19 Pandemic, with universities scrambling to find solutions to keep their doors open. In Nigeria, universities were shut down for more six months. In these times of need, online instructional tools emerged as a boom. Despite the current trends of online instructional delivery statuesque, a negative scenario appears with a total negativity in the current state of academic staff productivity in universities consequent upon some basic challenges facing the online instructional delivery in universities in Cross Rivers State, Nigeria today. These include ensuring access to technology and internet connectivity for all, maintaining student's engagement and motivation in virtual environments, addressing equity issues, such as the digital divide and providing effective training for academic staff to adapt to online instructional delivery methodologies which shows that academic productivity has not yielded it expected fruits. It is against this premise that the researchers intends to examine the level of online instructional delivery using various web-based applications to predict academic staff productivity in public universities in Cross Rivers State, Nigeria.

Statement of the problems

Academic staffs constitute the most productive workforce within the university system. Academic staffs are respected because they constitute the key profession among professions. They are the key actors in carrying out the objectives of the university. Academic staff are engage in core university activities such as teaching, research and community services. They translate the educational programmes of the university system into practical learning experiences through teaching, research and related community service.

However, there is a lot of worries expressed by the public over the commitment of the academic staff in universities via their productivity. Observations revealed that there is widely observed decline on the performance of the academic staff in the Nigerian university system. The commitment of the academic staff to his core duties has been widely questioned. Consequently, the quality of graduate has been widely challenged within and outside the country, hence, the level of academic staff productivity is presumed to be low.

It is obvious that academic staff productivity is germane to prestige and career progression of academic staff in public universities in Cross River State, Nigeria. In spite of the relevance of academic staff productivity, it is observed that the level of teaching and research productivity of academic staff in Nigeria is abysmally low in the face of negative attitude towards community related services. This undesirable situation has been observed with great concern by the researchers and this assertion of low productivity level, no doubt would have been affecting prestige and career advancement of academic staff negatively. Given this state of affairs, how does online instructional delivery predict academic staff productivity in public universities in Cross River State, Nigeria?

Methodology

The study adopted an ex-post facto research design with a total population of all academic staff that participates in online instructional delivery in the two universities in Cross River State namely: University of Calabar and University of Cross River State. The study used a sample 100 academic staff that participated in online instructional delivery in the two universities via accidental sampling technique. A structured questionnaire titled "Online Instructional Delivery and Academic Staff Productivity in Universities Questionnaire (OIDASPUQ) was used for data collection. The questionnaire was to elicit information on the online instructional delivery and academic staff productivity in universities accordingly. The instrument was subjected for face and content validity by experts in research, measurement and evaluation unit to establish its validity. To ascertain the reliability

of the instruments, the instrument was subjected to trial test were the Cronbach Alpha reliability test yielded 0.72. The questionnaire was administered personally by the researchers and retrieved back after completion. A coding key was designed to code all the responses in the instruments used in the study. Multiple regression analysis was used to test the composite hypothesis in the study at < 0.05 level of significance.

Purpose of the study

The main purpose of the study was to examine online instructional delivery and academic staff productivity in public Universities in Cross River States, Nigeria. Specifically, the study sought to find out whether web-based applications used during instructional delivery: YouTube, Zoom, Google meet, Skype, and Microsoft team jointly predict academic staff productivity in public Universities in Cross River State, Nigeria.

Research question

1. How does web-based applications used during instructional delivery: YouTube, Zoom, Google meet, Skype, and Microsoft team jointly predict academic staff productivity in public Universities in Cross River State, Nigeria?

Statement of hypothesis

3. Web-based applications utilized during instructional delivery: YouTube, Zoom, Google meet, Skype, and Microsoft team do not jointly predicts academic staff productivity in public Universities in Cross River State, Nigeria.

Results and analysis

Hypothesis 1: Web-based applications utilized during instructional delivery: YouTube, Zoom, Google meet, Skype, and Microsoft team do not jointly predicts academic staff productivity in public Universities in Cross River State, Nigeria. The predictor variables were: YouTube, Zoom, Google meet, Skype, and Microsoft team while the criterion variable was academic staff productivity in public universities in Cross River State, Nigeria. Multiple Regression analysis was used in testing the hypothesis and the results are presented in Table 1.

TABLE 1

Summary of Multiple Regression analysis for the contribution of the various dimensions of online instructional delivery to the variation in academic staff productivity in Universities in Cross River State, Nigeria.

R	R Square	Adjusted R Square	Std. Error of the Estimate
.854	.729	.728	3.822

Model	Sum of squares	Df	Mean square	F-ratio	Sig.
Regression	39686.256	6	6614.376	452.836	.000[b]
Residual	14723.405	1008	14.607		
Total	54409.661	1014			

Variables	B	Std. Error	Beta	T	Sig.	Rank
(Constant)	9.835	1.112		8.846	.000	
YouTube	.607	.038	.283	15.791	.000	3rd
Zoom	.144	.038	.078	3.749	.000	5th
Google meet	.623	.035	.362	17.890	.000	2nd
Skype	.261	.038	.123	6.854	.000	4th
Microsoft team	.978	.049	.450	20.054	.000	1st

Significant at 0.05 level.

a. Criterion: Academic staff productivity in public Universities in Cross River State

b.	Predictors:	(Constant), YouTube, Zoom, Google meet, Skype, and Microsoft team

Table 1 presents the summary the Multiple Regression Model and F-ratio test of the relationship between the dimensions of online instructional delivery via web-based application (YouTube, Zoom, Google meet, Skype, and Microsoft team) and their academic staff productivity in public Universities in Cross River State, Nigeria. Table 1 shows that the analysis of variance in the regression output produced an F-ratio of 452.836 ($p< .05$), which is statistically significant at .05 probability level. On the basis of this result, the null hypothesis was rejected and the alternate hypothesis upheld. This means that when the various dimensions of online instructional delivery are taken together, they significantly predict academic staff productivity in public Universities in Cross River State, Nigeria. The result also shows a Multiple Regression coefficient (R) of .854and a coefficient of determination (R^2) of .729. This implies that online instructional delivery has a significant positive relationship with academic staff productivity in public Universities in Cross River State, Nigeria and that 72.9 % of the variation in academic staff productivity in public Universities in Cross River State, Nigeria is accounted for, by the variation in the dimensions of online instructional delivery considered in this study. Thus 27.1 % of the variance in academic staff productivity in public Universities in Cross River State, Nigeria is attributed to the effect of other variables extraneous to this study.

To find the relative contribution of the various dimensions of web-based applications utilized during online instructional delivery (YouTube, Zoom, Google meet, Skype, and Microsoft team) to the variation in academic staff productivity in public Universities in Cross River State, Nigeria, a test of regression weight was carried out and the results shows that calculated t-values for YouTube (15.791, $p=.000$), Zoom (3.749, $p= .000$), Google meet (17.890, $p= .000$), Skype (6.854, $p= .024$) and Microsoft team (20.054, $p= .024$) were significant at .05 level of significance. Similarly, the results shows that Microsoft team ($t= 20.054$, $p < .05$) was the strongest predictor of the variance in academic staff productivity in public Universities in Cross River State, Nigeria, followed by Google meet ($t= 17.890$, $p < .05$), then YouTube ($t=3.676$, $p< .05$), then Skype ($t= 6.854$, $p < .05$), and then Zoom ($t=3.749$, $p= <.05$).

Discussion of findings

The result of the composite hypothesis revealed that all the predictor variables significantly jointly predicts academic staff productivity in public Universities in the study area with specific dimensions as indicted by the test of regression weight and variance in academic staff productivity in public universities in Cross River State, Nigeria. This is an indication that if academic staff in Universities utilizes the online instructional delivery resources adequately as intended it will yield optimal productivity for the upliftment of the academic standard in the University system generally.

The finding of the study is in consonance with the study of Wegel, Kamanowski and Hartman (2018) who studied academic staff compliance to online instructional delivery and staff productivity in Universities and found that academic staff compliance to online instructional delivery had positive impact on academic staff productivity in University of Applied Science in Switzerland. It is therefore concluded that the universities should setup relevant online instructional policies and engage in the implementation of such policies in connection to compliance to online instructional delivery in the 21st Century to promote optimally the hub of academic staff productivity in universities.

The study is also in agreement with the finding of Silay (2014) who studied online instructional delivery and its relationship with academic staff professional development and found that online instructional delivery has positive impact on academic staff professional development. This shows that online instructional delivery and academic staff professional development are highly interrelated variables that have very similar goals. This implies that online instructional delivery significantly predict academic staff professional development and as such needs to be carried out spontaneously in universities so as to install academic staff professional development optimally.

However, this result trends to give a clear situation in universities being that the goals of the university system which is to produce high level manpower for the economy revolves around the productivity of academic staff. The implication of this finding is that irregularities found in universities in Nigeria can be effecting controlling when adequate attention is given to academic staff and their productivity in the University system. University management and National Universities Commission (NUC) should find out why online instructional delivery is hardly anchored and suggest possible ways that can be used to modify or readdress activities around online instructional delivery to redirect the academic staff productivity in universities.

Conclusion

Based on the results of the study, it was concluded that online instructional delivery has a significant nexus with the academic staff productivity in public Universities in Cross River State, Nigeria generally. Therefore, all efforts should be geared toward effective implementation and assessment of online instructional delivery activities in Universities so as to improve academic staff productivity across board.

Recommendation

Management of universities should improve on online instructional delivery architecture in collaboration with National University Commission via building of strong web-based applications and effective assessment to promote academic staff productivity in universities.

References

Angelino, L. M., & Natvig, D. (2010). A conceptual model for engagement of the online learner. *Journal of Educators Online,* 6(1), 1-19.

Angiello, R. (2010). Study looks at online learning vs. traditional instruction. Education Digest, 76(2), 56-59.

Baba, R. I. (2020). Digitalization of higher education in Nigeria: Nexus for global competitiveness. *International Journal of Higher Education,* 4(2),   127-138.

Boulton, M. N. (2018). Management of Nigerian Universities community services. *European Journal of business and social sciences,* 4 (2), 14 – 20.

Ekundayo, (2019). Evaluation techniques and Nigerian University students experience. *Journal of research and measurement,* 8 (2): 113 – 119.

Federal Republic of Nigeria. (2004). *National Policy on Education.* (4th ed.). Lagos: NERDC Press.

Gabriel, M. A. & Kaufield, K. J. (2008). Reciprocal mentorship: An effective support for online instructors. Mentoring and Tutoring: Partnership in Learning, 16(3), 311-327.

Garbett, C. (2011). Activity-based costing models for alternative modes of delivering on-line courses. *European Journal of Open, Distance and E-Learning,* 1, 1-14.

Ajai, F. T (2020). *Effective online teaching strategies in higher education.* London: W. B. Saunders Company.

Major, C. H. (2010). Do virtual professors dream of electric students? University faculty experiences with online distance education. Teacher College Record, 112(8), 2154-2208.

Njuguna, A. D. (2020). Restructuring educational goals for national and economic growth in Nigeria. *IOSR Journal of Research and Methods in Education,* 5(4),8-14. https://doi.org/10.9790/7388-05420814

Nwangwu. N. A. (2015). *Issues in financing higher education in Nigeria.* Nigeria Academy of Education year book, (3rd ed.). Ibadan: XTM Technologies Press.

Ogbodu, N. K. (2017). "The contribution of university education to the global world". In UNESCO, Higher Education in the 21st century: vision and action. Paris: UNESCO

Okon, I. E. (2016).Clinical supervision and teachers' instructional role performance in public secondary schools in Calabar education Zone of Cross River State, Nigeria. Unpublished M.Ed Thesis carried out in University of Calabar, Calabar.

Schrum, L., Burbank, M. D., Engle, J., Chambers, J. A. & Glassett, K. F. (2005). Post-secondary educators' professional development: Investigation of an online approach to enhancing teaching and learning. Internet and Higher Education, 8, 279-289.

Shaheen, M. U. (2020). University Education in Nigeria: Implication for national development. *International Journal of Education Administration Planning and Research,* 7 (2), 86 – 99.

Silay, N. (2014). A study of moral education and its relationship with character education. *Mediterranean Journal of social sciences, 5*(2), 353-358.

Wegel, M., Kanenowski, M., & Hartman, A. B. (2018). Compliance and value reorientations at Universities. *Compliance Elliance Journal, 4* (2),62-71.

Williams, I. A. (2018). University as an ivory tower: A Case for Better Education in Nigeria. Retrieve from http://dailyindependentnig.com/2013/01/a-case-for-better-educational-funding-in-nigeria/