

Distance and Online learning in Nigerian Open and Distance Learning Institutions; Learners' Perspective

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Abstract

This study examined the view of Science Education learners at Distance Learning Institute (DLI), University of Lagos and the National Open University of Nigeria (NOUN) about Distance and online learning. A descriptive survey research design was adopted. A researcher-designed questionnaire with reliability co-efficient of 0.78 was employed. Mean score and standard deviation (SD) answered the research questions elicited from two hundred and ten (210) respondents while t-test analyzed the hypotheses. The result of the hypotheses, revealed no significant difference in the perception by learners based on gender. The findings revealed that, study materials were not all available at the beginning of the academic year. Learners prefer their lecture modules in audio and video formats, teleconferencing and live streaming than in-prints. The LMS does not accommodate virtual laboratory for practical, which is essential for Science Education students. The institutions' managements are encouraged to proffer solutions to these identified challenges for learners' motivation.

Keywords: distance learning, on-line learning, e-learning, computer-based test, study materials

Introduction

Due to the fact that the conventional Universities have inadequate spaces for enrolment, the quest for university education had therefore led to the increased demand for Open and Distance Learning (ODL) options in Nigeria. The National Open University Nigeria (NOUN) came to existence with the purpose of giving Nigerians access to higher education. The university has nine faculties with over 120,000 learners. The Distance learning Institute, however, is an organ of the University of Lagos for coordinating Open and Distance Learning programmes with close to 20,000 learners. The institute has the status of a faculty in the university with its own academic and management boards.

ODL institutions however require learners to study and interact with their E-tutors and their learning materials (In printed and E-formats) on-line. ODL institutions currently use Learning Management System (LMS) for online delivery of learning materials and contents to their learners. As a result, ODL learners are required to be available for online tutoring despite working conditions and other limiting factors, possess the necessary skills and be ready to cope with the challenges of learning on-line.

Distance Learning refers to learning that involves no constraints of time and place along with flexible learning opportunities. Various researchers have observed no significant difference in the outcomes between distance learning methods and the traditional face-to-face learning methods (Ushe, 2017 and Ezema, 2015). It is led by somebody at a distance in time and space from the learner with the purpose of delivering the curriculum

with all flexible teaching and learning approaches (Ushe, 2017). This learning approach is delivered through e-learning via various learning management systems such as Canvas, Moodle, Google classrooms etc.

The term e-learning denotes web-based products and services that are designed to support individual and organizational learning (Gaskell and Mills, 2015). Liu and Wang (2009) are of the opinion that the internet has progressed and transformed distance learning into e-learning. Sam (2011), reported that students are able to communicate with their tutors wherever they are, even housewives are able to receive lectures in their kitchen without face-to face interactions with their tutors. Through e-learning system, students can interact from any place with different instructional materials like text, sound, pictures and video through the internet (Al-Ammari & Hamad, 2008). As reported by Ngampornchai & Adams (2016) e-learning is a solution to the increasing demand for higher education especially in many developing countries.

With the fast pace at which digital technology is moving, e-learning is fast becoming a viable means to acquire education and learning from any part of the world using web-based technology. E-learning has been characterized as a system of improving learning encounters and a means to replace traditional face-to-face via distance learning (Goyen & Sumit, 2004). A significant difference in academic performance was observed between learners who had internet access and those without it (Osunade, Ojo & Ahisu, 2009). As a result, internet access is very essential for learners' academic performance through e-learning. Also, Barlow-Jones and van der Westhuizen (2013) observed a significant difference in the academic performance, between those that had internet access, as well as being computer literate and those without internet access and not computer literate. As a result, high level of competence in ICT is very important for an e-learner as Information and communication technologies are an intrinsic part of Open and Distance Education (Bozkurt, 2019). Distance Education serves as an easy access to education by those who are not privileged to be admitted into the traditional, face-to-face mode of learning. The Distance Learning Institute (DLI) as well as the National Open University of Nigeria (NOUN) both operate ICT enabled blended form of Distance Education. These institutions have since employed both print forms and online resources to facilitate their teaching and learning. According to Adeleke & Adesina (2018), Akanle, & Ofie (2018), there is little or no difference in the quality of education received between distance learning and the traditional classroom setting. The major difference is their mode of instructional delivery.

Irrespective of the great benefits of ODL (Ofole, 2018), distance learners are still faced with some challenges. One of the problems distance learners face is the fact that learners in ODL institutions have been dropping out of school due to disconnection, lack of computers and other related e-learning materials.

In view of e-learning advantages and its required materials, this study aimed at evaluating e-learners experiences with Distance Learning Institute (DLI) in particular University of Lagos and the National Open University Nigeria (NOUN). The findings from this study will be useful by the management of these ODL institutions to improve on helping learners overcome the identified challenges and also consider improvement on

distance/online learning services. Distance and Online learning or e-learning approach is faced with the diverse problems of lack of adequate computers, internet facilities, expensive data (access to internet) in remote places, virtual classroom e.t.c. It was against this background that the present study was conducted to determine learners' perception of Distance and Online learning in the Distance Learning Institute, University of Lagos and the National Open University of Nigeria (NOUN).

Theoretical Framework

This study embraced the Holmberg's theory of communication and interaction designed by Holmberg (1983). This theory has been chosen due to its features of effective distance education directed towards conversation with the aim of learning; with the possession of certain traits for such a conversation to aid and promote learning. The distance mode of learning and the connected form of communication characteristic of distance learning have been identified as the mechanisms of instructiveness between the learner and the tutor of the institution delivering the instruction. According to Holmberg (1983), there should be consistent interaction between the resources/course materials the learners have gone through in different media (print/softcopies) and the facilitators/-tutors.

As a result, Holmberg's theory has established seven background assumptions for distance education as follows:

- The interaction between the learner and facilitator is the main teaching
- The learning pleasure is stimulated by emotional involvement in the subject matter cum personal relationship between the facilitator and the learner.
- Students are motivated due to pleasure derived in learning
- Students are motivated in their study if allowed in decision making towards their study.
- When students are motivated, learning is enhanced
- A welcoming tone with seamless access to the subject matter aid learning
- When students have gained from what has been taught, then teaching has been effective.

The pointers expressed in this theory, have been helpful with formulating the research questions and made it more useful in exploring students' view of distance/online learning at Open and Distance Learning institutions.

Methodology

Sample and Procedure

This study evaluated learners' perception of studying under distance learning system through e-learning or online learning in the two ODL institutions in Nigeria; DLI and NOUN. The population of the study was the undergraduate Distance learners from the Science Education departments in the DLI, University of Lagos and NOUN. A descriptive survey research design was adopted. A purposive sampling technique was adopted in

selecting two hundred and ten learners of DLI and NOUN from years two to four, which are Science Education learners who could be reached within the time and space of the research work.

These informants were selected based they had not spent more than three years in the Open education programme and so they would easily adjust into the System. A quantitative data was gathered and analyzed. The instrument used for data collection was researchers' designed 4-point Likert scale structured questionnaire titled Learners' Perception of Open Distance Education Questionnaire (LPODEQ). The options were Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) with corresponding weights of 4,3,2,1 respectively.

The instrument was validated by experts in the Science Education Department of the Distance Learning Institute, University of Lagos. The reliability co-efficient of 0.78 on alpha level 0.05, was obtained for the questionnaire and this was high enough to justify its use for data collection for this study.

The Data collected was analyzed using both descriptive and inferential statistics. The mean score answered the research questions stated with the criterion mean taken as 2.50. As a result, any mean score below 2.50 was taken as disagree; while the mean score of 2.50 and above was taken as agree.

Results

The employment status of learners in both institutions were investigated to find out the percentage of the students participating in this research that are workers and students at the same time compared to those not working. The employment status of sampled students is reported below in Table 1. It is evident that 85% of the distance learners are working.

Table 1

Employment Status of Sampled DLI and NOUN Learners

Gender	Working	Non-Working	Total
Male	88 (42%)	8 (4%)	96 (46%)
Female	91(43%)	23 (11%)	114 (54%)
Total	179 (85%)	31(15%)	210

The results of students' responses based on the questionnaire were then analyzed.

Research Question 1

What are learners' perceptions of the use of E-learning resources available in DLI and NOUN?

Descriptive statistics of learners' perception of the use of E-learning resources available in DLI and NOUN

Table 2

S/N	ITEM	RESPONSES					X (Mean)	Remarks
		Strongly Agree	Agree	Disagree	Strongly Disagree			
1	Early orientation for new learners to help them flawlessly integrate into the ODL system is usually done.	84 (40.0%)	74 (35.24%)	23 (10.95%)	29 (13.81%)	2.97	Agree	
2	Learners (in DLI and NOUN) are given adequate information on availability of e-learning resources	16 (7.62%)	50 (23.8%)	79 (37.62%)	65 (30.95%)	2.24	Disagree	
3	Learners are aware of e-library and uses it effectively	13 (6.19%)	52 (24.76%)	91 (43.33%)	54 (25.71%)	2.30	Disagree	
4	Learners have access to their lectures via web conferencing, teleconferencing and live streaming	9 (4.29%)	21 (10.0%)	87 (41.43%)	93 (44.29%)	1.80	Disagree	
5	There are trainings in place for the learners on the accessibility and use of L.M.S and e-resources	10 (4.76%)	8 (3.81%)	111 (52.86%)	81 (38.57%)	1.74	Disagree	
6	There are adequate and good quality resources in the physical e-library.	60 (28.57%)	48 (22.86%)	70 (33.33%)	32 (15.24%)	2.59	Agree	

Note: X= mean value for learners' responses

Table 2 shows learners' view on the use of E-learning resources available in DLI and NOUN. The results in table 2 show that two of the statements scored 'agreed' because their mean scores were more than 2.50 while the remaining statements appeared scored 'disagreed'. These indicate that there are good quality and adequate resources in the physical e-library. However, learners have no access to their lectures via web conferencing, teleconferencing and live streaming and there are no trainings in place for the learners on the

accessibility and use of LMS and e-resources. Learners are not given adequate information on availability of e-learning resources and are not aware of e-library to be able to use it effectively.

Research Question 2

What are learners' experiences of combining work conditions with study and being able to afford tuition fees/prices of course materials?

Table 3

Descriptive statistics of the learners' perceptions of Working Conditions and affordability of Tuition fees/Prices of Course materials

S/N	ITEM	RESPONSES				Mean	REMARKS
		Strongly Agree	Agree	Disagree	Strongly Disagree		
1	Non-cooperating employers make studying and writing exams difficult	90 (42.86%)	65 (30.95%)	30 (14.29%)	25 (11.9%)	2.92	Agree
2	Poor working conditions affect learners' academic performance	70 (33.33%)	111 (52.86%)	12 (5.71%)	17 (8.1%)	3.39	Agree
3	I find it very difficult to cope with work and my academics	85 (40.48%)	45 (21.43%)	60 (28.57%)	20 (9.52%)	2.73	Agree
4	High cost of school fees affect payment for my study every year	68 (32.38%)	110 (52.38%)	21 (10.0%)	11 (5.24%)	3.32	Agree
5	The course materials are not expensive to afford	39 (18.57%)	40 (19.05%)	91 (43.33%)	40 (19.05%)	2.38	Disagree
6	Financial support services are in place for the distance learners in DLI	15 (7.14%)	21 (10.0%)	110 (52.38%)	64 (30.48%)	1.97	Disagree

Note: X= mean value for learners' responses

Table 3 above shows learners' perception of working conditions and affordability of tuition fees/prices of course materials. It is evident that only two of the statements were disagreed with because the mean score was less than 2.50 while the remaining statements were agreed with. These indicate that non-cooperating employers

make studying and writing exams difficult for the learners. Poor working environment and conditions affect learners' academic performance and they find it very difficult to cope with work and academics. Learners are of the opinion that their school fees are high. Their course materials are quite expensive to afford as expressed by the learners. They also affirm that financial support services are not in place for the distance learners in DLI and NOUN.

Research Question 3

What are the students' perceptions of quality and adequacy of the learning resources?

Table 4

Descriptive statistics of the quality and adequacy of the content of the course materials

S/N	ITEM	RESPONSES				Mean	REMARKS
		Strongly Agree	Agree	Disagree	Strongly Disagree		
1	Course materials are usually available and accessible at the beginning of the academic session	20 (9.52%)	10 (4.76%)	149 (70.95%)	31 (14.76%)	2.04	Disagree
2	The course materials are adequate for study	20 (9.52%)	11 (5.24%)	129 (61.43%)	50 (23.81%)	1.96	Disagree
3	The course materials are of low quality in content and production and this discourages my studying them	20 (9.52%)	15 (7.14%)	90 (42.86%)	85 (40.48%)	1.83	Disagree
4	There is usually power outages and poor access to online resources	21 (10.0%)	19 (9.05%)	110 (52.38%)	60 (28.57%)	2.00	Disagree
5	Lecture modules are available and accessible on the learning management system (LMS)	25 (11.90%)	80 (38.10%)	65 (30.95%)	40 (19.05%)	2.69	Agree
6	Lectures are preferred in Audio and Video formats than in prints	34 (16.19%)	70 (33.33%)	60 (28.57%)	46 (21.90%)	2.61	Agree

Table 4 shows learners' perception of the quality and adequacy of the content of the course materials. The result here shows four of the statements were disagreed with because their mean scores were less than 2.50 while the remaining statements were agreed with. These indicate that course materials are usually unavailable and accessible at the beginning of the academic session. The course materials are not adequate for

study though of good quality in content and production. The research also revealed that lecture modules are available and accessible on the learning management system (LMS) but lectures are preferred in Audio and Video formats than in prints by the learners. Also, there is usually power outages and poor access to online resources.

Research Question 4

How effective are the LMS and E-Tutor/Learners Interaction?

Table 5

Descriptive statistics of the effectiveness of the LMS and E-Tutor/Learners Interaction

S/N	ITEM	RESPONSES				Mean	REMARKS
		Strongly Agree	Agree	Disagree	Strongly Disagree		
1	Very low bandwidth for Internet services in the institutions make viewing deployed interactive videos difficult (via URL)	20 (9.52%)	40 (19.05%)	70 (33.33%)	80 (38.10%)	2.10	Disagree
2	The LMS is not robust for adequate accessibility of deployed resources; especially course materials	90 (42.86%)	80 (38.10%)	50 (28.57%)	90 (42.86%)	3.71	Agree
3	The LMS accommodates virtual laboratory for science practical	29 (13.81%)	11 (5.24%)	60 (28.57%)	110 (52.38%)	1.72	Disagree
4	Facilitators to Learners ratio being 1:50, makes learning difficult	19 (9.05%)	31 (14.76%)	66 (31.43%)	94 (44.76%)	1.94	Disagree
5	Adequate continuous Assessment is done Via LMS.	94 (44.76%)	85 (40.45%)	20 (9.52%)	11 (5.24%)	3.20	Agree
6	Teleconferencing, Video conferencing and Virtual classroom practice is available for effective learning	18 (8.57%)	21 (10.0%)	130 (61.91%)	41 (19.52%)	1.91	Disagree
7	Radio broadcast is available and it enhances learning	60 (28.67%)	101 (48.10%)	20 (9.52%)	29 (13.81%)	3.11	Agree

Table 5 reflects learners' perception of the effectiveness of the LMS and E-Tutor/Learners Interaction. The result shows that three of the statements were agreed with because their mean scores were more than 2.50 while the remaining statements were disagreed with. Learners agreed that there are adequate continuous assessments done via LMS. They also agreed that very low bandwidth for internet services in the institutions

make viewing deployed interactive videos difficult. The LMS is not robust for adequate accessibility of deployed resources. They are also of the opinion that the LMS does not accommodate virtual laboratory for science practical. However, radio broadcast (for live lectures) is available and it enhances learning.

Discussion

Learners' responses show that there are good quality and adequate resources in the physical e-library. However, learners are not aware of e-library. They need to be given adequate information on the availability of e-learning resources to be able to use it effectively. The study indicated that learners have no access to their lectures via web conferencing, teleconferencing and live streaming. Worse still, there are no trainings in place for the learners on the accessibility and use of LMS and e-resources. Therefore, there is a need for learners to be trained on how to effectively navigate through the learning management systems.

The finding on learners who combine studies and work, the findings of this study, concur with Sharma & Malhan (2003) who found out that, non-cooperating employers make studying and writing exams difficult for the learners. Poor working environment and conditions affect learners' academic performance and they find it very difficult to cope with work and academics.

Learners in this study were of the opinion that their school fees are high and they usually find it difficult to pay for their study every year. Their course materials are too expensive to afford. The worst scenario is that, there are no financial support services for the distance learners in DLI and NOUN. The management of these institutions should come up with a policy of financial support for their learners.

Learners indicated that course materials are usually unavailable and accessible at the beginning of the academic session. Though of good quality in content and production, even the course materials that are available, they are not adequate for study. These institutions need to make course materials available and accessible at the beginning of each academic session. Not ignoring the fact that, to plan and write course materials for open distance learning is very challenging (Petroman & Petroman 2013), effective learning to take place, learners need their resources/course materials in time for study.

The research also revealed that lecture modules are available and accessible on the learning management system (LMS) but lectures are preferred by learners in Audio and Video formats than in prints. Gotschall (2000) argued that eLearning concept was proposed based on distance learning and thus allowed transmission of lectures by video presentations to distant locations. According to the VAK Learning Styles Model that was developed by psychologists in the 1920s to classify the most common ways that people learn, most people prefer to learn in one of three ways: visual, auditory or kinaesthetic. A visually-dominant learner understands better when information is presented in pictures, diagrams and charts. An auditory-dominant learner chooses listening to what is being presented. For instance, in a lecture or group discussion, while a kinesthetic-dominant learner prefers a physical experience; "hands-on" approach. Therefore, there is a need for ODE

institutions in Nigeria to look into satisfying the needs of the visual and audio learners by providing more lectures in Audio and Video formats for improved academic performance.

Learners reported serious power outages and poor access to online resources. This issue of power outages is experienced as a national problem both in rural and urban areas in Nigeria. Learners reported that very low bandwidth for internet services in the institutions make viewing deployed interactive videos difficult; the LMS is not robust enough for adequate accessibility of deployed resources like videos. However, learners reported that the continuous assessment deployed Via the LMS is adequate and radio broadcast (for live lectures) is available and it enhances learning. This is why it is paramount to increase and make the bandwidth robust for internet services and the LMS to accommodate viewing of videos deployed. Internet should be made readily available at all times especially by the government and stake holders, to improve the quality of education in Nigeria.

Furthermore, learners were of the opinion that the LMS does not accommodate virtual laboratory for science practical. This is quite disturbing and needs special attention by the all these institutional management. This is key especially for courses that require practical skills. This is why Valentina Arkorful and Nelly Abaidoo (2014) argued that, online learning is more suitable for social sciences and humanities than the fields of natural sciences.

Conclusion

This work has identified some major challenges for learners of the Distance Learning Institute and the National Open University of Nigeria. These challenges included;

1. The Learning Management System (LMS) that is not robust enough for effective E-Tutor/Learners interaction;
2. In-adequate course materials for the students in different forms, there is no video conferencing or virtual classrooms/laboratories in place;
3. Learners have lectures and learning materials in prints but would prefer in Audio and Video formats.

In order to move along with the fast changing technological advancement arising out of globalization and liberalization, Distance Learning Institute, UNILAG and the National Open University of Nigeria (NOUN) need to improve on helping learners overcome all the identified challenges.

In particular, these institutions need to move to the level of producing all lectures in Video and Audio formats, so that learners can listen to their lectures any time; watch their lecturers and lesson delivery at their convenient time, anywhere, rather than just sitting down, to read their printed learning materials. For effective learning to take place, learners must be motivated (Holmberg's theory of communication and interaction 1983) and this is the theory that guided this study.

From the findings of the study, it is recommended that; Distance learning institute and the National Open University of Nigeria (NOUN) should improve online studies or distance learning education system and support services. This includes: financial support, affordable tuition fees, availability and adequate of study. Above all, virtual laboratories should be made available as soon as possible and learning materials at the commencement of a new academic session be made available in different formats especially the Audio and Video.

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