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MULTIMEDIA RESOURCES ADOPTION AND USE AMONG DISTANCE LEARNING STUDENTS AT UNIVERSITY OF IBADAN STUDY CENTRE

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Abstract:

Purpose: *This study examined the adoption and use of multimedia resources by distance learning students at University of Ibadan study centre.*

Design/Methodology/Approach: *Descriptive survey research design was adopted for this study. Four objectives were formulated to guide the study. Simple random sampling technique was used to sample 10% of the total population which gave a 532 sample size. The structured questionnaire was the main instrument used for data collection. A total of 532 copies of questionnaire were administered to the students at the faculty of education, 490 copies were duly completed and returned with a response rate of 92.1%. The data collected were analyzed using SPSS with frequency counts and percentages.*

Findings: *The findings revealed that majority of the respondents affirmed that multimedia resources such computers, the internet services, mobile/cell phones, radio and overhead projector were the available at the distance learning centre while few of the respondents indicated that slides and charts were not available. Furthermore, most of the respondents noted multimedia resources such as mobile/cell phones, the internet services, computers, television and camera were highly utilized at the centre while CD was never used. Limited access to multimedia resources, lack of knowledge to use the multimedia, uncooperative instructor to facilitate easy access, time consuming were some of the identified challenges encountered.*

Originality/Value: *It was recommended that there should be a general awareness about the multimedia resources at study centre and that funds should be adequately provided to acquire these resources. Also, university management should consider developing a functional policy that will guide and improve multimedia resources usage at the study centre.*

Keywords: *Multimedia resources, adoption, use, distance learning students, University of Ibadan*
Paper type*: Empirical research*

Introduction

Distance learning education (DLE) termed as external degree, part-time degree, and sandwich programs (Quadri and Omogbhe, 2014, p. 35). DLE involves the open learning approach as well as occasional interaction amongst the learners and teacher/lecturer. Therefore, DLE focuses more on the needs of individual students and is more of learner centered (Adetimirin and Omogbhe, 2011). According to Sacchanad (2002), distance learning students are quite different from students of conventional universities. Their characteristic was listed as adult learners, more mature, older in age, environmental adaptation while some are working full-time saddled with family tasks Sacchanad (2002, p. 2).

DLE started in 1988 with aim of providing access to instructional programs for students who are separated by time and/or physical location from an instructor or teacher/lecturer (Aramide and Bolarinwa, 2010). DLE is increasingly evolving owing to the emergence of information communication technologies (ICTs) as well as the Internet which has allowed distance learning interactive to experience betters program than the conventional classroom. The hiccups in providing educational opportunities for mature students and other people who are place-bound brought about the concept of distance education (Aramide and Bolarinwa, 2010).

DLE began solely via the use of print materials like books, journals, monographs, bulletins reports, which later generated owing to the integration of multimedia resources like CD ROM, CD player, audio player, the Internet service, mobile phone, e-mails, e-book, black board and electronic board (Al-Tamimi, 2003). There have been an increasing number of

multimedia resources available for distance education owing to technological development, decreasing cost and increasing ease of use of technicians as well as the creation of new uses for existing multimedia resources. Therefore, with greater choices available for distance learning media, the decision to adopt multimedia is supreme as it facilitates and enhances the success of distance learning education particularly in Nigeria (Aramide and Bolarinwa 2010). The importance and utilization of multimedia resources in DLE has been realized in Nigeria in some decades ago.

Aramide and Bolarinwa (2010) stated that the federal government of Nigeria plan of action between 2001-2010 for distance education acknowledged that distance education can provide and improve access to education to a large number of people who situation does not permit them to use the formal educational system. Oshinaike and Adekunmisi (2012) further stressed that through multimedia, communication of information is been done in a more effective and efficient way specifically as a means of instructional medium for information delivery.

Distance studying is the method of making an educational experience of equal value for the learner to excellent suit their needs outside physical wall of the classroom (Reju and Jita, 2018). In the same vein, Newby, Stepich, Lehman and Russell (2000, p. 210) view distance learning as "an organized instructional program in which teacher and learners are physically separated". Distance learning is principally beneficial to the student as they could learn from their chosen locations which can be several miles away from the school location. It has become more popular in recent times since its safe cost particularly for universities in reducing the number of halls of residence and full-time students (Moore and Anderson, 2007). Distance learning students' needs adequate access to ICTs for essential interactions with a large number of people in remote arears. On the other hand, the learners also require reading all sort of information materials especially when they are not in school premises so as to prepare for their course content as well as examinations (Moore and Anderson, 2007).

The medium for instructional delivery usually defines the types of DLE. DLE uses various forms of media to deliver learning materials as well as linking both students and teachers/lecturers' together. This medium could be categorized into two. Firstly, those that can be utilized to convey subject based content such as print materials (text-book, journals and so on), video tapes, CD-ROM. While those that allow interaction between teachers and students such as fax, radio, teleconferencing, discussion fora, video-conferencing as well as the Internet.

Multimedia resources must be adopted first before use in distance education, the adoption depends on who the student is, where they are, their technological know-how, ICT skills level as well as their learning styles. Tooth (2000) stressed that DLE programs are increasing using multimedia resources such as print materials, audio (audiotapes, radio etcetera) and video (videotapes, disc, CD-ROM and so on) in lectures delivery. Technological based media resources may suffer from limitations of the specific technology being utilized because accessibility depends on such multimedia been adopted and available, where and when it can be used and is contingent upon its reliable operation. Adoption of multimedia resources in distance education has revolutionalized the process of teaching and learning particularly in distance learning education in Nigerian universities (Oketunji, 2001). Many universities in developing countries like Nigeria lack maintenance culture. One thing is to procure multimedia equipment and the other is to maintain it. Most tertiary institutions find the adoption of multimedia technologies as a waste of resources, this may be attributed to maintenance policy of such project which may not be guaranteed (Anyim, 2018).

The distance learning centre, University of Ibadan has currently adopted the delivery of selected distance education course content using multimedia resources such as e-mails, the Internet, Power Point presentations, CD-ROM. Iwu and Anulobi (2010, p. 1) asserted that email as well as Global System for Mobile communication (GSM) were adopted and used to disseminate course contents among National Open University of Nigeria study centres. Ogunbote and Adesoye (2006) cited in

Oshinaike and Adekunmisi (2012, p. 3) submitted that "multimedia technology adds new dimension to learning experiences because concepts were easier to present and comprehend when the words are complemented with images and animations". The evolvement of multimedia has assisted learners to be more connect in their work while the availability of multimedia technology has helped the learners to create multimedia related applications as project requirement (Oshinaike and Adekunmisi, 2012).

Statement the of problem

Studies such as (Osarome 2011; Oshinaike and Adekunmisi 2012) has shown the importance of multimedia resources usage in the learning process as commonly observed in public institutions and this is why this study was carried out to assess the level of adoption and utilization of multimedia resources in distance education at the University of Ibadan. Multimedia resources have been neglected and not properly been adopted nor used in distance learning education (Eje, Nkanu and Okenjom, 2016, p. 29) which will affect the lesson plan, low retention, presentation of lesson or content, evaluation of lesson and teacher/lecturer-students relationship in the process of learning. All these will result to ineffective teaching and learning process.

Objectives of the Study

The specific objectives are to:

(1) ascertain the availability of multimedia resources at the distance learning centre at University of Ibadan.

(2) find out the extent of adoption of multimedia resources among distance learning students at University of Ibadan.

(3) examine the extent of use of multimedia resources among distance learning students at University of Ibadan.

(4) find out the factors militating against the adoption and use of multimedia among distance learning at University of Ibadan.

Review of Literature

Multimedia can be interpreted as a combination of data carriers such as video, the internet, CD-ROM, floppy disc and so on in which the possibility for an interactive method is offered (Smeets, 1996, cited in Oshinaike and Adekunmisi, 2012, p. 3). Multimedia now includes a flash drive (Tella, 2011).

The pervasiveness of ICT has brought about rapid changes in multimedia technology, social, political and global economic transformation. However, the field of education has not been unaffected by the penetrating influence of information and communication technology. The fact that ICT has impacted on the quality and quantity of teaching, learning and research in distance education cannot be overemphasized. Multimedia resources has provided opportunities for students as well as lecturers to communicate with one another effective particularly during teaching and learning (Sousa, Richter, and Nel, 2017).

Tutors should make effective use of hardware such as computers, projectors, electronic white board, wireless and portable devices and so on. Personal computer, tablets and other handled devices including digital and video cameras as well as the use of learning platforms for teaching and learning. Within the context of the school environment trainee lecturers will be mandatory to make effective usage of a wide range of multimedia resources and preparation for these experiences must be systematically addressed (Tella, 2011).

Distance education is concerned with a form of educational delivery where the acts of teaching and learning are separated in time and space, and technology plays a significant support role in enabling this form of delivery (Rahman, 2014). Distance learning education depends on a total delivery system where ICTs is highly embraced. In order to bridge the barriers of time and space, distance education must necessarily use a variety of multimedia resources to present the learning materials and provide for interaction (Shahid and Alamgir, 2011, p. 11). The advent of the World Wide Web has made interaction between learners and teachers/lecturers easier and more efficient and effective (Rahman, 2014).

Multimedia is defined as the combination of various digital media such as text, images, sound and video, into an integrated multi-sensory interactive application or presentation

to convey a message or information to an audience. In other words, multimedia resource refers to an individual or a small group using a computer to interact with information that is represented in several formats, by repeatedly selecting what to see and hear (Osinaike and Adekunmisi, 2012). According to the author, multimedia resources refer to an evocative convergence of text, audio, graphics, still images, and moving pictures into a single, computer-controlled product.

Adoption of a technology may be measured by "both the timing and extent of new and emerging technology utilization by individuals" (Sunding and Zilberman, 2001:19). The timing of adoption and diffusion can be split into three levels, that is, the decision process of the individual whether to adopt or not (or to abandon a technology once adopted), the innovativeness of the individual in terms of when to adopt in the diffusion process, and the rate at which a technology is adopted in the system (Rogers, 2003). The extent of adoption can be measured by intensity of teaching and learning in terms of number of students and instructors (CIMMYT, 1993). Park, Kim, Cho and Han (2018:228) opined that multimedia resources positively influence the user's perception of fit in learning and learning which in turn positively affects the adoption of multimedia resources for learning. Rolfe and Gray (2011) also revealed that adoption of multimedia resources has improved students' teaching and learning particularly in science education.

Alabi (2016) conducted in a study on adoption and use of e-instructional media among faculty members in South West universities in Nigeria. The study revealed that majority of the respondents 89.3% reported that they had adopted personal computer and nearly 80% of the respondents indicated that they had adopted the printer and multimedia projector respectively. While only about half of the respondents acknowledged they had adopted mobile devices and mobile phones in teaching and the least had adopted digital camera.

The adoption of new ICTs in general, and multimedia facilities in particular, challenge profoundly the organization of academic life both within classical and distance learning education. The multimedia technologies are irreversibly transforming the ways people learn, teach, generate knowledge and conduct research, and academics are expected to adjust to the future changes of their traditional roles (Ertmer and Ottenbreit-Leftwich, 2010).

The emerging teaching and learning environments require the lecturers in distance teaching universities to assume and adopt new responsibilities as well as to develop a range of new skills and talents (Guri-Rosenblit, 2018). Advances in technology have enabled the emergence of virtual institutions which have no physical boundaries or constraints, and the development of online teaching makes the location of students increasingly irrelevant (Khan, 2019). Life-long learning, mature age learners and part-time participation are now significant factors which must be accommodated (Castañeda, 2017).

Educational systems around the world and distance learning education in particular are increasingly using ICT to teach students' the knowledge and skills required in this 21st century (Omariba, Ayot and Ondigi (2016). Development, application and adoption of ICT facilities like the multimedia in tertiary institutions in Africa is critically germane if the continent is to reduce the knowledge, technological and economic gaps between itself and the rest of the world (Farrell and Shafika, 2007). Multimedia technology is also an essential resource in delivering and managing education and training materials. A vast storehouse of such resources relevant to learning is available (Atif, 2003). These technologies have the potential to transform the learning enterprise to the benefit of learners and educators alike. These technologies are growing to support an open, widely distributed, high capacity, and intensely interactive learning infrastructure (Atif, 2003).

Rao (2008) undertook a study to measure the access, awareness and use of media to support services by the learners of an Open University in which the author found that there was awareness of the media support services provided by the university as indicated by the majority learners. However, most of the learners are not aware about the availability of the media infrastructure at the study centre

which obviates the fact that these facilities at the study centres were not utilized (Rao, 2008). Tuimur and Chemwei (2015) reported that most of the respondents 40(100%) acknowledged that multimedia resources such as teachers' reference; chalkboard; wall map and atlases were available to use in North District Kenya. The respondents further noted that pupils' textbook; charts; pictures; notice board; resource persons and teacher-made notes were also multimedia resources available.

A number of new technologies are now deployed to distance education. These multimedia technologies have tremendous advantages in the sense that they help to stimulate and make use of the students' imagination. Kumar and Chander (2005) cited in Rai (2010, p. 74) reported in a study on multimedia resources usage by Indira Gandhi National Open University (IGNOU) students. The study revealed low awareness of the resources among the learners. The study further stressed that the reasons for non-use of these facilities can be attributed to lack of awareness, unhelpful attitude of staff, inconvenient timings of programmes as well as dissatisfying response from experts in radio and teleconferencing programmes.

Interactive multimedia CD-ROM with supplementary resources was regarded by many students as a valuable source to improve their learning and enhance the students to understand the subject well (Sivapalan and Cregan, 2012). This demonstrated the possibility of utilizing extensive multimedia techniques and resources to promote students' learning by distance education. Aziz (2003) examined the impacts of online technology on student engagement and learning in first year engineering course, the study concluded that online technology could be used to supplement good instructional methods, stimulate and maintain student's interest. Schuhmacher (2003) reported that the use of an e-learning environment complements the process with online discussions, student's portfolio management, assignment submission and assessment.

Distance learning students have faced with myriad of challenges to the use of multimedia resources to improve teaching and learning in tertiary institutions. Oshinaike and Adekunmisi (2012) avowed that problem such as lack of supportive infrastructures and time to spend on technology were indicated as the highest constraints (100.00%) militating to the use of multimedia resources among faculty members, followed by inadequate training (87.50%) and inadequate funds respectively. In addition, Rugut and Makewa (2016) reported that inadequate provision of multimedia resources as well as insufficient support for the integration of emerging media resources in teaching and learning were identified hiccups influencing multimedia resources usage in schools. Furthermore, Anyim (2018) revealed that challenges such as epileptic power supply, lack of funds, cost of multimedia facilities, lack of skills in the use of the multimedia resources and inadequate IT infrastructure were identified as the factors affecting effective usage of multimedia resources in North-Central universities in Nigeria.

Brief history of University of Ibadan Distance Learning Centre

The idea of distance education was conceived by the Department of Adult Education of the University of Ibadan in 1972. The proposal for the commencement of the various programmes was presented to the Senate of the University in 1976. Later, the National Universities Commission (NUC) also gave its approval on the condition that it would be a self-financing programme. Hence, the present-day Distance Learning programme started first as External Degrees and later changed to External Studies programme of the Department of Adult Education in 1988, with courses from the parent department (Adult Education) and two other Departments, Guidance and Counselling and Teacher Education.

By 1993, four more Department Special Education, Library and Information Studies, Educational Management and Physical and Health Education has joined the original three departments to offer courses leading to the award of the Bachelor of Education (B.Ed) degree. In 1998, the programme was extended to the Faculty of Agriculture.

The Distance Learning Centre's programme of studies is the same as that offered for full-time students of the University of Ibadan. The only

difference is that it is designed primarily to suit those in the working class, whose schedules, distance, financial condition and other situations may not permit them to undergo full-time studies at the university. These students read their study-packs at their convenience, communicate with their lecturers from time to time and only come into residence six weeks in a year for revision and examination. In addition to its Head Office at Moroundiya Site, Idi-Ose, Along Moniya Road, on the New Ibadan – Ilorin Expressway, Ibadan and the office at 20 Awolowo Avenue, Old Bodija, Ibadan; the centre also has information offices in Lagos and Abeokuta, and plans are underway to add new ones.

Research Methodology

The study adopted a descriptive survey method, because it is most commonly method used in humanities. This type of survey method also relies on a questionnaire instrument for data collection.

Population and Sample

The target population for this study consists of all the departments in the Faculty of Education, University of Ibadan. There were a total of 5,316 distance learning students in the selected faculty. Simple random sampling technique was adopted to sample 10% of the total number of students in all the departments in the faculty which gave a total of 532. The study sample is thus presented in table 1 below.

Table 1: Population of distance learning students in the faculty of education

Departments	Population of Students	Sample Size 10%
Adult Education	133	13
Guidance & Counselling	1,850	185
LARIS	420	42
Social Work	650	65
Teacher Education	1,140	114
Educational Management	533	53
Human Kinetics and Health Education	347	35
Special Education	243	25
Total	**5,316**	**532**

Instrument: A structured questionnaire was the only instrument used for the collection of data for the study. The questionnaire titled "Adoption and Utilization of Multimedia – AUM" was a self-developed instrument created after reviewing related literature.

Procedure: The questionnaire was administered personally by the researcher.

Data Analysis: Data collected were later analyzed through the Statistical Package for the Social Sciences (SPSS) software from which the frequency distribution and percentages were acquired, while the data was presented in tables.

Results and discussion

A total of 532 copies of the questionnaire were administered to respondents in faculty of education, university of Ibadan Nigeria, and 490 were duly completed and returned, giving a response rate of 92.1%. The results and discussion of findings are presented below.

Table 2: Availability of multimedia resources among distance learning students

Multimedia Resources	Available Freq (%)	Not Available Freq (%)	No Response Freq (%)
CD-ROM	379(77.3)	111(22.7%)	0 (0.0%)
Internet services	455(92.9)	35(7.1%)	0 (0.0%)
Computer	457(93.3%)	31(6.3%)	2 (0.4%)
Television	343(70%)	147(30%)	0 (0.0%)
Tape Recorder	348(71%)	142(29%)	0 (0.0%)
Audiotapes	352(71.8%)	138(28.2%)	0 (0.0%)
Video Player	345(70.4%)	145(29.6%)	0 (0.0%)
CD Player	348(71%)	139(28.4%)	3 (0.6%)
Video Tapes	327(66.7%)	164(33.2%)	0 (0.0%)
Overhead Projector	416(84.9%)	68(13.9%)	6 (1.2%)
Mobile/cell phones	428(87.9%)	62(12.6%)	0 (0.0%)
Scanners	411(83.3%)	79(16.1%)	0 (0.0%)
Cameras	389(79.4%)	101(20.6%)	0 (0.0%)
Multimedia Projectors	411(83.3%)	72(14.7%)	7 (2.0%)
Radio	426(86.9%)	64(13%)	0 (0.0%)
Electronic Board	378(77.1%)	113(22.8%)	0 (0.0%)
Pictures	315(64.3%)	175(35.7%)	0 (0.0%)
Slides	395(80.6%)	95(19.4%)	0 (0.0%)
Charts	411(83.9%)	79(16.1%)	0 (0.0%)

Table 2 revealed that majority of the respondents 457(93.3%) confirmed that computer was available, followed by Internet service 455(92.9%), 428(87.9%) mobile/cell phones, 426(86.9%) radio and 416(84.9%) overhead projector, while few of the respondents 95(19.4%) and 79(16.1%) indicated slides and charts were not available.. This then implies that all the listed multimedia resources were available for the DLC student to use for their academic activities. It must be noted that this multimedia was housed in a room at the distance learning centre of the university. This assertion was supported by the findings of Tuimur and Chemwei (2015) who reported that most of the respondents 40(100%) acknowledged that multimedia resources such as teachers' reference; chalkboard; wall map and atlases were available to use in North District Kenya. The respondents further noted that pupils' textbook; charts; pictures; notice board; resource persons and teacher-made notes were also multimedia resources available. In contrast however, Oshinaike and Adekunmisi (2012) found that majority of the respondents 52(65.00%) of the respondents indicated that multimedia resources were not available for teaching and learning. The above findings were in consonance with that of

Table 2: Extent of adoption of multimedia resources among distance learning students

Multimedia Resources	High extent Freq (%)	Average extent Freq (%)	Low extent Freq (%)	Never Freq (%)
CD-ROM	75(100%)	0(0%)	0(0%)	0(0%)
Internet services	75(100%)	0(0%)	0(0%)	0(0%)
Computer	60(80%)	15(20%)	0(0%)	0(0%)
Television	61(81.3%)	12(16%)	2(2.7%)	0(0%)
Tape Recorder	60(80%)	15(20%)	0(0%)	0(0%)
Audiotapes	47(62.7%)	26(34.7%)	2(2.7%)	0(0%)
Video Player	46(61.3%)	29(38.7%)	0(0%)	0(0%)
CD Player	48(64%)	25(33.3%)	2(2.7%)	0(0%)
Video Tapes	44(58.7%)	27(36%)	4(5.3%)	0(0%)
Overhead Projector	40(53.3%)	24(32%)	11(14.7%)	0(0%)
Mobile/cell phones	45(60%)	30(40%)	0(0%)	0(0%)
Scanners	66(88%)	9(12%)	0(0%)	0(0%)
Cameras	65(86.7%)	10(13.3%)	0(0%)	0(0%)
Multimedia Projectors	52(69.3%)	23(30.7%)	0(0%)	0(0%)
Radio	59(78.7%)	16(21.3%)	0(0%)	0(0%)
Electronic Board	59(78.7%)	13(17.3%)	3(4%)	0(0%)
Photographs	54(72%)	18(24%)	3(4%)	0(0%)
Slides	50(66.7%)	20(26.7%)	5(6.7%)	0(0%)

Charts	34(45.3%)	38(50.7%)	3(2.7%)	0(0%)

Table 2 showed that a majority of the respondents 75(100.0%) highly adopted CD-ROM and Internet services, Scanners 66(88.0%), Cameras 65(86.7%), Television 61(81.3%) and Computer 60(80%) while Charts 34(45.3%) and Mobile/cell phones 30(40.0%) indicated that there were average adoption rate of multimedia resources and fewer of the respondents 11(14.7%) Overhead projector, 5(6.7%) Slides and 4(5.3%) Video tapes affirmed that there were low adoptions of the multimedia resources. This then implies that the multimedia resources were fully adopted for teaching the DLS, this is expected to yield better academic performance among the students. This is consistence with study by Alabi (2016) reported that most of the respondents had fully adopted multimedia resources for teaching, these include personal computer, printer, projector, scanner, mobile phones as well as mobile devices, while only few of the respondents acknowledged that they fully adopted digital camera. In addition, Park, Kim, Cho and Han (2018, p. 228) found that multimedia resources positively influence the user's perception of fit in learning and learning which in turn positively affects the adoption of multimedia resources for learning. Rolfe and Gray (2011) also found that adoption of multimedia resources has improved students' teaching and learning particularly in science education.

Table 3: Usage of multimedia resources by students

Multimedia Resources	Frequency	Percentage
Yes	441	90
No	46	9.4
No Response	3	0.6
Total	**490**	**100**

Table 3 indicated larger proportion of the respondents 441(90%) confirmed that they have made use of the multimedia resources at the distance learning centre before, while 46(9.4%) have not.

Table 4: Extent of usage of multimedia resources among distance learning students

Multimedia Resources	High	Average	Rarely	Never	No Response
CD-ROM	187(38.2%)	135(27.6%)	82(16.7%)	86(17.6%)	0 (0%)
Internet services	288(58.8%)	150(30.6%)	39(8%)	13(2.7%)	0 (0%)
Computer	279(56.9%)	157(32%)	38(7.8%)	16(3.3%)	0 (0%)
Television	229(46.7%)	153(31.2%)	49(10%)	59(12%)	0 (0%)
Tape Recorder	188(38.4%)	160(32.7%)	54(11%)	88(18%)	0 (0%)
Audiotapes	179(36.5%)	158(32.2%)	65(13.3%)	88(18%)	0 (0%)
Video Player	190(38.8%)	157(32%)	64(13%)	74(15.1%)	5 (1.0%)
CD Player	184(37.6%)	154(31.4%)	84(17.1%)	64(13%)	4 (0.8%)
Video Tapes	179(36.5%)	159(32.4%)	73(14.9%)	79(16.1%)	0 (0%)
Mobile/cell phones	299(61%)	104(21.2%)	41(8.4%)	46(9.4%)	0 (0%)
Overhead Projector	161(32.9%)	143(29.2%)	102(20.8%)	84(17.1%)	0 (0%)
Scanners	167(34.1%)	172(35.1%)	88(18%)	61(12.4%)	2 (0.4%)
Cameras	223(45.5%)	127(25.9%)	76(15.5%)	64(13%)	0 (0%)
Multimedia Projectors	200(40.8%)	110(22.4%)	93(19%)	87(17.7%)	0 (0%)
Radio	216(44.1%)	95(19.4%)	106(21.6%)	71(14.5%)	0 (0%)
E-books	175(35.7%)	125(25.5%)	115(23.3%)	75(15.3%)	0 (0%)
Electronic Board	158(32.2%)	110(22.4%)	114(23.3%)	108(22%)	0 (0%)
Slides	173(35.3%)	173(35.3%)	89(18.2%)	67(13.7%)	0 (0%)
Charts	173(35.3%)	177(36.1%)	79(16.1%)	56(11.4%)	5 (1.0%)

Table 4 revealed that a majority of the respondents 299(61.0%) used mobile/cell phones, 288(58.8%) used the Internet services, 279(56.9%) used computer, 229(46.7%) television, 223(45.5%) cameras and 200(40.8%) multimedia affirmed that there was high usage of multimedia resources among the distance learning students. Chart 177(36.1%), slides 173(35.3%), tape recorder 160(32.7%) were

averagely used multimedia resources. E-books 115(23.3%), electronic board 114(23.1%) and radio 106(21.6%) indicated that they rarely used them while only few 86(17.6% of the respondents used CD-ROM, 88(18.0%) used audio tape, while 64(13.0%) never utilized CD multimedia resources at all. This is an indication that the available multimedia resources were moderately used by the DLS which in turn improve their academic performance. This contradict the findings by Anyim (2018) who found that multimedia resources are used in user education programme in North-Central Nigeria but to a low extent. Also, Rugut and Makewa (2016) reported that multimedia resources were rarely utilized by teachers in Nandi Central Sub-County in Kenya.

Table 5: Do you ever experience any problem with the use of multimedia resources?

	Frequency	Percentage
Yes	347	70.8
No	143	29.2
Total	490	100

From table 5 above, larger proportion of the respondents 347(70.8%) affirmed that they do experience problem with the use of multimedia resources.

Table 6: Problems encountered when using of multimedia resources by the students

Factors	Agree	Disagree
There is too much information retrieved	347(71.0%)	102(20.8)
Time consuming and wastes a lot of my time	315(64.3%)	137(28%)
Limited access to multimedia resources	362(73.9%)	128(26.1%)
Lack of multimedia knowledge to effectively utilize the services	361(73.7%)	129(26.3%)
Using multimedia resources often distract me from doing my other work	297(60.6%)	193(39.4%)
Uncooperative instructor to facilitate easy access	348(71.0%)	139(28.4%)
Information is cumbersome	301(34.4%)	189(38.5%)
Is too jam-packed	242(49.4%)	248(50.7%)

Table 6 showed that a majority of the respondents agree that they face the problem of limited access to multimedia resources 362(71.0%), lack of multimedia knowledge to effectively utilize the services 361(73.7%), uncooperative instructor to facilitate easy access 348(71.7%), time consuming/wastes a lot of my time 315(64.3%), information is cumbersome 301(34.4%). While only few 193(39.4%) acknowledged that using multimedia resources often distract me from doing my other work disagree. This finding corroborates the findings by Oshinaike and Adekunmisi (2012) who revealed that problem such as lack of supportive infrastructures and time to spend on technology were indicated as the highest constraints (100.00%) militating to the use of multimedia resources among faculty members, followed by inadequate training (87.50%) and inadequate funds respectively. In addition, Rugut and Makewa (2016) reported that inadequate provision of multimedia resources as well as insufficient support for the integration of emerging media resources in teaching and learning were identified hiccups influencing multimedia resources usage in schools. Furthermore, Anyim (2018) revealed that challenges such as epileptic power supply, lack of funds, cost of multimedia facilities, lack of skills in the use of the multimedia resources and inadequate IT infrastructure were identified as the factors affecting effective usage of multimedia resources in North-Central universities in Nigeria.

Conclusion

The findings of the first objective of this study revealed that a majority of the respondents affirmed that many multimedia resources were available for DLC students to use. This include computer, the internet services, mobile/cell phones, radio, overhead projector, scanners and chart while slide and CD-ROM were the least available multimedia resources in the DLC.

The second objective ascertain the extent of adoption of multimedia resources among distance learning students at University of Ibadan. The findings revealed that most of the respondents highly adopted CD-ROM and the internet services, scanners, cameras, television and computer while charts, mobile/cell phones were the averagely adopted multimedia resources and fewer of the respondents indicated that overhead projector, slides and video tape were low adoption.

The third objective examined the extent of use of multimedia resources among distance learning students at University of Ibadan. It was indicated that most of the respondents indicated that many of the available multimedia resources were moderately used by the DLS as shown in table 4, while CD multimedia resources was never utilized at all.

The last objective finds out the factors militating against the adoption and use of multimedia among distance learning at University of Ibadan. The findings noted that large proportion of the respondents agreed that limited access to multimedia resources, lack of multimedia knowledge to effective usage, uncooperative instructor to facilitate easy access, time wasting as well as cumbersome information were the challenges faced in the use of multimedia resources while only few of the respondents disagreed that using multimedia resources often distract me from doing my other work.

Recommendations

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

1. There should be general awareness about the multimedia resources in the distance learning centre of the University of Ibadan.
2. Multimedia resources should be generally accessible to the students at all level.
3. Funds should be adequately provided to acquire these multimedia resources.
4. Staff should be adequately trained to use this multimedia and at the same time to guide the students on the use.
5. Establishment of well-equipped multimedia resources centre in the university environment.
6. University management should consider developing a functional policy to guide and improve multimedia resources usage in the study centre.

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