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Full Length Research

Information and Communication Technology Training Needs of Academic Staff in Universities: A Window into Faculty of Medical Sciences, University of Jos, Jos, Nigeria

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This study determined the Information and Communication Technology training needs of academic staff in University of Jos, using the academics in the Faculty of Medical Sciences as a focal population. The study was guided by seven objectives. Survey research design was adopted for the study. The target population was all the 222 academics in the Faculty of Medical Sciences, University of Jos. Since, the population (222) was manageable, there was no sampling. Hence, all the academics were adopted in the research. The research instrument adopted was questionnaire. Data collected were analyzed using frequency counts and percentages. The findings of the study revealed among others that: the respondents have previous knowledge in the use of e-mail services; the type of training they received was through attending workshops; the training method they preferred was one to one instruction; the academics need training in Internet and online activities like browsing for materials for project writing, teaching and learning; incessant power failure was the major challenge the academic faced in the use of ICTs. However, it was recommended that: there is the need to expose these staff of the faculty to ICT training to enhance their skills in the use of ICTs. Efforts should also be made by the University management to look beyond development of programmes that merely focus on the training of academics in the operation of computers and ICT literacy per se but plans to work actively towards enabling Faculty of Medical Sciences academics to master ICT as an effective tool to improve teaching, research and learning in the university. The research therefore, conclude that the academics in Faculty of Medical Sciences, University of Jos, need training in the use of ICTs facilities especially, in the area of Internet and online activities.

Key words: ICTs, Training, Needs, Academics, University, Jos, Nigeria.

INTRODUCTION

Mohamed & Osman (2014) defined training in the field of education as a planned program which consists of learning opportunities offered to faculty members in the educational institution in order to improve their

performance in their specific work. Maduna (2014) defined it as a regulator and as a planned voltage to provide manpower in the organization of certain knowledge, improving and developing their skills and capabilities, and changing its behavior and trends positively. However, Boon, Lutz & Marburger (2015) defined it as a planned activity designed to bring about changes in the individual and in the community in terms of information and experiences, skills, levels of performance, ways of working, and behavior and trends. Thus, this makes individual or group to be effective in doing their jobs in high production efficiency. Chan (2010) believes that the basic function of the training is to contribute in making the changes that will help in solving a large number of problems faced by the various institutions, including universities. Lyad (2015) pointed that the training needs is a group of changes and developments that are required regarding a person's information, skills, and attitudes. Thus, this was aimed at meeting the business requirements and confronts the problems that occur in the organization. Furthermore, Omotunde & Ajie (2017) believes that training needs must be determined in accordance with the foundations of objective criteria, based on scientific facts in light of the reality of work and personnel problems. Thus, it would help to address future problems because it is a preventive measure in protecting against these problems. In addition, it helps in determining the cost, time, and effort. Training needs is not something constant which is measured and determined once. Thus, it is a flexible concept (Dynamic) which varies according to the experiences of faculty members and their abilities. It is also affected by variables, local, and global developments which affects the educational institution. Therefore, training needs must be identified in any institution on a regular basis, so that training efficiency will be adapted with contemporary changes and requirements (Liu, 2015).

The training needs of the University and faculty members can be classified into three main categories which are necessary for every educational institution and every educational system. These training needs are namely: regular frequent needs; needs that relate to the problems of work arising from the lack of knowledge, skills and innovation; and needs that aims to meet the future needs in response to the requirements of the environment (Omotunde & Ajie, 2017). Hence, the lack of attention to these needs, both in terms of identifying them, or hand counted and assembled, often leads to loss of time, effort, and money (Maria & Rafael, 2010). This is confirmed by Saeed & Othman (2014) who accurately determined that the needs of the trainees must precede the design of any training program, until the program achieve the desired goals. The interest in identifying training needs provides information which contributes to the development of plans. Hence, this

leads to the precise objectives of the training, and help in designing a targeted training program that bridges the gap between the current performance of the faculty member and the hoped performance (Alsabbag, 2014).

Information and Communication Technology (ICT) is increasingly becoming more wide spread throughout university education worldwide (Nwokedi & Nwokedi, 2018). This is in line with UNESCO's policy paper for change and development in higher education which urges higher education institutions to make greater use of the advantages offered by the advancement of communication technology to improve the provision and quality of their education (Lamtara, 2014). It is difficult and may be even impossible to imagine future learning environments that are not supported, in one way or another, by Information and Communication Technologies (ICT). When looking at the current widespread diffusion and use of ICT in modern societies, especially by the young – the so-called digital generation – then it should be clear that ICT will affect the complete learning process today and in the future (Liu, 2015). ICT has been proven to be a very important aspect of the teaching learning process. According to Veiga-Simₚo, Flore, Barros, Fernandes & Mesquita (2015) the quality of teaching depends on the quality of the teachers/lecturers which, in turn, depends to some extent on the quality of their professional development. Without well trained, qualified and committed teachers, it is impossible to deliver effectively functioning educational systems (Al-Asmar, 2009). In fact, to meet the challenges of globalization, lecturers are required to gain the necessary skills and knowledge. Although lecturers in tertiary institutions consider themselves to be knowledgeable and confident, due to the new expectations and challenges, they have a perception of a gap between their current knowledge and what they need to know to enhance their research and teaching. Training therefore became inevitable, training is generally seen to be a good thing; it is not too easy to send someone on an expensive ICT training course without being sure that the course is worthwhile, or even that, it is the right course for the person. Before this is done, it is quite important to take into account the lecturers' own perceptions about the areas in which they feel proficient, those in which they feel there is need to be trained and those areas in which they have deficiencies but they are completely unaware of them. This process should be based on a well-designed needs analysis phase. A needs analysis may identify more than one training need. These needs should be prioritized, and either placed into a formal training plan, or prepare a database for future training.

The use of electronic resources has in recent time been adopted by most higher learning institutions in Nigeria. However, the appropriate training for academic staff on how well to integrate it into their research output, learning and teaching process is at a worrisome state. Hence, the

need to identify the ICT training needs required of the lecturers in Faculty of Medical Sciences, University of Jos, Nigeria, for effective teaching, research and training.

Background Information on the Faculty of Medical Sciences, University of Jos

The Faculty of Medical Sciences, University of Jos, started in October, 1977. It has twenty one departments – see table 1. The total number of lecturers in the Faculty of Medical Sciences, University of Jos, was two hundred and twenty two (222) as at the time of this investigation (University of Jos, Academic Planning Annual Report, 2016/2017 Academic Session). The faculty has a library (Medical Library) which is located few kilometers (3km) away from the faculty. However, the main library which the lecturers often preferred to visit (University of Jos Main Library) has a computer laboratory with 80 desktops all with free internet access for staff and students.

SIGNIFICANCE OF THE STUDY

The findings of this study are significant to the University of Jos management, NUC and the Federal Ministry of Education. This is because the findings from this research expose the ICTs training needs of academics in a university setting in Nigeria. This will help the Faculty and University Managements to identify the kind of ICTs training, the academics in the Faculties need. So that, they will focus their training workshops and conferences in that direction. The finding of this investigation is also significant to NUC because it will assist it in designing appropriate Policies that will back-up the training of staff in that direction. The results of this study is also significant to Ministry of Education because it will help it know the training needs of university academics and through the NUC, make funds available for training university academics in that direction. Nevertheless, the findings of this study will also contribute to the wealth of existing literature on ICTs training needs of university academics in Nigeria.

OBJECTIVES OF THE STUDY

The main objective of this investigation was to assess the Information and Communication Technology (ICT) Training Needs of Academic Staff in the Faculty of Medical Sciences, University of Jos, Nigeria. Specifically, this research seeks to determine the:

1.   Previous knowledge and skills in using ICTs facilities by Lecturers in the Faculty of Medical Sciences, University of Jos, Jos;
2.   Type of training received by the lecturers;

3.   Training methods preferred by the lecturers;
4.   Need for training based on the ranks of the lecturers;
5.   How ICTs training needs of lecturers were identified;
6.   ICTs training needs of the lecturers;
7.   Problems Associated with ICTs use to improve teaching and learning.

LITERATURE REVIEW

Omotunde & Ajie (2017) in their research titled 'Information Communication Technology Training Needs of Academic Staff in Universities in Ekiti State, Nigeria', pointed out that the use of electronic resources has in recent time been adopted by most higher learning institutions in Nigeria. They further stated that the appropriate training for academic staff on how well to integrate it into their research output, learning and teaching process is at a worrisome state. Griffith & Rubera (2014) submitted that teacher training in the use of ICT is the best starting point in the ICT policy of a country because they are the key to making learning happen. In a study by Bonsode & Viswe (2015), lack of interest, limited access to ICT facilities and lack of training opportunities were among the obstacles to ICT usage among academic staff.

Akinnagbe & Baiyeri (2011) worked on 'Training needs analysis of lecturers for Information and Communication Technology (ICT) skills enhancement in Faculty of Agriculture, University of Nigeria, Nsukka' and asserted that despite coming of age with the internet and other technology, many university lecturers lack the Information and Communication Technology (ICT) literacy skills necessary to navigate and use the overabundance of information available today. Their research assessed the ICT skills and the areas of ICT training needs to improve teaching and research of lecturers in the faculty of agriculture, University of Nigeria, Nsukka. Data for the study were collected from 66 out of 104 academic staff of the faculty through the use of questionnaire. Data were analyzed using percentage, mean statistic and charts. The results of the study revealed that, lecturers were skilled in general windows operation (M = 1.79), word processing (M = 1.81) and internet/on-line activities (M = 1.74). They were not skilled in slides preparation / presentation (M = 1.15), spreadsheets preparation (M = 1.26), and data analysis using computer software (M = 0.84). The highest demand for ICT training need by the lecturers was data analysis using computer software like SPSS, GENSTAT, Excel, E-view etc (95.0%). The study therefore, recommended that academic staff of the faculty should be exposed to ICT training to enhance teaching and research in the university.

Azuh & Modebelu, (2013) in their research titled

Table 1: Distribution of the Faculty of Medical Sciences Academics into Gender and Departments

S/N	DEPARTMENTS	FREQUENCY (No.)		TOTAL	PERCENTAGE (%)
		MALE	FEMALE		
1	ANAESTETICS	02	01	03	1.35
2	ANATOMY	10	05	15	6.75
3	COMM.HEALTH	09	08	17	7.65
4	BIOCHEMISTRY	13	04	17	7.65
5	FAMILY MEDICINE	08	02	10	4.50
6	RADIOLOGY	06	00	06	2.70
7	MEDICAL LAB SCIENCE	09	02	11	4.95
8	OBSTETRICS & GYNAECOLGY	15	02	17	7.65
9	PAEDIATRICS	10	07	17	7.65
10	HAEMATOLOGY	01	02	03	1.35
11	PHYSIOLOGY	10	02	12	5.40
12	SURGERY	20	01	21	9.45
13	CHEM. PATHOLOGY	03	00	03	1.35
14	PSYCHIATRY	11	00	11	4.95
15	MEDICAL MICROBIOLOGY	04	05	09	4.05
16	NURSING SCIENCE	10	04	14	6.30
17	PATHOLOGY	04	00	04	1.80
18	MEDICINE	13	04	17	7.65
19	OTORHINOLARYNGOLOGY (ENT)	04	00	04	1.80
20	OTHOPAEDICS/TRAUMA	04	00	04	1.80
21	OPTHALMOLOGY	04	03	07	3.15
	TOTAL	170	52	222	100

Source: University of Jos Academic Planning Annual Report for 2016/2017 academic session

'Academic Staff Challenges to Effective Utilization of Information and Communication Technology (ICT) in Teaching/Learning of Agricultural Education' examined the academic staff challenges to effective utilization of ICT in teaching and learning of Agricultural Education in Federal Universities in South East geopolitical zones of Nigeria. Forty respondents were purposively sampled from universities and used for the study. Three research questions guided the study. A 35-item researchers' developed questionnaire was used for data collection. Instrument validation covered face and content validity by two experts in educational management and agricultural education. While reliability index values of 0.86, 0.85 and 0.92 were obtained using Cronbach alpha. Means and grand means were used to analyze the research questions. The findings revealed a low extent utilization and inadequate ICT tool literacy among the academic staff in the federal universities in south east geo-political zone of Nigeria. It was therefore, recommended that the academic staff avail themselves the opportunity of various conferences and workshops to acquire the needed skills for effective utilization of ICT tools.

Abouelenein & Mohamed (2016) in their research titled 'Training needs for faculty members: Towards achieving quality of University Education in the light of technological innovations', was designed to identify training needs of university faculty members, in order to achieve the desired quality in the light of technological innovations. A list of training needs of faculty members was developed in terms of technological innovations in general, developing skills of faculty members in the use of technological innovations and promoting university faculty members in quality assurance skills. The study followed the descriptive-analytic design in presenting the literature.

The data collection was based on a questionnaire developed to assess university faculty members' needs in four areas, these are: teaching, scientific research, community service and promoting quality assurance procedures. The participants were 135 university faculty members chosen from different Saudi universities. Results were statistically analyzed using SPSS. The results revealed the need for university faculty to be trained in the light of technological innovations. The study recommends a program for training faculty members, to use technological innovations, meet their scientific research needs, university teaching, and community service and meet course requirements in terms of quality standards and performance indicators.

Stukalina (2012) investigated the level and depth of use of computers by university staff in Nigeria. Findings revealed 58.5% use computers for word processing, 32.2% use it for spreadsheet and data processing and 20.5% use it for programming. 66.9% use it for email/ Internet while 9.4% use the computer for other purposes apart from the aforementioned. Ademodi and Adepoju (2009), conducted a study in Ondo and Ekiti states in Nigeria and found that, the rate of computer skills and competence among ICT trainers working with libraries was low.

In a related study conducted by Casanova, Moreira & Costa (2011) on E-competence and use of ICT for teaching and learning among academic staff both studies concluded that, students and academic staff need to be aware of, and understand, the innovative potential of the technology that is available for their teaching, learning, research and consultancy; and that they need to develop specific, appropriate and new competences to cope with the technological challenges. Emiri (2015) argued that university teachers in Africa have undergone little or no training for their role as lecturers, let alone training for ICT usage. He concluded that it is as if higher education institutions in Africa are using imported ICT staff development approaches in the training of its employees which means, Africa is not only importing ICT facilities, but also ways of training their own people.

As part of the ongoing drive to reposition the University of Jos as a Center for Academic Excellence and Learning in the 21st century, the University of Jos Management built computer Laboratories in all its faculties and provided free Internet services for both staff and students. Nevertheless, the university management also subscribed to so many relevant Internet databases for its staff and students. In addition, the university management has been organizing series of workshops, lectures and seminars for the lecturers in the faculties on the awareness, use and relevance of the subscribed Internet databases for teaching and research activities on campus. However, the academics on campus hardly utilized the subscribed database (University of Jos Library annual report, 2017). Could it be that the

academics do not possess enough ICT competence to access the subscribed databases? It was on this background that this research was designed to assess the specific ICT Training Needs of Academic Staff in University of Jos, using the Faculty of Medical Sciences academics as a focal population.

METHODOLOGY

Research Design

Survey Research Design was adopted for this study. According to Busher & Harter (1980) survey research design enables specific issues to be investigated through information gathering on people's opinions and believes over a wide population. This technique is relevant to this study because it involved sampling of opinions of Academics in the Faculty of Medical Science, University of Jos, on their Information and Communication Technology (ICT) Training Needs.

Population of the Study

The targeted population for this study comprises all the 222 Academics in the Faculty of Medical Sciences, University of Jos. Since, this population (222) is manageable; there was no need for sampling. Hence, all the academics were adopted (Complete Census) in the research - see table 1.

Research Instrument

The instrument used for data collection was questionnaire. A 52 items structured questionnaire was designed. The questionnaire was divided into 2 sections. Section 'A' sought for information on personal (Demographic) data of the respondents. Section "B" sought for information on the lecturers in the faculty of Medical Sciences, University of Jos, previous knowledge and skills in using ICT facilities; type of training the lecturers received; training methods preferred by the lecturers in learning about electronic information resources; need for training based on the ranks of the lecturers; how ICTs training needs of the lecturers were identified; ICTs training needs of the lecturers; problems associated with ICTs use to improve teaching and learning.

Validation of the Instrument

The questionnaire went through content validity check. Copies of the questionnaire were given to senior colleagues in the profession. The essence of this exercise was to ensure that the questions were clear, simple and appropriate for the study. On the basis of their

suggestions and modifications, some of the items were modified to suit the objectives of the study. A final draft of the questionnaire was then prepared and used for the study.

Pretest:

A pretest of the study was conducted using test and retest method. Twenty (20) lecturers from the Faculty of Medical Sciences, University of Maiduguri, were used to test the reliability of the questionnaire. The reliability coefficient of r=0.86 was obtained, and the coefficient was considered high enough for reliability (Tiraieyari, Idris, Uli & Hamzah, 2011). This enabled the researcher to ascertain whether or not the questions asked were able to generate the required data. The questionnaire was then distributed.

Administration of Questionnaire

Based on the total number (222) of the lecturers in the Faculty of Medical Sciences, University of Jos, 222 copies of the questionnaire were produced and administered to the lecturers in their offices and collected the next day.

Method of Data Analysis

Data collected were analyzed using descriptive statistics of frequency counts and percentages for answering the research questions. Tables were also provided where necessary.

Response Rate

Two hundred and twenty two (222) copies of the questionnaire were administered to the respondents in their offices. Out of the 222 copies distributed one hundred and ninety eight (198) copies were filled, returned and found usable. This gave a response rate of 89.18%. (Table 2).

DATA ANALYSES

Table 2, shows the response rate of the respondents. This revealed that out of 222 copies of the questionnaire distributed, 198 were filled correctly and returned. This gave a response rate of 89.18%.

Table 3, shows the distribution of the respondents by rank. This revealed that the highest proportion 92 (46.46%) of the respondents were Lecturers I and II. This was followed by Professors and readers with 56 (28.28%) respondents, Senior Lecturers 42 (21.21%) respondents, Assistant Lecturers 6 (3.03%) respondents and Tutors (Others) 2 (1.01%) respectively.

Table 4, illustrates the respondents' previous knowledge in using ICT facilities. This showed that the highest proportion 51 (25.76%) of the respondents indicated that they had previous knowledge in using e-mail. This was followed by 48 (24.24%) respondents that claimed downloading/uploading a file from the internet; 41 (20.70%) of the respondents submitted word processing; 22 (11.11%) of the respondents indicated power-point design and presentation, 14 (7.07%) of the respondents affirmed using WWW search engines; 9 (4.54%) of the respondents indicated spread sheet programmme; 8 (4.04%) of the respondents stated graphic design, respectively.

Table 5, shows the type of training received by the respondents. This revealed that more than half 103 (52.02%) of the respondents submitted attending workshop, this was followed by 51 (25.75%) of the respondents that indicated got help from friends/associates; 25 (12.62%) respondents said computer assisted instruction; 12 (6.06%) respondents claimed classroom instruction; 7 (3.54%) respondents affirmed one to one instruction, respectively.

Table 6, revealed the training method preferred by the respondents. This showed that the highest proportion 71 (35.85%) of the respondents indicated one on one. While 51 (24.76%), 40 (20.20%), 32 (16.16%) and 4 (2.02%) of the respondents submitted that the training method they preferred were classroom demonstration, workshop, classroom assisted instructions and printed sheets/manuals, respectively.

Table 7, shows the need for training based on the respondents' ranks. This indicated that all 2 (100%) of the Tutors (others) agreed that they need more training on the ICT use. Also, all 6(100%) of the Assistant Lecturers; 81 (88.04%) Lecturers I and II; 28 (66.66%) Senior Lecturers; and 18 (32.00%) Professors/Readers admitted that they need further training in the use of ICT facilities, respectively.

Table 8, reveals how training needs of the lecturers were identified. The highest proportion 92 (46.46%) of the respondents claimed that it was by various discussions with colleagues. While 45 (22.72%), 33 (16.67%) and 28 (14.14%) of the respondents affirmed that it was by the faculty computer instructor, by my-self and by appraisal of knowledge of EIR by the faculty, respectively.

Table 9, shows the percentage distribution of respondents ICT needs. This revealed that majority (98.12%) of the respondents indicated Internet and online activities like browsing for project materials. This is followed by those that submitted E-mail accessing / usage (91.20%), Data analysis using computer software (e.g SPPF, GENSAT, Excel etc.) (86.02%), preparation of slides (83.04%), Word processing (76.10%), General windows skill (72.02%), and Excel spread sheet (71.02%), respectively.

Table 10, shows the problems associated with ICTs

Table 2: Response Rate

No. of Copies of Questionnaire Distributed	No. Returned (Frequency)	Percentage (%)
222	198	89.18

Source: Field Work

Table 3: Ranks of the Respondents
N=198

S/N	Ranks	Frequency (No.)	Percentage (%)
1	Professor /Readers	56	28.28
2	Senior Lecturers	42	21.21
3	Lectures 1 & 11	92	46.46
4	Assistant Lecturers	06	3.03
5	Others (Tutors)	02	1.01
	TOTAL	**198**	**100**

Source: Field Work

Table 4: Respondents Previous knowledge in Using ICT Facilities
N=198

S/N	Pervious knowledge in using ICT facilities	Frequency (No.)	Percentage (%)
1	Word processing	41	20.70
2	E-mail	51	25.76
3	Using a www search engine	14	7.07
4	Downloading/uploading a file from the internet	48	24.24
5	Online discussion	05	2.52
6	PowerPoint design and presentation	22	11.11
7	Spread sheet programme	09	4.54
8	Graphic design	08	4.04
	TOTAL	**198**	**100.00**

Source: Field Work

Table 5: Type of Training Received by Respondents
N=198

S/N	Types of Training	Frequency (No)	Percentage (%)
1	Attending workshops	103	52.02
2	Got help from friends/associates	51	25.75
3	Computer assisted instruction	25	12.62
4	Classroom instruction	12	6.06
5	One to one instruction	07	3.54
	TOTAL	**198**	**100.00**

Source: Field

use to improve teaching and learning by the respondents. The highest proportion 28 (14.14%) of the respondents indicated incessant power failure, while 26 (12.13%), 25 (13.62%), 24 (14.12%), 23 (15.61%), 19 (6.59%), 14(7.07%),13 (8.65%),12 (9.06%),9 (10.54%),3 (11.51%) and 2 (12.01%) of the respondents submitted that the problems they faced in the use of the ICTs were high cost of ICT equipment, inadequate ICT facilities, poor internet connectivity, lack of internet access, non- availability of ICT training centres to update ICT knowledge, financial problems, poor attitude towards acquiring ICT skills, lack of competence in internet searching skills on the part of many lecturers, too busy schedule, lack of awareness on the various analytical software and priority issues on the part of both the faculty and the university, respectively.

Table 6: Training Method Preferred by Respondents
N=198

S/N	Preferred Training Methods	Frequency (No.)	Percentage (%)
1	One to one instruction	71	35.85
2	Classroom demonstration	51	24.76
3	Computer assisted instruction	32	16.16
4	Workshop	40	20.20
5	Printed sheets/manual	04	2.02
	TOTAL	**198**	**100.00**

Source: Field Work

Table 7: Need for Training Based on the Ranks of the Respondents
N=198

S/N	Ranks	Number of Respondents	Yes	Percentage (%)	No	Percentage (%)
1	Professors/Readers	56	18	32.00	38	68.00
2	Senior Lecturers	42	28	66.66	14	33.34
3	Lecturers 1/11	92	81	88.04	11	11.96
4	Assistant Lecturers	06	06	100	00	0.00
5	Others (Others)	02	02	100	00	0.00
	TOTAL	198	135	68.18	63	31.81

Source: Field Work

Table 8: How Training Needs of Respondents were Identified
N=198

S/N	Statements	Frequency (No.)	Percentage (%)
1	By various discussion with colleagues	92	46.46
2	Identify my own training needs by myself	33	16.67
3	By the faculty computer instructor	45	22.72
4	By appraisal of knowledge of EIR by the faculty	28	14.14
	TOTAL	198	100.00

Source: Field Work

Table 9: Percentage Distribution of Respondents ICT Training Needs.

Area of Training Needs	Yes (%)	No (%)
General windows skill	72.02	27.98
Word processing	76.10	23.90
Excel spread sheet	71.20	28.80
Preparation of slides	83.04	16.96
E-mail accessing / usage	91.20	8.80
Internet and online activities like browsing for project materials	98.12	1.88
Data analysis using computer software e.g. SPSS, GENSTAT, Excel, E-view etc	86.02	13.98

Source: Field Work

DISCUSSION OF FINDINGS

Table 4, shows that the highest proportion 51 (25.76%) of the respondents claimed that they have previous knowledge on the use of e-mail. This finding could possibly be because e-mail is used for communication and it is the fastest means of communication, because of this, the lecturers were forced to acquire the e-mail skill. This finding corroborates the works of Manduna (2014) and Liu (2015) who on separate occasions submitted that email services is one of the services that encouraged academics to exchange ideas on their researches with colleagues and friends, and even send their articles for publication. They further claimed that the knowledge and

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Table 10: Problems Associated with ICTs use to Improve Teaching and Learning by the Respondents
N=198

S/N	Problems associated with ICTs use to improve teaching and learning	Frequency (No.)	Percentage (%)
1	Non availability of ICT training centers to update ICT knowledge	19	9.59
2	Inadequate ICT facilities like computer, electronic board in the faculty	25	12.62
3	High cost of ICT equipment	26	13.13
4	Incessant power failure	28	14.14
5	Lack of internet access	23	11.61
6	Poor internet connectivity	24	12.12
7	Too busy schedule	09	4.54
8	Lack of awareness on the various analytical software e,g SPSS, STATA etc	03	1.51
9	Poor attitude towards acquiring ICT skills	13	6.56
10	Priority issues on the part of both the faculty and the university	02	1.01
11	Financial problem	14	7.07
12	Lack of competence in internet searching skills on the part of many lecturers	12	6.06
	TOTAL	**198**	**100.00**

Source: Field Work

use of email serves amongst the academics is higher than that of any other profession.

Table 5, shows the type of training received by the respondents. This revealed that majority 103 (52.02%) of the respondents indicated they acquired the ICT knowledge through attending workshops. This observation could be because most academics are usually sponsored to attend workshops by their Institutions. Hence, majority of the academic submitted attending workshops. This finding is in line with the works of Chan (2010) and Griffith and Rubera (2014) who on different occasions pointed out that workshops are one of the effective means of imparting knowledge.

Table 6, shows the training method preferred by the respondents. Highest proportion 71 (35.85%) of the respondents affirmed, that one to one instruction. This could be because one to one instruction involves one instructor teaching one learner. One to one instruction normally gives room for more interaction and learning between the instructor and the learner. This observation supported the woks of OZcan (2013) and Mohammed & Osman (2014) who independently concluded in their researches that one to one method of imparting knowledge is the best effective method to impart knowledge because it creates room for more questioning and explanation (interaction). Hence, it creates room for total understanding of any issue under discussion/training.

Table 7, reveals the need for training based on the ranks of the respondents. This showed that all the 2 (100%) Tutors (others) and all the 6 (100%) Assistant

lecturers agreed that they need more training in the use of the ICTs faculties. This finding could possibility be because the ranks of Tutors (others) and Assistant Lecturers are usually considered as a learning/training positions. Most of them are engaged in one programme or the other. Hence they are ready to undergo any training. This situation is just the opposite as one moves to a higher rank. This observation corroborates the reports of Alshaghadi, Greener and Loveless (2014) and Mohammed & Osman (2014) who on separate occasions pointed out that training need of academics are usually inversely proportional to their ranks. That is, as the rank of a worker goes higher, less likely will the worker like to undergo training or learning new ideas.

Table 8 illustrates how training needs of the respondents were identified. The highest proportion 92 (46.46%) of the respondents claimed that they identified their ICTs training needs by various discussions with colleagues. This finding could be because latest developments or issues in any profession, are often discussed when colleagues come together in a meeting (Faculty Board Meeting) or in conferences and workshops. However, this observation is in line with the works of Kecetep & Ozcan (2014), Casanova, Moreira & Costa (2011) and Khallaf-allah (2010) who on separate occasions affirmed that academics training needs are usually identified through discussions with colleagues, usually in gatherings, conferences, workshops, seminars and informal meetings.

Table 9, shows the areas the respondents need ICT training. This revealed that majority 98.12% of the

respondents admitted that they need training in internet.

This finding could be because the internet hosts large amount of information resources in all filed of knowledge. Hence, the academics want to be able to access these resources in the internet for teaching, research and learning. Hence, they all express their desire, by submitting that they need training in internet use. This finding supports the works of Lyad (2015) and Omotunde & Ajie (2017) who submitted that most academics are usually interested in acquiring internet skills. They further claimed that internet skills of academics often correlate positively with their research output. This observation was also confirmed by the works of Nwokedi & Nwokedi (2018), and has further amplified the importance of internet skills to academics.

Table 10, illustrates the problems associated with ICTs use to improve research, teaching and learning. The highest proportion 28 (14.14%) of the respondents indicated incessant power failure. This finding could be because electricity power is needed to power the ICT facilities before they can be put into use. The electricity power situation in Nigeria is embarrassingly very low (Emiri, 2015). At times, some parts of Nigeria may go on without electricity power supply for weeks and even months (Abouelenein & Mohamed, 2016). This finding is in line with works of Nwokedi & Nwokedi (2018) who on different occasions submitted that one of the major challenges of using ICTs facilities in Nigeria was constant electricity power outages and slow internet access respectively.

SUMMARY OF MAJOR FINDINGS

1. The highest proportion 51 (25.76%) of the respondents have previous knowledge in the use of E-mail services;
2. Majority 103 (52.02%) of the respondents indicated that the type of raining they received was through attending workshops;
3. Highest proportion 71 (35.85%) of the respondents agreed that the training method they preferred was one to one instruction;
4. All the 2 (100%) Tutors (others) and all the 6 (100%) Assistant Lecturers stated that they need more training in the use of ICTs facilities;
5. Highest proportion 92 (46.46%) of the respondents affirmed that they identified their ICT training needs by discussions with colleagues;
6. Majority (98.12%) of the respondents submitted that they need training in Internet and online activities like browsing for materials for project writing, teaching and learning.
7. Highest proportion 28 (14.14%) of the respondents indicated incessant power failure as the major challenge they faced in the use of ICTs to improve teaching and learning in the Faculty of

Medical Sciences, University of Jos.

CONCLUSION AND RECOMMENDATIONS

Following the establishment of internet and subsequent migration of information resources to the internet, it becomes mandatory that academics must acquire skills that will enable them to access the resources in the internet, if they are to remain relevant in their chosen career. Hence, Lecturers need continuing professional development in order to maintain and upgrade their ICT skills. They also need to exemplify a willingness to explore and discover new technological capabilities that would enhance and expand learning experiences. Therefore, for a satisfactory teaching and research in the university, it is absolutely essential that lecturers, as the most valuable human resource in the educational sector, should improve their ICT skills properly. They need a wide variety of educational opportunities to improve these ICT skills. The highest demand for ICT training need by the academics was improvement in the use of internet and online activities. However, challenges such as Incessant power failure, High cost of ICT equipment, and Poor Internet connectivity could hamper teaching, research and learning in the University. Hence, there is the need to expose these staff of the faculty to ICT training to enhance their skills in the use of ICTs. Efforts should also be made by the University management to look beyond development of programmes that merely focus on training academics in the operation of computers and ICT literacy per se but plans to work actively towards enabling Faculty of Medical Sciences academics to master ICT as an effective tool to improve teaching, research and learning in the university.

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