

COMPUTER LITERACY SKILL AS PREDICTOR OF USE OF DIGITIZED DATABASES IN FEDERAL POLYTECHNICS IN SOUTH-WESTERN NIGERIA

By

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Abstract

The study sought to find out whether computer literacy skill predicts the use of digitised databases among engineering technology students in Southwest Nigeria. A descriptive research of correlational type was adopted for the study, while questionnaire was used as the instrument for data collection. Two questions were answered and one hypothesis tested at 0.05 level of significance. Nine hundred and forty-seven (947) Higher National Diploma II engineering technology students comprising 770 male and 177 female respondents selected from four federal polytechnics in southwest Nigeria were involved in the study. The only hypothesis tested was found to be significant and so rejected. The findings show that computer literacy correlated significantly with the use of digitised databases among engineering technology students in federal polytechnics in southwest Nigeria. Furthermore, the level of use of digitised database as well as level of computer literacy skill of the respondents were found to be high and moderate respectively. The

study concludes that, acquisition of computer literacy skill is an essential tool that can aid the use of digitised databases among engineering technology students in federal polytechnics in Nigeria. The study suggests far reaching recommendations on the need for stakeholders to blend the use of digitised databases with print resources and polytechnic institutions to provide proper and consistent computer and information literacy programmes in their curricular to cater for low computer skilled users.

Keywords: Engineering students; Polytechnics in Nigeria; Use of digitised databases; Computer literacy skill.

Introduction

The birth of Information age known as Computer age is connected with digital revolution, just as the industrial revolution marked the birth of the industrial period. These periods brought about some challenges such as the ones arising from daily explosion of information resources, constant technological changes, need to use information resources effectively and efficiently. Consequently, there is the need for students of higher institutions of learning in Nigeria, especially polytechnics to have preference for digital resources, thereby leading to a change in their information resources' use format. With particular reference to polytechnics in Nigeria, the challenges enumerated above have brought about the need for media-mix especially in the field of engineering if academic performance must be enhanced.

These challenges can be surmounted through the use of digitised databases in the course of their academic pursuits. This is based on the conviction that, technology is a potent and powerful tool for lifelong learning. Besides, with advances in Information and Communication Technology (ICT), electronic information resources such as electronic books and journals, online public access catalogue (OPAC), online databases and the Internet have launched the world into an information age tagged 'tsunami' (Isiakpona & Ifijeh, 2012). It means that, no institution or organisation can still rely only on traditional printed information resources to perform effectively and efficiently. To students, ICT is a significant development that provides tools for managing the avalanche of information generated by modern society.

Resulting from the identified challenges, and all over the world, students in higher institutions of learning especially those from engineering departments in Nigeria need to use digitised information resources so as to cope with the challenges and improve on their academic performance. Consequent upon the need for engineering students to acquire skills, computer literacy is important for students to have a good grasp of communication process which is essential in aiding and moving learner towards meeting positive educational goals. In addition, according to Basic Computer Literacy and Essential Skills Facilitator's Guide (2015), computer literacy skill increases learners' literacy in some or all of the essential skills, and refreshing their technology application memory.

Suffice to say that, engineering technology students are expected to develop new skills and right attitude required to explore and exploit information in electronic resources, conduct research, learn and accomplish other academic tasks. All these can be done through the use of computers

connected to the Internet to search and retrieve needed information from electronic catalogues, e-journals, e-books and large databases of digitised scholarly information.

Ekwelem, Okafor and Ukwuoma (2018) describe digitised databases as information sources that are available and can be accessed electronically through computer-networked facilities such as, on-line library catalogues, the Internet, the World Wide Web (WWW), and digital libraries. A typical example is the African Academic Digital Library (AADL) which provides access to over 1000 well-known published materials. The digital contents cover various educational materials that can meet various knowledge needs. The digital content has the capacity to remove inequality of information access and increase the pace of learning.

Many libraries subscribe to digitised databases for easy access and use of current information. This is also predicated on the fact that, their intellectual contents are certified to be highly classified, authentic, educational and suitable for learners. Therefore, it is not an over statement to say that, digitised databases have emerged as one of the vehicles to achieve the desired change in education. Computer literacy skill is an important component of educational change that students must present in the use of digitised databases. Students should have the ability to successfully and confidently use technology to achieve excellence and survive in the digital environment. This assertion was supported in the Maryland Literacy Skills Compendium (2021) where it is stated that, computer literacy skill is the knowledge and ability to utilise computers and related technology efficiently, with a range of skills covering different levels from elementary use to programming to solving an advanced problem. That, acquisition of the skill is intended to guide students on independent learning and to specifically teach them software application and use to enable them access, manage, integrate, evaluate, create and communicate information for positive learning outcomes. Thus, one can assume that computer literacy skill is the ability to use digital technology, communication tools and networks appropriately to solve information problems in order to function in an information society (Yalia, 2020).

Esse (2014), supporting the aforementioned assertion, submitted that, digitised resources cannot be utilised without adequate computer literacy skill. Equally, she noted that, users need skills to make comparison between paper, CD-ROM and electronic resources. There is therefore the need to equip students with computer literacy and information retrieval skills among others as strategies to promote effective use of digitised databases. Consequently, one may deduce from the above statements that, computer literacy skill remains one of the basic factors students need to utilise electronic publications for learning. It means that, students' computer literacy skill is inevitable in the ability to use digitised databases in the quest for satisfaction of their information needs (Computer Literacy Statistics, 2020). This was discussed by Tenopir (2017) where he opined that, for users to utilise databases, an in-depth knowledge of Information and Communications Technology is required. The statement was also supported in an overview of the Basic Computer literacy skill (2015).

Statement of the Problem

Several challenges have been observed to be the precursor of problems of low use of digitised databases among engineering technology students in polytechnic institutions in Nigeria. Among

the challenges that could impede academic performance of students are poor campus networking for internet browsing, over-dependence on print materials, poor attitude, inadequate Internet access points on campuses, and defects in the use of learning resources. Obviously, the problem of lack of adequate computer literacy skill motivated the conduct of this research work. The gap is what this empirical work strives to fill.

Justification for the study

As a corollary, this study is expected to create incentives to invest in scholarly electronic publications by polytechnic funding bodies, polytechnic managements, external donors and individual students. This would provide information that will enable the Federal Government of Nigeria, National Board for Technical Education, Polytechnic Administrators, Polytechnic Librarians and Media Specialists to make provision for, and formulate appropriate policies on scholarly digitised databases necessary for the use of students in higher institutions in Nigeria.

Objectives of the Study

1. To investigate the level of computer literacy skill possessed by engineering students in Federal Polytechnics in South-western Nigeria.
2. To determine the level of digitised databases utilisation by engineering students in Federal Polytechnics in South-western Nigeria.

Research questions

Research question 1: What is the level of computer literacy skill possessed by engineering students in Federal Polytechnics in South-western Nigeria?

Research question 2: What is the level of utilisation of digitised databases by engineering students in Federal Polytechnics in South-western Nigeria?

Research Hypothesis

H₀: There is no statistically significant relationship between computer literacy skill and use of digitised databases among engineering students in federal polytechnics in South-Western Nigeria.

Literature Review

Ekwelem, Okafor and Ukwoma (2018) describes digitised databases as information sources that are available and can be accessed electronically through Online Library Catalogues (OLC), the Internet, the world wide web and digital libraries. These online resources consist of e-books, full text e-journal articles, newspapers, theses, dissertations, databases and CD-ROMs, which are likely to be alternatives to the print media. Emerald, EBSCOHOST, Scopus, MYlibrary, Compendex are some of the examples of online digitised databases.

Similarly, digitised databases are resources which text may be entered directly by a computer or by other file transfer mechanisms in a machine-readable form. The editorial processing is facilitated by a computer and the articles are thus made available in electronic form to readers. The familiarity and use of these electronic information resources by learners in higher institutions of learning are necessary and important. This assertion was confirmed by Omotayo (2010) who opined that, e-resources remain one of the most valued information and communication channels for researchers globally. Electronic journals and books form the largest part of digitised collection of a library for providing web-based services. Today, many journals are available electronically; some are full text while others are only bibliographic (just indexes and abstracts). Major advantages of electronic resources are constant updates and ease of access and use once a person possesses the necessary skills.

The use of these online educational resources is very important for any meaningful educational enhancement. It is obvious that, researchers and academia have recognised the capabilities of the information and communication technologies as efficient and effective means to share results and get around barriers by full transfer of intellectual property rights from the author to the publisher. It is also a means of improving the slow turn-over of traditional publishing (Correia & Neto, 2016). Electronic journals relatively provide efficient access to information and thus, they are easy to distribute to library patrons than traditional print. In the financially stringent environment of higher education system, electronic journals have become a medium which is cheaper than the traditional printed journals.

According to Tenopir (2017), electronic materials are of two different forms. One, resources in printed form, also available in digital form and two, electronic materials which do not have the print version but can be managed by an editor and the scholarly community. The inference that can be drawn here is that, electronic information resources, being a simple electronic representation of educational materials, replicate exactly the printed version of the materials, but occasionally include additional information (such as interactive graphs of external link). In some cases, parallel print resources may not be available since the materials are born digital. For instance, any available journal on the Internet can be called an '*electronic journal*'. It may or may not have print equivalent. Both types may have a significant impact on scholarly communication and in this way, knowledge is created and disseminated. Both versions can be conveniently used by researchers for academic growth and development. According to literature as cited in the Maryland Literacy Skills Compendium (2021), electronic information has gradually become a major resource in every academic library. Being a unit of electronic resources, Aramide and Bello (2009) noted that, databases can be used as an invaluable asset in education, research, teaching and learning.

The emergence of electronic information resources, simply referred to as e-resources, has tremendously transformed information handling and management in academic environments. Chisenga (2017) opined that, through the use of electronic resources, researchers and students now have access to global information resources, particularly the Internet, for their scholarly intercourse. There is no standard definition available for these electronic resources. As a result of this, they are called by various names such as e-journals, e-books, virtual journals, virtual library,

paperless journals, online books, scholarly electronic theses, e-encyclopaedia and CD-ROM journals or books.

Furthermore, Chisenga (2017) ascertained that, the use and inclusion of databases generally have transformed the conduct of research and teaching in polytechnics and universities by allowing students especially those in technology, a wide range of opportunities for accessing accurate, concise and timely information on various subjects. The researcher also emphasized that, the use of electronic databases allows learners to effectively and efficiently access digitised information to assist with investigating issues, solving problems and making decisions to support learning and develop new understanding in all areas of their academic lives. Suffice to say that, the Internet facilities which are the transmission channel of digitised databases give learners a wide range of opportunities in the creation, processing, transmission and dissemination of information.

Methodology

The study employed descriptive survey design of correlational type. Answers to the research questions were through descriptive statistics such as percentages, mean and standard deviation. Pearson product-moment correlation (PPMC) otherwise referred to as “coefficient” was used in testing the only hypothesis. Population sample for the study comprised 947 HND II engineering students selected through total enumeration or censor’s method in four federal polytechnics in southwest Nigeria, namely: Federal Polytechnic, Ado Ekiti; Federal Polytechnic, Ede; Federal Polytechnic, Ilaro; and Yaba College of Technology, Yaba, Lagos. Out of 1456 copies of the questionnaire distributed, 947 copies representing 65% were properly filled and returned and found suitable analysis.

The research instrument for the study consisted a questionnaire titled “Computer-literacy Skill (CLSQ)” with different scales which measured different constructs personally developed by the researchers. The questionnaire consisted two (2) sections with each section designed to elicit unbiased responses from the respondents. For the psychometric properties of the instrument, the following reliability coefficients were obtained through Cronbach Alpha method: Computer literacy skill, $r = 0.76$; and Use of digitised databases, $r = 0.93$.

Table 1: Questionnaire distribution and the response rate by institution and department

S/N	Polytechnic	Elect. Elect Engr. Tech.	Computer Engr. Tech.	Mech. Engr. Tech.	Civil. Engr. Tech.	Total	Nos. returned	%
1.	Yaba Coll. of Tech., Lagos	102	116	104	126	448	280	62.5
2.	Federal Poly., Ado Ekiti	104	112	100	108	424	291	68.6
3.	Federal Polytechnic, Ede	83	76	-	45	204	139	68.1

4.	Federal Polytechnic, Ilaro	116	98	76	90	380	237	62.3
	Total	405	402	280	369	1456	947	65.0

Research Question 1: What is the level of computer literacy skill possessed by engineering students in Federal Polytechnics in South-western Nigeria?

Table 2: Level of computer literacy skill of engineering technology students in Federal Polytechnics in South-western Nigeria

S/ N	Computer literacy skill scale	SD	D	A	SA	Mean	Std. D
1.	I can confidently use computer to communicate with people and send e-mails.	37 3.9%	68 7.2	244 25.8 %	598 63.1 %	3.48	.79
2.	I have the ability to check my mail account.	70 7.4%	96 10.1 %	242 25.6 %	539 56.9 %	3.32	.93
3.	I can use the computer to surf the world wide web.	57 6.0%	80 8.4%	334 35.3 %	476 50.3 %	3.30	.86
4.	I can confidently use the computer facilities to find needed information.	68 7.2%	86 9.1%	321 33.9 %	472 49.8 %	3.26	.90
5.	I can use computer to access information needed to perform tasks related to learning in an efficient manner.	58 6.1%	151 15.9 %	306 32.3 %	432 45.6 %	3.17	.91
6.	I am able to use the computer to organise and manage files.	48 5.1%	126 13.3 %	409 43.2 %	364 38.4 %	3.15	.84
7.	I know how to get information from databases online.	53 5.6%	154 16.3 %	577 39.8 %	363 38.3 %	3.11	.87
8.	I am proficient in the use of computer to browse the Internet.	120 12.7%	144 14.9 %	225 23.8 %	461 48.7 %	3.08	1.07
9.	I can comfortably use the computer to organise information.	78 8.2%	150 15.8 %	368 38.9 %	351 37.1 %	3.05	.93
10.	I can draw pictures on the computer.	92 9.7%	171 18.1 %	303 32.0 %	381 40.2 %	3.03	.99
11.	I can use the computer to analyse data.	93 9.8%	142 15.0 %	366 38.6 %	346 36.5 %	3.02	.95

12.	I can confidently use computer facilities to solve practical problems.	70 7.4%	171 18.1 %	393 41.5 %	313 33.1 %	3.00	.90
13.	I am experienced at using ICT in learning.	121 12.8%	150 15.8 %	327 34.5 %	349 36.9 %	2.95	1.02
14.	I am able to use variety of programmes (software).	116 12.2%	153 16.2 %	389 41.1 %	289 30.6 %	2.90	.97
15.	I am proficient in the use of computer to carry out research work.	201 21.1%	113 11.9 %	283 29.9 %	350 37.0 %	2.83	1.14
16.	I can make selections from the databases online.	263 27.8%	234 24.7 %	275 29.0 %	175 18.5 %	2.38	1.08
17.	I do not have the ability to handle online software.	323 24.5%	280 29.6 %	288 30.4 %	147 15.5 %	2.37	1.02
18.	I cannot get software up and running.	238 25.1%	320 33.8 %	244 25.8 %	145 15.3 %	2.31	1.01
19.	I understand all the terms relating to online databases.	239 25.2%	319 33.7 %	271 28.6 %	118 12.5 %	2.28	.98
20.	I have low ability to work on a personal computer.	384 40.5%	177 18.7 %	195 20.6 %	191 20.2 %	2.20	1.17
21.	I have no ability to organise and manage online files	335 35.4%	281 29.7 %	211 22.3 %	120 12.7 %	2.12	1.03
22.	I have low ability to word process my documents on the computer.	334 35.3%	305 32.2 %	223 23.5 %	85 9.0%	2.06	.97
23.	I cannot handle, fix and remove storage devices correctly.	382 40.3%	262 27.7 %	200 21.1 %	103 10.9 %	2.03	1.02
24.	I have low ability to search for databases relating to my course of study online.	370 39.1%	292 30.8 %	188 19.9 %	97 10.2 %	2.01	1.00
25.	I cannot integrate computer facilities in learning.	373 39.4%	313 33.1 %	157 16.6 %	104 11.0 %	1.99	1.00
26.	I do not know how to copy from the CD-ROM.	407 43.0%	265 28.0 %	170 18.0 %	105 11.1 %	1.97	1.03

27.	I cannot confidently use computer for the following purposes: refresh, reboot, reload, stop, forward, etc.	453 47.8%	234 24.7 %	127 13.4 %	133 14.0 %	1.94	1.08
28.	I am not able to perform basic operations like using keyboard, mouse, launch browsers, etc.	556 58.7%	202 21.3 %	95 10.0 %	94 9.9%	1.71	1.00
29.	I am not experienced at using computer and its facilities.	595 60.7%	182 19.2 %	117 12.4 %	73 7.7%	1.67	.97
GRAND MEAN = 2.61							

In Table 2, the overall mean score and the standard deviation of computer literacy skill of engineering technology students in federal polytechnics in South-western Nigeria are 75.71 and 9.64 respectively. Furthermore, the percentage score of the respondents who strongly agreed and agreed respectively with the questionnaire items on computer literacy skill is put at 68.4%. It can thus be deduced from the results that, the level of computer literacy skill of engineering technology students in federal polytechnics in Southwest Nigeria is moderately high. This is further confirmed in the test norm table (Table 3) which clearly specifies an overall mean score of 75.71 within the moderate interval level. This clearly demonstrates that, engineering technology students in federal polytechnics, especially in Southwest Nigeria are computer literate and possess the necessary computer literacy skill to explore the numerous digitised databases in their various areas of studies.

In terms of ranking, the item-by-item analysis indicates that, the statement, ‘*I can confidently use computer to communicate with people and send e-mails*’ (mean = 3.48) ranks highest by the mean score rating, followed by ‘*I have the ability to check my mail*’ (mean = 3.32), and ‘*I can use the computer to surf the World Wide Web (WWW)*’ (mean = 3.30). On the other hand, the last three statements, ‘*I cannot confidently use computer to refresh, reboot, reload, stop forward, etc.*’, (mean = 1.94), ‘*I am not able to perform basic operations like using keyboards, mouse, launch browsers, etc.*’, (mean = 1.71), and ‘*I am not experienced at using computer and its facilities*’ (mean = 1.67) rank lowest.

Table 3: Test norm table of computer literacy skill of engineering technology students in federal polytechnics in Southwest Nigeria

Interval	Total mean score	Remark
1 - 39		Low CL
40 - 78	75.71	Moderate CL
79 - 117		High CL

*CL = Computer literacy skill

- (a) Maximum scores for a respondent on the 29 item CL scale (29 x 4) = 116
- (b) Level of computer literacy, that is, three levels (**high, moderate and low**) = 3
- (c) To establish an interval score (116/3) = 38.6 = 39

(d) Therefore, an interval score of 39 is used to chart the norm table.

The overall mean score of engineering technology students on computer literacy skill scale of 75.71 falls within the interval distribution of 40 – 78 which is moderate computer literacy skill. This clearly shows that the level of computer literacy skill of engineering technology students in federal polytechnics in South-western Nigeria is moderately high.

Research Question 2: What is the level of digitised databases utilisation by engineering students in Federal Polytechnics in South-western Nigeria?

Table 4: Level of utilisation of digitised databases among engineering technology students in federal polytechnics in South-western, Nigeria

S/N	Digitised databases	Very highly utilised	Highly utilised	Occasionally utilised	Not utilised	Mean	Standard deviation
1.	Myilibrary	216 22.8%	215 22.7%	272 28.7%	244 25.8%	2.5 7	1.10
2.	ScienceDirect	201 21.2%	244 25.8%	268 28.3%	234 24.7%	2.5 6	1.08
3.	Engineering Materials Abstracts (EMA)	218 23.0%	243 25.7%	232 24.5%	254 26.8%	2.5 5	1.12
4.	African Journal Online (AJOL)	238 25.1%	203 21.4%	314 33.2%	192 20.3%	2.4 9	1.08
5.	Engineered Materials Index (EMI)	225 23.8%	296 31.3%	227 24.0%	199 21.0%	2.4 2	1.07
6.	Engineering Village 2	238 25.1%	251 26.5%	286 30.2%	172 18.2%	2.4 1	1.05
7.	Engnetbase Engineering Handbooks Online	233 24.6%	258 27.2%	291 30.7%	165 17.4%	2.4 1	1.04
8.	Journal Storage (JSTOR)	236 24.9%	276 29.1%	276 29.1%	159 16.8%	2.3 8	1.03
9.	IEEE/IET Electronic Library (IEL)	269 28.4%	253 26.7%	233 24.6%	192 20.3%	2.3 7	1.10
10.	Directory of Open Access Journal (DOAJ)	273 28.8%	279 29.5%	225 23.8%	170 18.0%	2.3 1	1.07
11.	EBSCOHOST (e-journal)	295 31.2%	276 29.1%	248 26.2%	128 13.5%	2.2 2	1.03
12.	E-Granary e-books	280 29.6%	352 37.2%	200 21.1%	115 12.1%	2.1 6	.98
13.	INSPEC	301 31.8%	284 30.0%	272 28.7%	90 9.5%	2.1 6	.98
14.	Wilson WEB Omnifile	352 37.2%	232 24.5%	221 23.3%	142 15.0%	2.1 6	1.09

15.	Compendex	332 35.1%	285 30.1%	217 22.9%	113 11.9%	2.1 2	1.02
GRAND MEAN = 2.35							

The overall mean score of the respondents stands at 46.93 while the standard deviation is 6.72. The percentage score of those who have positive ratings of the questionnaire items is 55.29%. This shows that the level of use of digitised databases among engineering technology students in federal polytechnics in southwest Nigeria is high. Table 5 further illustrates this conclusion that the overall mean score of the respondents falls within the high use in the norm table. This clearly shows that engineering technology students of federal polytechnics in South-western Nigeria make use of digitised databases for their academic pursuits.

In terms of item-by-item analysis, the most heavily used digitised database is Mylibrary (mean = 2.57), followed closely by ScienceDirect (mean = 2.56) then Engineering Materials Abstracts (mean = 2.55). Then in the lower rank, INSPEC (mean = 2.16), Wilson WEB Omnifile (mean = 2.16) and Compendex (mean = 2.12) remain the least used among the digitised databases.

Table 5: Test norm table on the level of use of digitised databases by engineering technology students in federal polytechnics in South-western Nigeria

Interval	Total mean score	Remark
1 - 20		Low use
21 - 40		Moderate use
41 - 60	46.93	High use

Maximum scores for a respondent on the 15 items utilisation scale (15 x 4) = 60
 Level of use, that is, three levels (**high, average and low**) = 3
 To establish an interval score, (60/3) = 20 = 20
 Therefore, an interval score of 20 is used to chart the norm table.

Thus, the overall mean score of engineering technology students on the level of use of digitised databases scale of 46.93 falls within the interval distribution of 41 – 60 which is high (Table 5). This clearly shows that the level of use of digitised databases among engineering technology students in federal polytechnics in South-western Nigeria is high.

Testing of hypothesis

H₀₁: There is no significant relationship between computer literacy skill and use of digitised databases among engineering technology students in federal polytechnics in Southwest Nigeria.

Table 6: What is the relationship between the level of computer literacy skill and utilisation of digitised databases among engineering students in federal Polytechnics in South-western Nigeria?

Variable	Mean	Std. Dev.	n	R	P	Remark
Computer literacy skill	75.7117	9.6376	947	0.299**	0.000	Sig.
Use of Digitised Databases	46.9282	6.7146				

** Correlation significant at .05 level

As depicted in Table 6, positive significant relationship existed between use of digitised databases and computer literacy skill by engineering technology students in federal polytechnics in South-western Nigeria ($r = 0.299^{**}$, $N = 947$, $P < 0.05$). This means that, computer literacy skill correlated significantly with the use of digitised databases among engineering technology students in the study. Therefore, the null hypothesis was rejected. An inference from this result is that, engineering technology students need to be well versed in computer literacy skill so as to explore the vast resources available in the digitised databases.

Discussion of the findings

The first section of the questionnaire elicited demographic information from the respondents. These included their age, gender and designation while other sections bordered on level of computer literacy skill and use of digitised databases. Findings on the demographic variables of the respondents depict a skewness in gender representation. It consisted of 770 males representing 81%, and 177 (19%) females. The skewness may be due to the fact that, engineering courses are perceived as masculine profession in our society than being feminine.

Level of computer literacy skill possessed by engineering technology students in federal polytechnics in Southwest Nigeria.

Research question one sought to find out the level of computer literacy skill possessed by engineering technology students in federal polytechnics in South-western Nigeria. The finding clearly shows that the level of computer literacy skill is moderate with most of the respondents indicating their ability to confidently use computer to perform many tasks. Many of the respondents specifically indicated their ability to obtain information from digitised databases such as EBSCOHOST, E-granary, JSTOR, Nigerian Virtual Library, DOAJ, and HIGHWIRE ARCHIVE among others. This implies that, if computer literacy skill of engineering technology students improves, use of scholarly electronic publications in polytechnic libraries will increase. In other words, use of e-materials is contingent on competence in computer literacy skill. This finding is in tandem with a related study by Jenkins, Mimbs, and Kitchel (2009) on teachers. They found out that, teachers agreed that they had knowledge connected to computer literacy. Meaning that, electronic resources are widely used among higher institution students and that there is a direct relationship between computer literacy skill and use of electronic resources. This scenario

of high computer literacy skill among engineering technology students is a pointer to knowledge as food to soul, translating to the fact that, computer literacy skill is a key factor in digitised databases' use among students. To engineering technology students in federal polytechnics in South-western Nigeria, this is an indispensable instrument for educational growth and outcome.

Level of use of digitised databases among engineering technology students in federal polytechnics in South-western Nigeria

Research question two also sought to find out the level of use of digitised databases among engineering technology students in federal polytechnics in South-western Nigeria. The finding of this research question indicates that the level of use of digitised databases among engineering students in federal polytechnics in southwest Nigeria is high. The interpretation of this is that, engineering technology students have the competencies to use digitised databases maximally in respect of their academic pursuits. This finding also indicates that, engineering technology students in federal polytechnics in South-western Nigeria use digitised databases to complement prints for them to excel in their courses of study and to collect additional points to what they got from the familiarised sources.

This is in consonance with the finding of Ajuwon (2014) that, many students now use digitised databases such as e-books, e-journals and other available resources in the university libraries for learning and research activities. The use, it is believed in many quarters, enables students to do better literature reviews for their projects, dissertations and manuscripts. She further reported that, scholars of the National Open University, through distant learning programme in two Nigerian study centres indicated that, majority of the respondents in the two study centres, to a great extent, made use of the available electronic information resources mostly for knowledge acquisition and learning purposes. She enumerated other reasons that enhanced the use of e-materials by the respondents. These are; access, ease of use, deviation from the use of aging and poor textbooks, centrality of information centres, conducive environment and so on.

Summary

This research work was conducted with a view to establishing linkage mechanisms between the dependent variable '*use of digitised databases*' and independent variable '*computer literacy skill*'. Answers were sought for two research questions with one hypothesis tested. The following are the major research findings arrived from the study.

- The level of computer literacy skill of engineering technology students in federal polytechnics in South-western Nigeria is moderate. Thus relatively, the students possess adequate computer literacy skill in the areas of word processing, surfing the Internet, use of computer to solve practical problems and other related skills that enable them to retrieve relevant information in libraries. In other words, moderate computer competence level of engineering technology students in federal polytechnics in Nigeria stimulated their significant and high use of digitised databases. This is expected to give engineering technology students a lift in their educational pursuit.

- The study also found out that, the level of use of digitised databases of engineering technology students in federal polytechnics is high. This is an indication of a better use of the electronic information resources by engineering technologists in training. This could be attributed to factors such as the need for academic excellence to enhance their research productivity and advancement in the areas of technology in Nigeria.

Conclusion

For a result-oriented library and information services and in tandem with the findings of this research work, the study concludes that, efficient and effective utilisation of digitised databases by engineering technology students in federal polytechnics in Nigeria is germane to good performance in their academic pursuits. Any contrary view by the engineering technology students may force the students to continue to face some challenges arising from inappropriate, inefficient and inadequate use of digitised databases. Therefore, it is essential to provide free access to information resources online to motivate, encourage and inspire engineering technology students to use digitised databases to obtain quality information with a view to making informed decisions so as to improve their academic performance and educational pursuits.

Recommendations

Based on the findings of this research work, the following recommendations are proffered:

1. It is recommended that scholars should combine the use of print resources with digitised databases. Learners should also learn how to discover and use relevant information that exists in their chosen fields of knowledge around the world. This, if done can be of immeasurable benefits to the entire citizenry, boost the use of information resources for academic performance, research output and technological growth.
2. The Management of the polytechnic institutions in Nigeria should provide proper and consistent computer and information literacy programmes in their curricular to cater for low computer skilled users. This is central to all successful learning and by extension, to all successful living. Also, this will help re-engineer research and development policies that may eventually earn reputation and recognition. By implication, many of the skills underlying the attributes of being a lifelong learner are embedded in computer and information literacy skill hence, institutions with a focus on lifelong learning should also have a strong focus on computer literacy skill development for all students. To accomplish this, programmes such as Advanced Digital Appreciation Programme for Tertiary Institutions (ADAPTI) by Digital Bridge Institute, sponsored and funded by the Nigerian Communications Commission (NCC) can be replicated. The programme introduces students in tertiary institutions to an in-depth computer literacy skill training.
3. There should also be sufficient provision of digitised databases that can promote scholarship, creativity, knowledge transfer, global educational mobility and accelerate the much desired vocational and technological advancement required to move Nigeria forward. Libraries and school library media centres should therefore be automated, digitised and be self-sufficient to enhance and advance the use of beneficial media by prospective students.

References

- Ajuwon, G. A. (2014). Changing behaviours in learning, research, teaching and patient care transforms output and treatment. Retrieved from: [www. research4life.com](http://www.research4life.com).
- Aramide, K. A., & Bello, T. (2009). Accessing electronic databases for curriculum delivery in schools: Implications for school library media specialists. Paper presented at the 24th Annual Conference of the Nigerian School Library Association, held at the Multipurpose Hall, University of Ibadan.
- Basic Computer Literacy and Essential Skills Facilitator's Guide (2015). Community learning network. Retrieved from [computer literacy skill 3.pdf](#) 06 Oct. 2021.
- Chisenga, J. (2017). Implementing and using electronic mail at the National University of Lesotho. *African Journal of Library Archival and Information Science*, 7(2), 13-24.
- Computer Literacy Statistics (2020). Annual Department of Census and Statistics, Sri Lanka [AnnualBuletinComputerLiteracy-2020.pdf](#) January - December – 2020. Retrieved from <https://www.diversity.unc.edu/wp-content//upload/sites/371/2020/Julia>
- Correia, A. M. R., & Neto, M. D. (2016). The role of e-print archives in the access to and dissemination of scientific grey literature: Liza-a case study by National Library of Portugal *Journal of Information Science*, 28(3), 207-223
- Ekwelem, V. O., Okafor, V. N., & Ukwuoma, S. C. (2018). Students' use of electronic information resources at the University of Nigeria, Nsukka. *African Journal of Library, Archival, and Information Science*, 7(1), 34-45.
- Esse, U. C. (2014). Attitude of students towards utilisation of electronic resources at BELLS University of Technology, Ota. *Jewel Journal of Librarianship*, 6(1), 24-34.
- Hunter, J. (2009). Make your students computer literate. *Business Education Forum*, 4, 45-50.
- Isiakpona, C. D., & Ifijeh, G. (2012). Availability of electronic resources for service provision in university libraries in Ogun State, Nigeria. *Samaru Journal of Information Studies*, 12(1/2), 7.
- Jenkins, D., Mimbs, C. A., & Kitchel, T. (2009). Computer literacy, access, and use of technology in the family and consumer sciences classroom. *Journal of Family and Consumer Sciences Education*, 27(1), 1-13.
- Marcum, D. B., & George, J. (2003). Digital library forum, hears, hopes for collection sharing. *Council on Library and Information Resources (CLIR)*, (34), 84-90.
- Maryland Literacy Skills Compendium (2021). A Companion to the Maryland Technology Literacy Standards for Students. Retrieved from <https://www.montgomeryschool.org/departments/techlit/docs/levels%20of%20use/pdf> 07 Oct. 2021.
- Omotayo, B. O. (2010). Access, use and attitude of academics toward electronic journals: A case study of Obafemi Awolowo University, Ile-Ife. *Library Philosophy and Practice*. Retrieved from <http://unlibiunl.edu/LPP/2010.omotayo.htm>.
- Rowley, J. (2006). The question of electronic journals. *Library Hi Tech*, 18(1), 46-54.
- Simonson, M. R., Maurer, M., Montag-torardi, M., & Whitaker, M. (2007). Development of a standardised test of computer literacy skill and computer anxiety index. *Journal of Educational Computing Research*, 3(2), 231-247.
- Tenopir, C. (2017). Use and users of electronic library resources: An overview and analysis of recent research studies. Council on Library and Information Resources. Retrieved from <http://www.clir.org/pubs/reports/pub120.pdf>.
- Yalia, Y. (2020). An examination of literacy and computer literacy skill amongst adults who are incarcerated: an analysis of the PIAAC.