

**ELECTRONIC JOURNAL PROVISION AND USER SATISFACTION AS
CORRELATES OF JOB PRODUCTIVITY OF ACADEMIC STAFF IN
SELECTED FEDERAL POLYTECHNICS IN NORTH- CENTRAL, NIGERIA**

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ABSTRACT

The study investigated the Electronic Journal Provision and User Satisfaction as Correlates of Job Productivity of Academic Staff in Selected Federal Polytechnics in North- Central, Nigeria. The study was guided by six objectives, six corresponding research questions and three null hypotheses. Among the objectives of the study were to: determine the availability of electronic sources of information resources in selected Federal Polytechnics in North-Central, Nigeria. determine the influence of electronic sources of information resources on job productivity of academic staff in selected Federal Polytechnics in North-Central, Nigeria. Survey research design method was adopted for the study. The target population of the study was 2540 which comprised of academic staff in four (4) Federal Polytechnics in North-Central, Nigeria namely: Federal polytechnic Bida, Federal polytechnic Nassarawa, Federal polytechnic Idah and Federal Polytechnic, Offa. The sample size for the study was 333 drawn using Krejcie and Morgan (1970) sample table. Questionnaire was the only instrument used for data collection. Out of the 333 copies of questionnaire administered, 326 copies were filled, and returned and used for data analysis. Descriptive statistical tool involving frequency counts and percentages, mean and standard deviation were used to analyse the data. Pearson Product Moment Correlation (PPMC) was used to test the null hypotheses in the study at 0.05 level of significance. The findings of the study revealed that there is availability of electronic sources of information resources such as -journals, e-books, emagazines, e-newspapers, online databases, full-text (aggregated) databases, indexing and abstracting databases, reference databases (biographies, dictionaries, directories, encyclopedias), e-images and e-audio/visual resources. Similarly, the academic staff indicated that poor Internet connection, shortage of fund, lack of proper ICT knowledge, low bandwidth and epileptic power supply are seen as challenges faced in the use of electronic journals which affects

the productivity of academic staff. In conclusion, the study also indicated that the use of electronic sources of information support academic staffs to complete their job without errors and on time, improve their research output despite time pressure, complete their work in accordance with the specified standard, supporting them perform their duties efficiently and electronic sources of information resources improve their job productivity as compared with peers having similar qualifications. The polytechnic managements in North-Central, Nigeria should increase the acquisition of electronic information resources.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Polytechnics are basically established with a core mandate to provide enabling environment for the provision of technical knowledge. This is expressed in academic learning and research activities. Productivity describes various measures of the efficiency of production. Often, a productivity measure is expressed as the ratio of an aggregate output to a single input or an aggregate input used in a production process, i.e. output per unit of input, typically over a specific period of time. Most common example is the (aggregate) labour productivity measure, e.g., such as GDP (Gross Domestic Product) per worker. There are many different definitions of productivity (including those that are not defined as ratios of output to input) and the choice among them depends on the purpose of the productivity measurement and/or data availability. Indeed, research productivity has become essential for university success and academic's employment and promotion prospects for academic staff including librarians (Okiki & Asiru, 2011).

Research productivity plays a central role in higher education institution development. Research productivity helps improve teaching quality as there exists a strong nexus between teaching and research effectiveness (Desselle *et al.*, 2018). At the same time, research productivity helps develop knowledge and shape higher education institutions' reputation and brand names.

Productivity in academic environment is a means by which faculty members contribute and measure their own knowledge to the existing body of knowledge. This can be in form of journal article, technical reports, books, supervision and training of students.

Publication productivity is expressed by the number of papers published by a selected unit in a given time (Sudhier & Abhila, 2011). A well known research productivity indicator is the number of publications produced by librarians within a given time. Publications are tangible outputs of research in professional journals, conference proceedings, writing books or chapters in books, working with post-graduate students on dissertations, and class projects, carrying out editorial duties, obtaining patents and licenses, writing monographs, developing experimental designs, producing works of an artistic or creative nature and engaging in public debate and commentaries (Iqbal & Mahmood, 2011).

Tertiary institutions are types of institution geared towards manpower development, research output and economy development of the nation. Tertiary institutions are universities, polytechnics and colleges of education. It is important to understand that higher institutions are not set up simply as degree mills to produce students in learning centers, but primarily to do research, and disseminate outcomes and propagate innovation through the society (Ibidapo-Obe, 2012). Thus, is dedicated to providing academic, staff, and students with an environment and infrastructure that help them develop potentials for scholarship, creative work, professional realization, and services that culminate in its

objectives of building a total man, by impacting knowledge, skills and capacity to identify problems in the society and proffer solutions to them (Obayan et al, 2012). To achieve the enormous objectives, different category of staffs are recruited and retained to discharge required assignments. Basically, the entire staff make-up in the system can be categorized into four major groups which include: administrative, Lab technologists/ attendants, security and academic staff — that form the crux of this study.

Academic staff is solely responsible for activities such as teaching and research, teaching and scholarship or research and innovation which represent their career pathways (Kulno, 2016). Academic staff are adept scholars thus very knowledgeable in their subject areas, hard personality attributes that promote rapport with students, they are organized, deliver well prepared lectures, promotion every three and four years for both junior and senior levels based on their research productivity (output) especially in the form of publications made in referred works and patents. In this way, academic staff members generate knowledge and information classified and packaged into different mediums for onward dissemination (Kamla, 2011). Madu (2012) asserted that academic staff are evaluated for promotion every three and four years for both junior and senior levels based on their research productivity (output) especially in the form of publications made in referred works and patents. In this way, academic staff generates knowledge and information classified and packaged into different media for onward dissemination.

Academic productivity is a means by which faculty members contribute and measure their own knowledge to the existing body of knowledge. This can be in form of journal articles, technical reports, books, supervision, training of students, teaching and research, however this publication is going to be concerned with journal publication. Publication productivity is expressed by the number of papers published by a selected unit in a given

time (Sudhier and Abhila, 2011). A well-known research productivity indicator is the number of publications produced by an academic staff within a given time. Publications are tangible outputs of research in professional journals, conference proceedings, writing books or chapters in books, working with post-graduate students on dissertations, and class projects, carrying out editorial duties, obtaining patents and licenses, writing monographs, developing experimental designs, producing works of an artistic or creative nature and engaging in public debate and commentaries (Iqbal and Mahmood, 2011). Access to electronic journal is a requisite to quality research output by academic staff in polytechnic in North Central Nigeria.

Electronic Journal (E-journal) is among electronic information resources that have become popular and “must use” among academic staff and research scholars due to their ability to report research findings more timely and allow remote access without geographical limitations. Academic staff members are motivated to engage in publication for various reasons. Ogbomo (2010) reported that academic staff research productivity is also influenced by the satisfaction derived from the job.

Job satisfaction by academic staff can be seen as the collection of feelings, beliefs, and thoughts about how a person responds to his work. Tella *et al.* (2015) asserted that job satisfaction is a collection of employees' feelings towards their work, whether they like / dislike, as a result of employee interactions with the work environment or as a perception of mental attitude, as well as the results of employee evaluations of their work. Academic staff feelings about work reflect their attitudes and behaviour at work. Job satisfaction of academic staff may be affected by the environment, inadequate access to needed resources and infrastructure, thereby affecting the research productivity.

Provision of electronic journals by polytechnic libraries as well as the satisfaction of academic staff in Federal Polytechnics in North-central Nigeria, is germane to the quality of their research productivity. Preliminary investigation by the researcher showed that the job productivity of academic staff in Federal Polytechnics in Northcentral Nigeria is low which may be due to lack of access to electronic journals, lack of enabling environment, institutional policies, lack of motivation and inadequate facilities.

It is against this backdrop, that this study is carryout, to investigate how provision of electronic journals and user satisfaction influence job productivity of academic staff of selected Federal Polytechnics in North-Central. Nigeria.

1.2 Statement of the Research Problem

Polytechnics are basically established with a core mandate to provide enabling environment for the provision of technical knowledge which promote vocational education, technology transfer and skills development to enhance the socio-economic development of the country. Federal polytechnics in the 21st century are spending huge sums of money to subscribe and purchase electronic information resources in order to meet the information needs of academic staff of their institutions. The polytechnics in Nigeria are basically funded by the Government budgetary allocations and interventions by government agencies like the Educational Trust Fund. The institutions also enjoy funding through award from donors and international bodies, which in turn is expected to affect the acquisition of information resources, remuneration of staff and creating an enabling environment for the academic staff thereby contributing to their job productivity. Apart from benefiting from several externally financed electronic information resources which are also deemed inadequate and unsustainable, most polytechnic libraries do not subscribe to journals from commercial publishers due to financial constraints.

Consequently, there is need to conduct research regularly in order to meet the requirement for their desired progress otherwise there can be no successful job productivity without significant progress in their research endeavours. Thus, the quality of academic and job productivity of academic staff is greatly dependent on availability of fund and facilities/resources provided to support such activities.

However, different studies have shown that job productivity of academic staff in terms of research output is low compared to the expectation, which may be due to paucity of electronic journals, inadequate bandwidth, inadequate scholarly databases, inadequate information literacy skill, lack of motivation, job policies, lack of job satisfaction thereby influence their job productivity (Izuagbe *et al.*, 2016; Ikonne, 2015; Tella & Ibinaiye, 2020).

It is against the aforementioned that this study is investigating how provision of electronic journals and user satisfaction are factors for job productivity of academic staff in selected Federal Polytechnics in North-Central, Nigeria.

1.3 Aim and Objectives of the Study

The aim of the study is to investigate the provision of electronic journals and user satisfaction as correlates of job productivity of academic staff in selected Federal polytechnics in North-Central, Nigeria.

The objectives of the study were to determine:

1. the availability of electronic information resources in selected Federal Polytechnics in North-central, Nigeria.
2. the influence of electronic sources of information resources on job productivity of academic staff in selected Federal Polytechnics in Northcentral, Nigeria.

3. the impact of institutional selected policies on job productivity of academic staff in selected Federal Polytechnics in North-central, Nigeria
4. the impact of years of experience on job productivity of academic staff in selected Federal Polytechnics in North-central, Nigeria
5. the impact of promotion on job productivity of academic staff in selected Federal Polytechnics in North-central, Nigeria
6. the challenges facing the availability of electronic journals as a factor on job productivity of academic staff in selected Federal Polytechnics in Northcentral, Nigeria

1.4 Research Questions

The following are research questions guiding this study:

1. what are the electronic information resources available in Federal Polytechnics in North-central, Nigeria?
2. what is the influence of electronic information resources on job productivity of academic staff in Federal Polytechnics in North-central, Nigeria?
3. what is the impact of institutional policies on job productivity of academic staff in Federal Polytechnics in North-central, Nigeria?
4. what is the impact of years of experience on job productivity of academic staff in Federal Polytechnics in North-central, Nigeria?
5. what is the impact of promotion on job productivity of academic staff in Federal Polytechnics in North-central, Nigeria?
6. what are the challenges facing the availability of electronic journals as factors of job productivity of academic staff in Federal Polytechnics in North-central,

Nigeria?

1.5 Research Hypotheses

The following null hypotheses will guide this study and were tested at 0.05 level of significance.

H₀₁: there is no significant relationship between the influence of electronic information resources on job productivity of academic staff in Federal Polytechnic in North-Central, Nigeria.

H₀₂: there is no significant relationship between user satisfaction and job Productivity of academic staff in Federal Polytechnics in North-central, Nigeria.

H₀₃: there is no significant relationship between years of experience and promotion on job productivity of academic staff in Federal Polytechnics in North-central, Nigeria.

1.6 Significance of the Study

The study will be of significant value to academic staff in Nigerian Federal polytechnics because it would improve their level of awareness and usage of electronic journals publications and as well as eliminating the problems bedevilling the use of electronic journals which in turn increase their research productivity. Similarly, the study will be of significant value to researchers and scholars in library and information Science because it would contribute to the body of knowledge of the field in Nigeria and world at large. The study will also benefit polytechnic libraries on necessary journals to acquire through subscription to scholarly databases thereby influencing the job productivity of academic staff. Finally, the study will be of immense value to institutions on necessary policies to put in place, which in turn will improve satisfaction vis-à-vis the job productivity of academic staff.

1.7 Scope of the Study

The content scope of this study covered the provision of electronic journals and user satisfaction as correlates of job productivity of academic staff in federal polytechnics in North central, Nigeria. This study was intensive in scope in the sense that only academic staff were studied on the provision of electronic journals and user satisfaction as correlates of job productivity of academic staff. The geographical scope of this study covered four (4) federal polytechnics in North-central, Nigeria, namely: federal polytechnic Bida, federal polytechnic Nasarawa, federal polytechnic Idah, federal polytechnic Offa.

1.8 Operational Definition of Terms

The following terms are defined as used in this study:

Academic staff are scholars who work in Federal Polytechnics in North-Central, Nigeria.

Electronic journal are current information resources which are born digital and relevant to the job productivity of academic staff in Federal Polytechnics in NorthCentral, Nigeria.

Job satisfaction is the feeling of fulfillment that derived from theS job.

Job Productivity is the research outputs by academic staff in Federal Polytechnics in North-

Central, Nigeria.

Satisfaction is joy derived from doing a job.

CHAPTER TWO

2.0

LITERATURE REVIEW

2.1 Conceptual framework

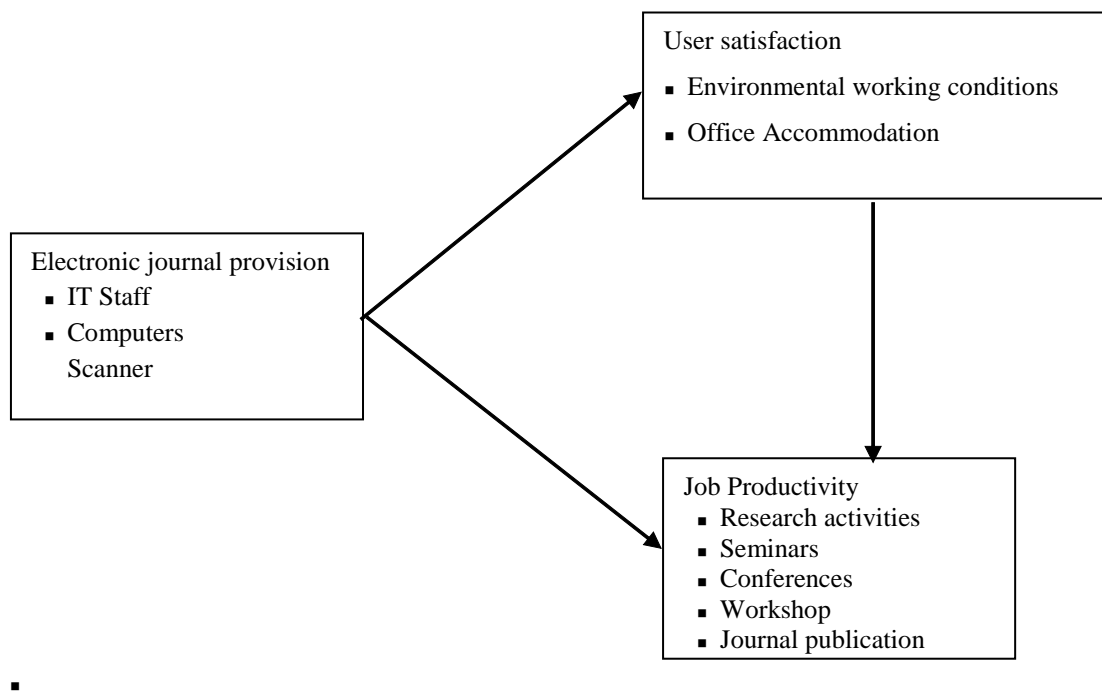


Figure 2.1: Conceptual Framework

Figure 2.1 show the relationship between electronic journal provision, user satisfaction and job productivity. The model show that electronic journal provision by polytechnic libraries will influence the user satisfaction and as well promote the job productivity of faculty members. Similarly, the model show that user satisfaction of faculty members with the services provided by the library, institutional policies, motivation and remuneration will strongly influence the job productivity of faculty members in Federal polytechnics in North-Central, Nigeria.

2.1.1 Electronic information resources

According to International Federation of Library Associations and Institutions (IFLA, 2012), “Electronic resources” refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. They may

either be accessed remotely via the Internet or locally. Some of the most frequently encountered types are: E-journals, E-books, Full-text (aggregated) databases, indexing and abstracting databases, Reference databases (biographies, dictionaries, directories, encyclopaedias, etc.), Numeric and statistical databases, E-images, E-audio/visual resources (Johnson *et al.*, 2012). In support of the above definition "electronic resource" is defined as any work encoded and made available for access through the use of a computer. It includes electronic data available by remote access and direct access (fixed media). In other words: remote access (electronic resources) refers to the use of electronic resources via computer networks. Direct Access (electronic resources) refers to the use of electronic resources via carriers (discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment.

2.1.2 Use of electronic books

The integration of e-books in academic libraries is beneficial as they are remotely accessible and available around the clock. Furthermore e-resources enable academic libraries to benefit from shared storage and easier integration to Virtual Learning Environments (VLEs). While the majority of the U.K.'s undergraduate students are now using e-books, none are yet relying on them as a primary source of information (www.teleread.com). Akpojotor (2016), described an exploratory study into e-book usage patterns amongst undergraduate students at the Faculty of Computer Science and Information Technology at the University of Malaya, Kuala Lumpur.

The study found low usage levels mainly because students preferred to use printed books and lacked knowledge on how to use e-books.

Supporting research and learning activities becomes a major mission for academic libraries. In recent years, academic libraries face pressures like diminished budgets, increased patron demands, and rising costs for book purchases and periodical subscriptions (Okiki, 2012). The thriving growth of electronic publications is reshaping the nature of collections and the mode of delivering and accessing information in libraries. The traditional print resources nowadays face challenges from their electronic counterparts in faster and timely delivery of information as well as in improved access (Omotayo, 2010). Among various resources for learning, staff and students throughout much of the world can retrieve seemingly endless volumes of information from all over the globe in a short span of time. It appears that the rate of production of electronic materials has exceeded that of print-based publications (Anushandhan & Maharana, 2013).

Electronic resources have affected the functioning of libraries and the information seeking habit of users (Dafioghor, 2012). Resources at today's library are not only available in print but also in electronic format. CD-ROM technology has enabled libraries to provide instant, easy, and convenient access to a substantial amount of relatively current and retrospective information at a fixed or predictable cost. Due to the availability of CD-ROM databases, libraries have reported an increase in the use of journal collections, interlibrary loans services, and microfiche collections.

The level of quality of an institution of higher education is determined to a great extent by that of its library, that is, by the adequacy of its collections of books, journals, other research materials, and services. Higher education is changing rapidly with the advent of technology. According to Bhukuvhani *et al.* (2012), in recent years, electronic information has gradually become a major resource in every university library. The

growth and diversity of electronic resources, especially ejournals, in the past few years has led many to predict the extinction of the printed journal (Bassi, & Camble, 2011).

It has been suggested that a new paradigm is sweeping scholarship (Bassi, & Camble, 2011; Bhukuvhani *et al.*, 2012). Bashorun *et al.* (2011) argued that technological advancements opened up new horizons for the creation, storage, access, distribution and presentation of information. In the global information communications technology (ICT) dominated world, “place” is much less important (Aina, 2014). The impact of moving from text-based to resource-based learning has involved heavier use of library materials and a demand for more and varied media sources (Ahmad, and Panda, 2013). This makes the provision and use of Electronic Information Systems (EIS) in academic libraries a critical issue for those working in information and library services (Adesoye & Amusa, 2013). The pace at which information resources are being produced and converted into an electronic form is greater today than in previous years (Abinew & Vuda, 2013). In today’s information age it would seem that library users would not only be eager to take advantage of the convenience electronic resources have to offer, but would be fully immersed in the new technologies (Akpojotor, 2016).

Electronic information resources offer today’s students different opportunities compared to their predecessors. Gakibayo and Okello-Obura (2013) details the advantages of networking for the user as being: the information needed can be delivered from the most appropriate source to the user; the user can re-specify his or her needs dynamically; the information is obtained when it is wanted, so becomes “just in time” rather than “just in case”; the user selects only the information needed to answer the specific question and, finally, the information is only stored should the user wish. Electronic information can therefore provide a number of advantages over traditional print based sources.

These advantages include the fact that electronic information sources are often faster than consulting print indexes, especially when searching retrospectively, and they are more straightforward when wishing to use combinations of keywords. They open up the possibility of searching multiple files at one time, a feat accomplished more easily than when using printed equivalents. Electronic resources can be printed and searches saved to be repeated at a later date; they are updated more often than printed tools. One main advantage, especially to distance learners or those with limited time to access the library, is their availability from outside the library by dial-up access.

Chen (2012) argued that while reading an e-journal is not the same as reading a printed one, many are beginning to acknowledge the possibility that electronic documents (edocuments) offer users advanced features and novel forms of functionality beyond what is possible in printed form. Gakibayo and Okello-Obura, (2013), noted that the advantages of electronic resources over print include speed, ease of use, ability to search multiple files at the same time, ability to save, print and repeat searches, more frequent updating and the ability to access from outside the library (a particular advantage for the distance learner). Electronic resources According to Adeniran, (2013), are invaluable research tools that complement print-based resources in any traditional library. Their advantages include access to information that might be restricted to the user because of geographical location or finances, access to current information, and provision of extensive links to additional resources or related content (Adeniran, 2013). E-resources could be stored electronically thereby saving space, the risk of lost, theft or damage is lessened and costs significantly reduced.

2.1.3 Use of e-journals

Several studies have shown that implementation of online databases has an impact on internal library use, particularly when databases are Internet accessible. Studies that have looked specifically at health professionals and students have all shown an increased reliance on online databases and electronic resources, especially when the products are made available by libraries at no cost (Thanuskodi, 2012). Accessing and usage of e-journals may be hampered by; types of journal publications available, problem of awareness of the importance of journals, lack of acquisition of current journals in different areas of specialization, and lack of organization of journals in subject area. Adeleke, and Emeahara, (2016) studied the use of e-journals among the research scholars of Goa University, India. They have reported the users' willingness for e-journals as access to information is provided instantly. They highlighted that the Boolean searching was most commonly used by the researchers. Their study also reported need for user orientation for optimum use of the e-journals.

There have been many studies on users of electronic resources in the professional literature in the last few years. The surveys of users of electronic resources carried out so far have been summarised by Ahmed (2013). They show that:

1. Use of electronic journals increases with time.
2. Age and/or academic position are inversely related to the use of electronic media and journals.
3. There is a gradual reduction in the use of printed journals as users prefer and use the electronic format more.
4. With increased use, users access the electronic format more frequently.

5. The use of a journal is not necessarily an indication of the preference of users. There may be an increase in the acceptance and frequency of use of the electronic format merely because the traditional print format is no longer easily available.
6. When respondents were asked about the advantages of electronic journals, accessibility and desktop access, home access, ease of retrieval and hyperlinks to outside content were the arguments cited most often. On the other hand, the disadvantages of electronic journals mentioned most often were the lack of back issues and problems with reading a text from the computer screen.

Electronic resources are widely used in universities. There is a direct relationship between computer literacy and use of electronic resources. Mostly academics are computer literate; however, they need to develop their searching skills (Ahmed, 2013). Studies show that journals are the most valued information communication channel for researchers. Their production dates back to the seventeenth century, and their importance has not diminished. With the advent of the Internet and electronic publishing, they have become more easily accessible. Print books may be around for a long time, but print journals are rapidly being supplanted by e-journals. It is important to study the use of electronic journals, scholars' attitudes, and future patterns of use, for library development, and because of the central role journals play in scientific communication.

In an empirical study by Manda and Mukangara (2007) that examined the association between gender and the use of electronic information resources among postgraduate students at the University of Dares salaam, Tanzania of 100 postgraduate. Findings revealed that gender is associated with the use of electronic information resources and male postgraduate students were more likely to use electronic information resources than

female students. Results further showed that even when we controlled for attitude toward the use of electronic information resources or training in the use of e-resources the relationship between gender and electronic information resource use was maintained. Other variables that were found to have positive association with the use of electronic information resources included: training in the use of electronic information resources, access to e-resources, awareness of the availability of resources and year of study.

2.1.4 The importance of online resources in collaborative academic tasks

Greenberg and Bar-Ilan (2017) reported that the information needs of the first-year undergraduate students primarily concentrated on their academic coursework since they had little need to look for information beyond what is needed in their courses; the students felt that they were able to acquire extra information using general search engines. He, *et al.* (2012) studied the perceptions and uses of Google Scholar among undergraduate students for their coursework and research assignments.

2.1.5 Challenges in the use of electronic information resources

While the use of electronic resources by students in both developed and developing countries is well-recognized, earlier studies and recent research however reveal that electronic information resources are underutilized in many universities because of various reasons. Megameno-Ndinoshiho (2010) found that many electronic resources were substantially under-utilized by undergraduate nursing students at the University of Namibia's Northern Campus. The main barriers identified were the shortage of computers, unreliable internet connections and lack of skills.

According to the study conducted at the Redeemer's University Library, Mowe, Nigeria to examine the usage of electronic resources by undergraduate students, it reveals that the use

of electronic resources has tremendous impact on the academic performances of the undergraduate students of Redeemer University; however, there is need for them to acquire more skills in the use of electronic resources. Among the problems cited were; not sufficiently familiar with electronic resources, unavailability of materials that the students wanted to use, technical problems and difficulty to read from the screen among other things, (Adeniran, 2013). One of the findings of the study that was done at Catalan Academic Libraries, Librarians stated that most of the complaints they received from users on the use of electronic resources were to do with platform breakdowns, difficulties in accessing resources off-campus, and discontinued resources.

Some persistent challenges, namely bandwidth and funding, continue to affect e-resources usage. The high cost of bandwidth remains a major challenge that still hampers the full utilization of e-resources and when users do literature searches and/or try to download articles but find the internet slow, some of them give up, and this affects usage.

Greenberg and Bar-Ilan (2017) conducted a survey of the user community in virtual libraries. Most of the participants who were undergraduate students considered themselves as less than competent at performing complex searches, and their collaborative information seeking activities were centered on particular academic tasks such as assignments and group projects. Boolean logic and truncation are techniques which can enhance information seekers to access electronic information resources; however, many users may not possess the technical know-how on the usage of Boolean logic. Lack of printing facilities, terminals and trained staff are the may also discourage users from accessing the electronic information services. According to Okiki (2012), substantial barriers to electronic resources access and use include a lack of research culture.

Each technological development in library electronic resources during the 20th century was intended to make access to resources more direct, convenient, and timely for the user. The implementation of electronic resources made the library a growing organism as libraries adapted processes and reorganized staff repeatedly to accommodate the changes inherent in the use of constantly changing technology.

Constraints to use of electronic resources on law by law lecturers were identified. These constraints were identified by the respondents and, the law librarians during the interview sessions. These constraints in ranked order are absence of sufficient training programme; non-availability of desired electronic resources within the universities. Further, low level of local contents in the electronic information resources; poor ICT skills on the part of law lecturers lack of time due to tight academic and job schedule, lack of publicity on the contents of the available electronic resources by the universities or libraries. Also, unorganised nature and proliferation of electronic resources on law, paucity of workstations to access electronic resources in the universities and, irrelevance of contents of electronic resources to local academic needs. Bhardwaj and Madhusudan (2013) identified the followings as constraints to use of electronic resources: Lack of proper arrangement of legal information resources, poor description on legal information sources, lack of online help, poor website design, too many login requirements, lack of expertise in using the databases, lack of printing provision, and confusing search screens. Its effective use is hampered by several factors including low bandwidth, few internet access points, and lack of skills.

2.1.6 Information literacy skills training

Mahmood (2013), identified the followings seven dimensions of literacy:

Tool literacy – the ability to understand and use the practical and conceptual tools of current information technology relevant to education and the areas of work and professional life that the individual expects to inhabit;

Resource literacy – the ability to understand the form, format, location, and access methods of information resources, especially daily expanding networked information resources;

Social-structural literacy – knowing that and how information is socially situated and produced;

Research literacy – the ability to understand and use the information technology-based tools relevant to the work of today’s researchers and scholar;

Publishing literacy – the ability to format and publish research and ideas electronically, in textual, and multimedia forms (including via World Wide Web, electronic e-mail and distribution lists, and CD-ROMs);

Emerging technology literacy – the ability to adapt to, understand, evaluate, and make use of the continually emerging innovations in information of prior tools and resources, and to make intelligent decisions about the adoption of new ones;

Critical literacy – the ability to evaluate critically the intellectual human and social strengths and weaknesses, potentials and limits, and benefits and costs of information technologies. Gaining skills in information literacy multiplies the opportunities for students’ self-directed learning, as they become engaged in using a wide variety of information sources to expand their knowledge, ask informed questions, and sharpen their critical thinking for further self-directed learning.

2.1.7 User satisfaction

User satisfaction and optimization of resources have become important areas for libraries to maintain awareness of. Many libraries especially the academic libraries are focusing on evaluation of the users' needs and their satisfaction with their services. User surveys can provide useful perceptions of service quality in libraries. While the majority of previous user satisfaction studies have focused on industrial and organizational settings, there is much less literature on user satisfaction levels of academic faculty members. According to Kiseleva *et al.* (2016) this area has not received attention because a high level of user satisfaction generally has been presumed to exist in a formal setting. Several demographic, institutional, and personal factors have been shown to impact user satisfaction levels for faculty members. A large number of researchers have used a combination of variables such as gender, ethnicity, job achievement, nature of work, salary, collegial relationships, and rank and tenure to study their impact on faculty user satisfaction.

1. Gender as an explanatory variable

The majority of studies that focus on faculty satisfaction have explored the relationship between satisfaction and gender (Sivathaasan, 2013). The study found that male faculty members have higher levels of overall job satisfaction than female faculty members, particularly in terms of benefits and salary. On the other hand, Hossain and MdAnwarul (2012) did not find any significant differences between male and female faculty members in overall levels of job satisfaction. They did observe, however, that male faculty members had almost three times the satisfaction levels of female faculty members when it comes to promotion opportunities.

2. Disciplinary affiliation as an explanatory variable

On the other hand, there is relatively little research on the impact of discipline on faculty satisfaction. Adeniran (2011) used several individual and environmental characteristics to construct a conceptual framework of faculty job satisfaction. She divided the variables that contribute to faculty job satisfaction into two main categories: (1) mediators and (2) triggers.

Academic discipline served as a mediator in the model to predict faculty job satisfaction. Yet, Adeniran, (2011) did not find academic discipline as a significant predictor of job satisfaction. A study by Hossain and Md-Anwarul (2012) concluded that there are significant differences in job satisfaction levels based on the gender and disciplinary affiliation of faculty members. For female faculty members, they found that engineers were the most satisfied and social scientists were the least satisfied. For male faculty members, they concluded that social scientists had the highest levels of satisfaction and natural/physical scientists had the lowest levels. Although their study examined job satisfaction across gender and discipline, it was based on a sample of 900 academics at five Scottish universities more than a decade ago. Disparity in pay across disciplines also impact faculty job satisfaction. Hossain and Md-Anwarul (2012) observed that engineering faculty members express the highest levels of satisfaction with pay when compared with scientists, social scientists, medical and arts faculty members.

3. Control variables

We include a variety of control variables in our exploration of the relationship between gender, discipline and faculty satisfaction. In this section, we give a brief overview of

some literature that has explored the importance of these control variables for studying faculty job satisfaction. We classify these variables into four main categories: (1) demographic, (2) institutional, (3) career, and (4) productivity.

a. Demographic variables

Some scholars have found that faculty of colour and female faculty members encounter more barriers while advancing up the academic ladder (Sivathaasan, 2013). User satisfaction can be affected marital status, gender, work experience of the employee.

Marital status and children can also impact faculty satisfaction. The results of studies that explore the relationship between marriage and faculty job satisfaction have yielded mixed results. On the one hand, marriage has been shown to increase satisfaction levels for faculty members (Sivathaasan, 2013). Yet, some studies have shown that marriage can have a negative impact on faculty job satisfaction (Kiseleva *et al*, 2016). Additionally, the presence of children in the household has been found to impact job satisfaction.

b. Institutional variables

Another key factor in faculty career satisfaction is the nature of the work itself – i.e., the proportion of time spent conducting research and teaching (Hossain and Md-Anwarul, 2012). Teaching and conducting research are often the supporting pillars in a faculty member's work life. A study conducted by Anjum *et al*. (2018) found that faculty members who expressed greater satisfaction with teaching are less likely to receive support and recognition from their peers in their department. Shamaki (2015) reached a similar conclusion when she found that faculty members who spend a greater percentage of time on teaching (and less time on research) express greater dissatisfaction with their

work. The study also concluded that faculty members that expressed greater satisfaction with research were more likely to attain tenure and had significantly greater support from their peers. Shamaki (2015) found that faculty members in the natural/physical sciences and engineering were more likely to spend time conducting research than teaching.

c. Career variables

Rank and tenure are additional control variables for faculty user satisfaction (Shamaki 2015, (Hoboubiet *et al.*, 2017) employees with higher job ranks will have higher levels of user satisfaction. Hoboubiet *et al.* (2017) concluded that full professors report a higher mean level of satisfaction when compared to junior faculty members. Thus, rank continues to be a highly significant predictor of job satisfaction among academics, with full professors expressing greater user satisfaction than junior faculty members. Kiseleva *et al.* (2016) found that tenured faculty members have significantly higher levels of perceived job security.

d. Productivity variables

In particular, several researchers have found that increased time spent on research positively impacts faculty productivity and satisfaction (Böckerman & Ilmakunnas, 2012). The impact of scholarly productivity on faculty user satisfaction is a topic that is disputable. Often previous studies have used proxies for faculty productivity (e.g., the number of journal/book publications or time spent on research) as predictors of faculty satisfaction levels (Imran, et al 2015). Some scholars suggest that satisfaction with work is a predictor of faculty productivity (Reback *et al*, 2014), while others believe that the reverse relationship is more descriptive.

Job productivity has been described as, the assessment of whether an employee has done their job well (Sivathaasan, 2013). Job productivity is an evaluation of individual effort. Job productivity is an important factor in a company's success. Employee productivity is of high importance for companies and employees alike. High- performing individuals achieve a sense of satisfaction, self-efficacy and mastery from executing their tasks well. Companies are inclined to recognize, promote, honour and award these high performers. The latter also tend to be presented with more career opportunities than low or moderate performing individuals.

2.2 Theoretical Framework

2.2.1 Expectation confirmation theory

Expectation confirmation theory (ECT) is a cognitive theory which seeks to explain post-purchase or post-adoption satisfaction as a function of expectations, perceived performance, and disconfirmation of beliefs. The structure of the theory was developed in a series of two papers written by Oliver (1977; 1980). Although the theory originally appeared in the psychology and marketing literature, it has since been adopted in several other scientific fields, notably including consumer research and management among others.

Expectation confirmation theory involves four primary constructs: expectations, perceived performance, disconfirmation of beliefs, and satisfaction.

Expectations refer to the attributes or characteristics that a person anticipates or predicts will be associated with an entity such as a product, service, or technology artifact. Expectations are posited to directly influence both perceptions of performance and disconfirmation of beliefs, and are posited to indirectly influence post purchase or post

adoption satisfaction by way of a mediational relationship through the disconfirmation construct. Pre-purchase or pre-adoption expectations form the basis of comparison against which the product, service, or technology artefact is ultimately judged.

Perceived performance refers to a person's perceptions of the actual performance of a product, service, or technology artefact. According to expectation confirmation theory, perceptions of performance are directly influenced by pre-purchase or pre-adoption expectations, and in turn directly influence disconfirmation of beliefs and post-purchase or post-adoption satisfaction. Perceived performance is also posited to indirectly influence post-purchase or post-adoption satisfaction by way of a mediational relationship through the disconfirmation construct.

Disconfirmation of beliefs refers to the judgments or evaluations that a person makes with respect to a product, service, or technology artefact. These evaluations or judgments are made in comparison to the person's original expectations. When a product, service, or technology artefact outperforms the person's original expectations, the disconfirmation is positive, which is posited to increase post-purchase or post adoption satisfaction. When a product, service, or technology artefact underperforms the person's original expectations, the disconfirmation is negative, which is posited to decrease post-purchase or post-adoption satisfaction (i.e., to increase dissatisfaction).

Post-purchase or post-adoption satisfaction refers to the extent to which a person is pleased or contented with a product, service, or technology artefact after having gained direct experience with the product, service, or artefact. Expectation confirmation theory posits that satisfaction is directly influenced by disconfirmation of beliefs and perceived performance, and is indirectly influenced by both expectations and perceived performance

by means of a mediational relationship which passes through the disconfirmation construct.

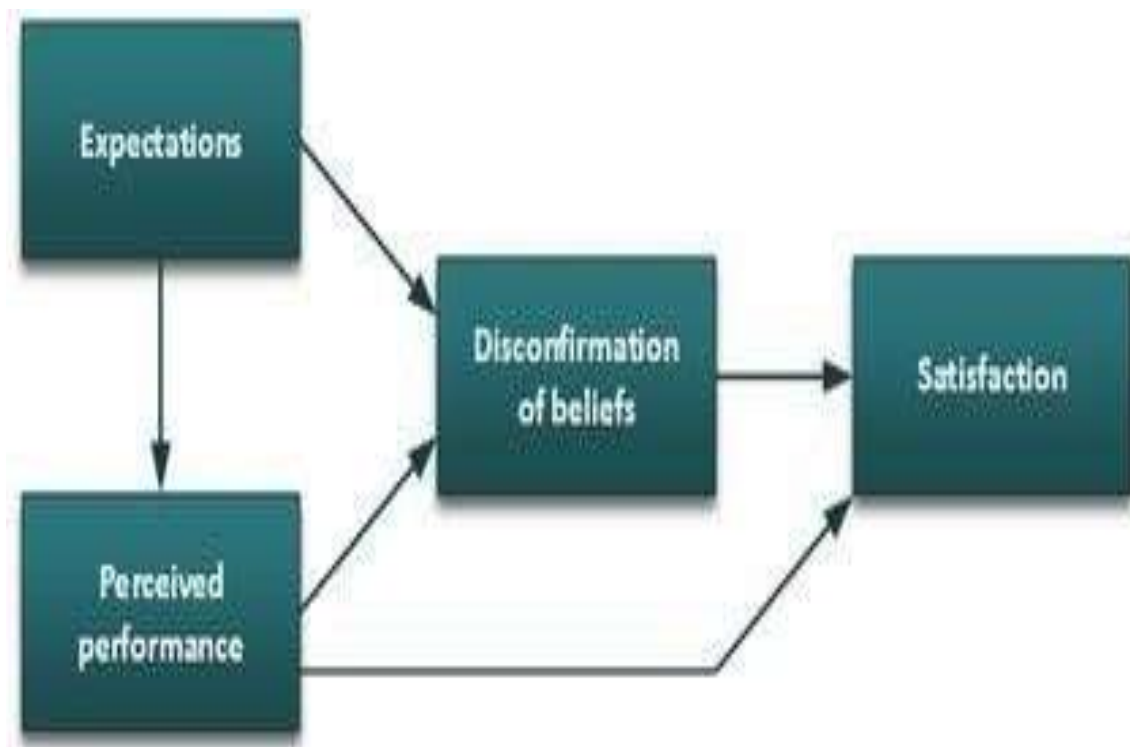


Figure 2.2: Expectation confirmation theory (Hossain & Quaddus, 2012).

2.2.2 Vroom's Expectancy Theory

The expectancy theory of motivation explains the behavioural process of why individuals choose one behavioural option over the other. This theory explains that individuals can be motivated towards goals if they believe that there is a positive correlation between efforts and performance, the outcome of a favourable performance will result in a desirable reward, a reward from a performance will satisfy an important need, and/or the outcome satisfies their need enough to make the effort worthwhile.

Vroom introduced three variables within the expectancy theory which are valence (V), expectancy (E) and instrumentality (I). The three elements are important behind choosing

one element over another because they are clearly defined: effort-performance expectancy (E>P expectancy), performance-outcome expectancy (P>O expectancy)

- Expectancy:

Expectancy can be described as the belief that higher or increased effort will yield better performance. This can be explained by the thinking of "If I work harder, I will make something better. Conditions that enhance expectancy include having the correct resources available, having the required skill set for the job at hand, and having the necessary support to get the job done correctly.

- Instrumentality:

Instrumentality can be described as the thought that if an individual performs well, then a valued outcome will come to that individual. Some things that help instrumentality are having a clear understanding of the relationship between performance and the outcomes, having trust and respect for people who make the decisions on who gets what reward, and seeing transparency in the process of who gets what reward.

- Valence:

Valence means "value" and refers to beliefs about outcome desirability (Lee, 2007). There are individual differences in the level of value associated with any specific outcome. For instance, a bonus may not increase motivation for an employee who is motivated by formal recognition or by increased status such as promotion. Valence can be thought of as the pressure or importance that a person puts on an expected outcome.

Vroom concludes that the force of motivation in an employee can be calculated using the formula:

$$\text{Motivation} = \text{Valence} * \text{Expectancy} * \text{Instrumentality}$$

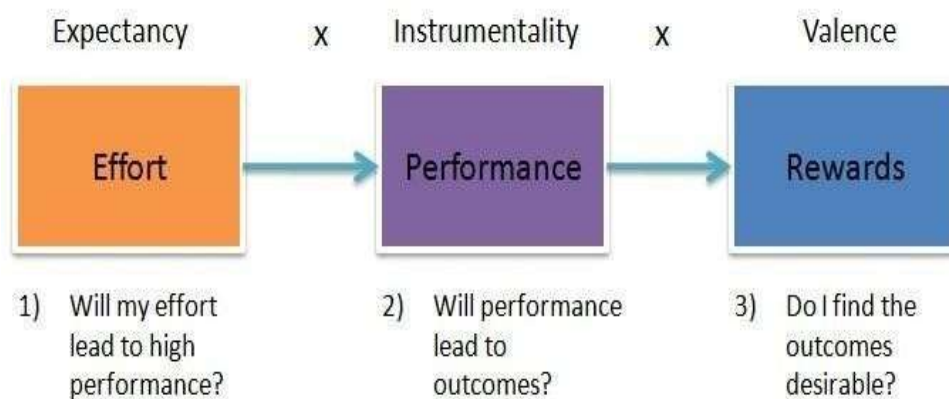
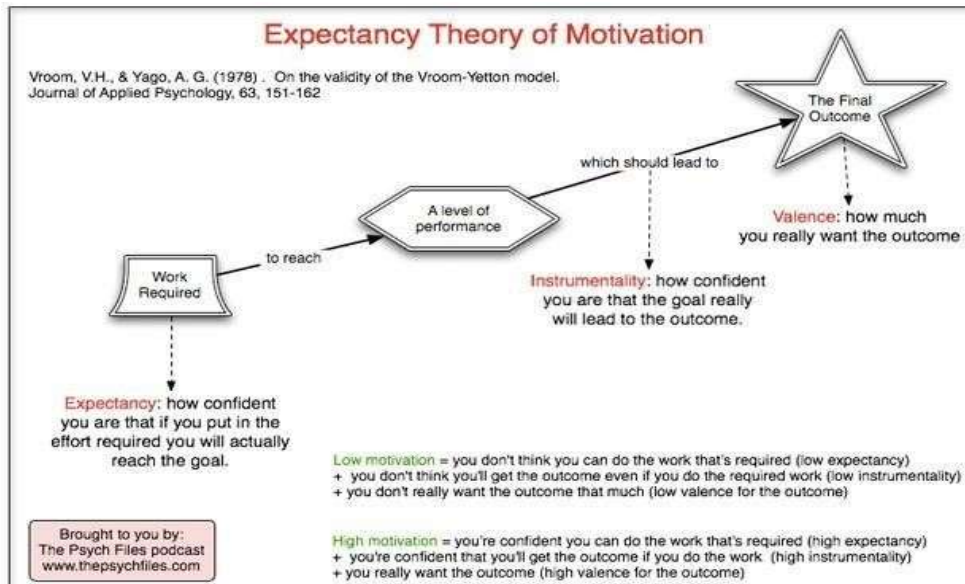


Figure 2.3: Expectancy Theory of Motivation

Vroom also believed that increased effort would lead to increased performance; given the person has the right tools to get the job done. The expected outcome is dependent upon whether or not the person has the right resources to get the job done, has the right skills to do the task at hand, and they **MUST** have the support to get the job done. That support

may come from the boss or by just being given the right information or tools to finish the job.

Although many people correlate high performance with high rewards, many times the theory is limited because rewards are not always directly correlated with performance in many organizations. It is also related to other parameters such as position, effort, responsibility, education, etc.

It is important to remember that there is a difference between incentives and motivators. Incentives are non-material objects. They are manipulated by managers and leaders in order to get employees to do desired tasks. Incentives may work, if the incentive is something the employee desires, however if the incentive is taken away, the behaviour may not sustain. Motivation theories need to accentuate motivation and not incentives. For this reason, motivation implies that people make decisions about their own behaviour and what motivates them.

The locus of control is different for incentives and motivation. Motivation is intrinsic control where incentives are extrinsically controlled by people in the organization (Frey, 1997).

2.3 Review of Related Empirical Studies

Okiki (2013) examined available information resources for academics research activity in the academia. This study, therefore, examined the perception of academics on availability of information resources for research productivity in federal universities in Nigeria. Descriptive survey research design was adopted. The Multistage sampling technique was used to select 1,057 academic staff members from twelve federal universities in the six geo-political zones of Nigeria. The categories of academic staff covered in the study were

from professorial cadre to graduate assistant. The instruments used for data collection were: Availability of Information Resources ($r= 0.69$) and Research Productivity of Academics ($r=0.91$). Eight hundred and seventy-three copies of the questionnaire were used for analysis. Data were analysed using descriptive statistics, Pearson Product Moment Correlation Coefficient. There was no significant relationship between availability of information resources and academics research productivity. The mean score of information resources availability was adequate in Nigerian federal university libraries ($=2.41$; $SD = 0.90$) which means that information resources were readily available to academics for research productivity. To further sustain academic staff research productivity, librarians should organize continuous awareness program on availability of information resources to increase research productivity of academics.

Nguyen *et al.* (2021) evaluated the impact of institutional research promoting policies and organizational characteristics on research productivity in Vietnam universities. The author employed a dataset surveying faculty staff from 115 universities across the country and used multivariate data analysis to analyse data and test hypotheses. It was found that institutional characteristics such as size, time in operation and advantageous location were positively associated with research productivity. Specifically, universities located in the big cities with longer time in operation and larger size had higher level of international publication. Institutional policies such as management and infrastructure had a positive impact on research productivity while human resource policies had a positive impact on faculty research outcomes. The study also provided some suggestions to promote research productivity of Vietnam universities. The study detected a significant impact of university characteristics on university research productivity. Specifically, university size proxy by

the number of enrolments had a strong influence on universities' research productivity ($\beta = 0.34$). Time in operation also affected research productivity ($\beta = 0.23$)

The results supported the argument that a larger university would have more faculty and researchers involved in research activities and consequently lead to a greater number of scientific publications. Favourable locations helped the universities attract better students and better faculty and researchers. Weaker influence of location ($\beta = 0.16$) on university research productivity.

Uganneya et al, (2012) examined the extent to which users are satisfied with reference and circulation services provision by agricultural research libraries in Nigeria. Descriptive survey method was used for the study. Through purposive sampling six agricultural research libraries: (three university of agricultural libraries and three agricultural research institute libraries) were selected from three out of six agricultural zones of Nigeria. A total of 701 respondents', 241 from agricultural research institute libraries and four hundred and sixty (460) users from university of agricultural libraries were obtained in this study. The study finds out that reference and circulation services were highly provided by the agricultural research libraries in Nigeria. Majority of the users were satisfied with both the reference and circulation services provision by the agricultural research libraries. However, referral service and shelf management of books were rated dissatisfied. Irregular internet services, expensive, internet services, outdated material and staff unresponsiveness were some of the constraints to user satisfaction. The study recommended that there is need for librarian to design system that can facilitate and enhance referral services between the library and users. Adequate shelf management system that would allow proper shelf arrangement of books should also be put in place.

Badrianto and Ekhsan (2020) investigated effect of work environment and job satisfaction on employee performance in pt. nesinak industries. Improving employee performance is one of the main factors for companies to achieve goals. In addition to being a factor in achieving goals, employee performance is also a way to measure the quality of human resources in a company. Some factors that can influence the success of employee performance include the work environment and job satisfaction. The purpose of this study is to find out whether there is an influence of the work environment and job satisfaction variables on employee performance. This study is to examine the effect of work environment and job satisfaction on employee performance at PT. Nesinak Industries. The company is engaged in manufacturing automotive and electronic spare parts made from rubber. The sample in this study amounted to 88 respondents who worked in the production department. This research uses quantitative methods. Data for conducting this research was obtained through filling out questionnaires by predetermined respondents. Data analysis method used is multiple linear regression analysis. Based on the results of the t test (partial) and f test (simultaneous) of this study, the variable work environment and job satisfaction bring a positive and significant effect on employee performance partially and simultaneously.

Matolo (2015) assessed job satisfaction in order to identify its determinants and its effect on employee performance. Specifically it attempted to (i) analyse job satisfaction of employees across their demographic characteristics; (ii) analyse employees' job performance across their demographic characteristics; and to (iii) examine the relationship between job satisfaction and job performance. A total of 235 copies usable questionnaires from the 313 distributed to employees of the Eastern and Dares Salaam

Zones of the National Microfinance Bank Plc, including its Head office, were analysed. The job satisfaction scale (JSS) was used to assess job satisfaction while the employee performance scale was adapted from Crossman and Abou-Zaki (2003) – a combination of Yousef's (2000) questions and Baruch's (1996) seven point rating scale - was used to assess employee's job performance. Analysis of variance (ANOVA) was used to analyse both job satisfaction and employee performance across demographic characteristics. Regression analysis was used to assess the effect of job satisfaction on employees' job performance. The study finds statistically significant differences in the mean total job satisfaction scores across age, marital status, length of services and job position categories. It also finds statistically significant differences in the mean total job performance scores across age, and length of services. Moreover, the study finds job satisfaction significantly affects employees' job performance.

Ebuara and Coker (2012) examined the influence of staff discipline and attitude to work on job satisfaction of Lecturers in tertiary institution in Cross River State. A forty-item four point-liker survey questionnaire was used for data collection. A total of 400 lecturers (200 males and females) out of a population of over 2,000 were chosen. Four (4) hypotheses were formulated for the study. The data generated was analysed using Person Product Moment Correlation Analysis and Analysis of Variance (ANOVA). The result of study revealed that lecturers who have high, moderate, or low perception of how staff is disciplined do not differ in their level of job satisfaction. Also, lecturers' attitude towards classroom teaching, lecturers' attitude towards the tasks of disciplining students, lecturers' attitudes towards supervision of instructions and lecturers' attitude towards classroom management do not significantly relate to their job satisfaction. The result of the study showed a significant relationship between lectures recognition and their job

satisfaction. Based on the findings, the following recommendations are made, *inter-alia*: to ensure appropriate staff discipline there is need for enabling teaching environment to be created. Lecturers should be properly rewarded for their effort through improved conditions of serves. In-service training for all lecturers should be made compulsory to enhance their job satisfaction.

Andjarwati *et al.*, (2019) analysed the effect of Occupational Safety and Health (OSHA), work environment and work discipline on job satisfaction and employee performance. The method used in this study is a survey conducted on the employees of PT. Maspion IMaxim Division of the Spray Coating Department. The sampling method used by taking the entire total of enumerator of 70 employees to be respondents. The data used in this study are primary data. Data analysis and hypothesis testing in this study used Goodness of fit analysis in the Partial Least Square model. The results showed that the work environment and work discipline variables had a significant effect on employee performance while OSHA had no significant effect on employee performance. OSHA implementation and work discipline have a significant effect on job satisfaction. The environment has no significant effect on employee job satisfaction.

Ilham *et al.* (2015) described the training variable and to know the simultaneous and partial effects from the variables of training, compensation and work discipline toward the employee work performance of PT PLN (Persero) Malang Service and Network Area. This research is an explanatory research or explanation study, which explain the causal relationship among the variables through the testing of hypotheses. This research is held in the office of PT PLN (Persero) Malang Service and Network Area. The sample in this research is 44 respondents. The independent variables are: Training (X1),

Compensation (X2) and Work Discipline (X3). The dependent variable is Employee Work Performance (Y). Multiple linear regression analysis is used as the statistical method. Based on the descriptive analysis on this research result, it can be concluded that the training followed by the employees is assessed on its target especially for the content of the material and optimal time duration. Compensation is rated in good level, especially on the salaries and complementary compensation, while for the facility element consists of vehicle and residence needs to be improved. Employee work performance is also very positively responded in its three elements such as punctuality, work quality and work quantity. The training, compensation and work discipline simultaneously and partially have significant effects toward the employee work performance in PT. PLN (Persero) Malang Service and Network Area. The whole effects of the independent variables have a positive direction. The largest contribution comes from the training variable.

Adeleke and Nwalo (2017) evaluated availability; awareness and use of electronic resources that provide access to authoritative, reliable, accurate and timely access to information. The use of electronic information resources (EIRs) can enable innovation in teaching and increase timeliness in research of postgraduate students which will eventually result into encouragement of the expected research-led enquiry in this digital age. The study adopted a descriptive survey design. Samples of 300 of postgraduate students within seven out of 13 Faculties were randomly selected. Data were collected using questionnaire designed to elicit response from respondents and data were analysed using descriptive statistics methods percentages, mean, and standard deviation. Results indicated that internet was ranked most available and used in the university. Low level of usage of electronic resources, in particular, full texts data bases is linked to a number of constraints: Interrupted power supply was ranked highest among other factors as speed

and capacity of computers, retrieval of records with high recall and low precision, retrieving records relevant to information need, lack of knowledge of search techniques to retrieve information effectively, non-possession of requisite IT skills and problems accessing the internet. The study recommended that usage of electronic resources be made compulsory, intensify awareness campaigns concerning the availability, training on use of electronic resources and the problem of power outage be addressed.

Barik (2013) evaluated the library services and resources of Einstein Academy of Technology and Management (EATM), Bhubaneswar. In this study the investigator distributed a simple questionnaire among 72 faculty members from all the departments of the college to obtain their satisfaction, views and suggestions about the services, resources and staff attitudes. Only 60 faculty members returned the questionnaire at a ratio of male and female as 42 and 18 respectively. The detail procedure of study, methodology and research findings is described in the study. It is found that the overall satisfaction level of faculty members towards library services is about 81.66%. The quality of services, adequacy of e-resources, and the nature of IT enabled services are comparatively good in the library. But adequacy of print resources is not satisfactory.

15% faculty members disagree about the adequacy of print resources. One other thing also revealed from the study is that, only 6% of faculty members spend more than 2-3 hours in the library whereas 40% of them visit the library on daily basis.

2.4 Summary of Literature Reviewed

Although many studies have been able to draw conclusions on effects of social demographic factors like age, marital status, education level, gender and job tenure on user satisfaction and consequently job productivity, there is paucity of evidence on the

effect of electronic journal and user satisfaction on job productivity on the faculty members in Federal Polytechnic North Central Nigeria. There were number of gaps left by different reviewed theoretical and empirical literature ranging from geographical, methodologies used, time as well as the nature of organization studied, despite the fact that, many studies were conducted to explore factors influencing employees' user satisfaction and productivity in the world. Therefore, this calls for, and justifies, more studies to fill the gaps left by previous researchers especially in determinants of user satisfaction and its effects on staff job productivity in Federal Polytechnics North Central, Nigeria.

CHAPTER THREE

3.0

RESEARCH METHODOLOGY

3.1 Research Design

The study adopted correlation descriptive survey research design method. The survey research design was considered suitable for this study as it describes and interprets the electronic journal provision and user satisfaction as factor for job productivity of academic staff in Federal polytechnics in North-central, Nigeria. Survey research design according to Ibrahim *et al.* (2013) is used to assess a situation with a view to correcting inadequacies or effecting improvements. Moreover, survey research method is a type of descriptive research which could be used to sample data, describe and explain what is in existence or non-existence on the present status of a phenomenon that is undergoing investigation. Sharma (2017) stated that descriptive survey research method deals with describing the situation of a given population using some characteristics that are common among them. It is a process that involves a number of steps such as planning survey, questionnaire design, sampling, data collection, data processing and drawing conclusion.

3.2 Population of the Study

The total population for this study is 2,540 which comprised of academic staff in four (4) Federal Polytechnics in North-central, Nigeria namely: Federal polytechnic Bida, Federal polytechnic Nassarawa, Federal polytechnic Idah and Federal Polytechnic, Offa. The reason for using only the four polytechnics is because they are fully in operation.

Table 3.1: Population of the Study

School	Chief lecturers	Principal Lecturers	Senior Lecturers	Lecturer 1	Lecturer 2	Lecturer 3	Assistant lecturers	Total
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Federal polytechnic Bida	140	64	54	82	138	5	159	642
Federal polytechnic Nassarawa	54	52	41	107	71	57	155	537
Federal polytechnic Idah	93	50	48	92	80	48	142	553
Federal polytechnic Offa	67	115	102	171	79	121	153	808
Total	317	369	372	602	366	424	736	2,540

Source: Registrars offices in respective Federal Polytechnic in North Central, Nigeria.

3.3 Sample size and Sampling Technique

The study adopted proportional sampling technique. The sample size was determined using Krejcie and Morgans' (1970) Table for determining sample table. The sample size of the study is 333. The sample size was proportionally distributed across the study area.

Table 3.2: Sample size

School	Size
Federal polytechnic Bida	85
Federal polytechnic Nassarawa	70
Federal polytechnic Idah	72
Federal polytechnic Offa	106
Total	333

3.4 Data Collection Instrument

In order to obtain valid and reliable information for the study, questionnaire was used for data collection. Questionnaire was considered appropriate for the study based on Ibrahim *et al.* (2013) recommendation that in a study, it is advantageous for respondents to answer

at their convenient time. According to Kothanri and Garg (2014) using questionnaire in a study is quite popular and there is low cost even when the population is large and is widely spread geographically.

A structured questionnaire titled, “Electronic Journal Provision and User Satisfaction as correlates for Job Productivity of Academic Staff in Selected Federal Polytechnics in North-Central, Nigeria (EJPUSCJPAS)” was used for the study.

The researcher considered the use of questionnaire as the main instrument for data collection because it is the most appropriate method for gathering opinion from a large population. The study designed structured questionnaire for academic staff and librarians, based on research questions with provisions for the respondents to tick where appropriate. The questionnaire designed is divided into Section A-E. Section A covered the demographic information of the librarians, while sections B-E covered the research questions pertinent to the Librarians.

3.5 Validity of the Research Instrument

To ascertain the face validity of the instrument the researcher submitted the draft copies of questionnaire to the supervisor and two (2) other lecturers in the Department of Library and information Technology, Federal University of Technology, Minna. They were requested to look at the content of the copies of the questionnaire, whether is in accordance with the research questions and statement of the problem, more also the format of the questionnaire, the appropriateness of the questionnaire title, clarity of the items contained therein and to any grammatical errors in the questionnaire. The comments and criticisms made were used to correct and strengthen the instrument.

3.6 Reliability of the Research Instrument

The reliability of the research instrument for this study was ascertained using pilot study. A pilot study was conducted in Niger State polytechnic Zungeru library. Thirty (30) copies of the questionnaire were shared to academic staff Responses were analysed using Cronbach Coefficient Alpha formula. The result of the Cronbach Coefficient Alpha formula is 0.71 indicating that the instrument is reliable.

3.7 Method of Data Collection

The researcher collected and attached a letter of introduction from Head of Department, Library and Information Technology, Federal University of Technology, Minna to the Federal Polytechnics studied. The questionnaire copies were administered and collected personally by the researcher. The administration and collection of copies of the questionnaire was done within the period of six (6) weeks.

3.8 Method of Data Analysis

The data collected was analysed using descriptive statistics such as frequency counts, mean, standard deviation and Person Product Moment Correlation (PPMC). The descriptive statistics was used to measure demographic information of the respondents and research questions in the study, while Pearson Product Moment Correlation (PPMC) was used to test the null hypotheses in the study.

CHAPTER FOUR

4.0

RESULTS AND DISCUSSION

4.1 Respondents Rate

A total of three hundred and thirty-three (333) copies of the questionnaire were administered to librarians in the four federal polytechnics in North-Central, Nigeria. Three hundred and twenty-six (326) copies of the questionnaire were filled, returned and found usable for the analysis representing 98% response rate.

Table 4.1 shows the response rate based on the copies of questionnaire administered and returned with their percentage(s) in each of the federal polytechnics studied.

Table 4.1: Response Rate

S/N	Name of Federal Polytechnic	Copies of questionnaire Administered	Copies of Returned Questionnaire	Percentage(s) (%)
1	Federal Polytechnic, Bida	85	83	98
2	Federal Polytechnic, Idah	70	68	97
3	Federal Polytechnic, Nassarawa	72	71	98
4	Federal Polytechnic, Offa	106	104	98
	Total	333	326	98

Table 4.1 shows that 85 copies of the questionnaire were administered to librarians in Federal Polytechnic, Bida, out of which 83 (98%) copies of the valid questionnaire were returned, 70 copies of the questionnaire were administered to librarians in Federal Polytechnic, Idah, 68 (97%) copies of the valid questionnaire were returned, 72 copies of the questionnaire were administered to librarians in Federal Polytechnic, Nassarawa, 71 (98%) copies were returned and 106 copies of the questionnaire were administered to librarians in Federal Polytechnic, Offa, 104 (98%) copies were returned.

4.2 Descriptive Analysis of Respondents Demographic Characteristics The respondents were asked to indicate their demographic variables, Table 4.2 shows their responses based on their school, gender, rank and years of experience.

Table 4.2: Respondents Demography

Name of Federal Polytechnic		Frequency	Percentage(s)
Federal Polytechnic Bida		83	25
Federal Polytechnic Idah		68	21
Federal Polytechnic Nassarawa		71	22
Federal Polytechnic Offa		104	32
Total		326	100

S/N	Gender	Frequency	Percentage(s)
1	Male	212	65
2	Female	114	35
Total		326	100

Rank	Frequency	Percentage(s)
Assistant librarian	61	19
Librarian III	75	23
Librarian II	84	26
Librarian I	68	21
Senior librarian	30	9
Principal librarian	4	1
Chief librarian	4	1
Total	326	100

S/N	Year(s) of Experience	Frequency	Percentage(s)
1	1 – 5years	53	16
2	6 – 10 years	165	51
3	16 – 20years	67	20
4	21years and above	41	13
Total		326	100

Table 4.2 reveals that 99(29%) of the respondents are from Federal Polytechnic Bida;68(21%) of the respondents are from Federal Polytechnic, Idah; 71(22%) of the respondents are from Federal Polytechnic, Nassarawa and 104(32%) of the respondents

are from Federal Polytechnic, Offa. On the other hand, 212 (65%) of the respondents are male, while 114 (35%) of the respondents are female. This shows that most of the respondents are males

The results from Table 4.2 reveals further that 61(19%) are Assistant librarians, 75(23%) are Librarians III, 84(26%) are Librarians II, 68(21%) are Librarians I, 30(9%) are senior librarians, 4(1%) are principal librarians and 4(1%) were chief librarians.

Similarly, on working experience Table 4.2 indicates that 53(16%) of the respondents are between the age range of 1 – 5years, 165(51%) were between 6 – 10 years, 67(20%) were between 16 – 20 years and 41(13%) were between the age range of 21 years and above.

4.3 Research Questions

Research Question One: What are the electronic information resources available in Federal Polytechnics in North-Central, Nigeria?

Table 4.3 shows the electronic information resources available in the federal polytechnics studied

Table 4.3: Electronic Information Resources Available in Federal Polytechnics Bida, Idah, Nasarawa and Offa Federal Polytechnic Libraries.

Electronic Information Resources	Name of Federal Medical Centre			
	Federal Polytechnic, Bida	Federal Polytechnic, Idah	Federal Polytechnic, Nasarawa	Federal Polytechnic, Offa
E-journals	√	√	√	√
E-books	√	√	√	√
E-magazines	√	√	√	√
E-newspapers	√	√	√	√
Online databases	√	√	√	√
Full-text (aggregated) databases	√	√	√	√
Indexing and abstracting databases	√	√	√	√
Reference databases (biographies, dictionaries, directories, encyclopaedias,)	√	√	√	√
Numeric and statistical databases	√	√	√	√
E-images	√	√	√	√
E-audio/visual resources	√	√	√	√

Key [√] = Available, [-] = Not Available

The result in Table 4.3 shows the electronic information resources available and those that are not available in the federal polytechnic libraries studied. Electronic information resources such e-journals, e-books, e-magazines, e-newspapers, online databases, fulltext (aggregated) databases, indexing and abstracting databases, reference databases (biographies, dictionaries, directories, encyclopedias), e-images and e-audio/visual resources are available in the federal polytechnics libraries, while full-text (aggregated) databases are not available in Federal Polytechnic, Nasarawa and Federal Polytechnic, Idah respectively.

Research Question Two: What is the influence of electronic information resources on job productivity of academic staff in Federal Polytechnics in North-central, Nigeria?

Table 4.4 shows the influence of electronic information resources on job productivity of academic staff in the studied areas.

Table 4.4: Influence of Electronic Sources of Information Resources on Job Productivity

S/N	Influence	SA	A	D	SD	n	FX	\bar{x}	STD	Decision
		4	33	2	1	3326				
1	The use of electronic sources of information support me to complete my job without errors	117	100			326	953	2.92	0.42	Agreed
2	Electronic sources of information resources support me to complete my job on time	124	104	76	33	326	955	2.93	0.43	Agreed
3	Electronic sources of information resources support me to complete task exceeding the required standard	80	67	49	49	326	802	2.46	0.04	Disagreed
4	Electronic sources of information resources improve my research output despite time pressure	99	112	102	77	326	910	2.79	0.29	Agreed
5	Electronic sources of information resources support me to complete my work in accordance with the specified standard	103	109	66	49	326	933	2.86	0.36	Agreed
6	Electronic sources of information resources support me to perform my duties efficiently and useful	99	102	82	32	326	899	2.75	0.25	Agreed
7	Electronic sources of information resources help me to take decision without waiting for leadership orders	57	73	72	53	326	754	2.31	0.19	Disagreed
8	Electronic sources of information resources does not allow me to propose new idea regarding my duties	69	85	113	83	326	775	2.38	0.10	Disagreed
9	Electronic sources of information resources improve my job productivity compared to my peers with similar qualifications	94	104	72	100	326	897	2.75	0.25	Agreed
10	My job productivity does not depend on electronic sources of information resources	61	63	81	47	326	728	2.23	0.27	Disagreed

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD)

Table 4.4 shows that ten items was listed for librarians to respond on the influence of electronic information resources on their job productivity. Six items produced high mean scores which were above the average benchmark mean of 2.50. These items include item 2: Electronic information resources support me to complete my job on time($\bar{x}=2.93$; $SD=0.43$), item 1: The use of electronic sources of information support me to complete my job without errors ($\bar{x}=2.92$; $SD=0.42$), item 5: Electronic information resources support me to complete my work in accordance with the specified standard($\bar{x}=2.86$; $SD=0.36$), item 4: Electronic information resources improve my research output despite time pressure($\bar{x}=2.79$; $SD=0.29$), item 6: Electronic sources of information resources support me to perform my duties efficiently($\bar{x}=2.75$; $SD=0.25$) and item 9: Electronic information resources improve my job productivity compared to my peers with similar qualifications($\bar{x}=2.75$; $SD=0.25$). On the other hand, four items produced low mean score which were below the average benchmark of 2.50. These items include item 3: Electronic sources of information resources support me to complete task exceeding the required standard($\bar{x}=2.46$; $SD=0.04$), item 8: Electronic information resources does not allow me to propose new idea regarding my duties($\bar{x}=2.38$; $SD=0.10$), item 7: Electronic information resources help me to take decision without waiting for leadership orders($\bar{x}=2.31$; $SD=0.19$) and item 10: My job productivity does not depend on electronic information resources($\bar{x}=2.23$; $SD=0.27$).

Research Question Three: What is the impact of institutional policies on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria?

Table 4.5 shows the impact of institutional policies on job productivity of librarians in the federal polytechnics studied.

Table 4.5: Impact of Institutional Policies on Job Productivity

S/N	Statements Impacts	SA	A	D	SD	N	FX	\bar{x}	STD	Decision
		4	3	2	1	326				
1	Job security contribute to my job productivity	96	107	77	46	326	905	2.77	0.27	Agreed
2	Career advancement contribute to my job productivity	99	102	72	53	326	899	2.76	0.26	Agreed
3		101	98	85	72	326	940	2.88	0.38	Agreed
	Level of responsibility contribute to my job productivity									
4	Remuneration impacts my job productivity	91	104	98	33	326	905	2.78	0.28	Agreed
5	Contribution to society impacts my job productivity	57	86	113	70	326	782	2.39	0.11	Disagreed
6	Intellectual challenge affects my job productivity	108	118	67	33	326	953	2.92	0.42	Agreed
7		72	81	97	76	326	801	2.46	0.04	Disagreed
	Location of office does not affect my job productivity									
8	Supplementary benefits like seasonal allowances influence my job productivity	138	104	51	33	326	999	3.06	0.56	Agreed

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD)

The result from Table 4.5 shows that eight items were listed for librarians to respond on the impact of institutional policies on their job productivity. Six items produced high mean scores which were above the average benchmark of 2.50. These items include item 8: Supplementary benefits like seasonal allowances influence my job productivity($\bar{x}=3.06$; $SD=0.56$), item 6: Intellectual challenge affects my job productivity ($\bar{x}=2.92$; $SD=0.42$), item 3: Level of responsibility contribute to my job productivity($\bar{x}=2.88$; $SD=0.38$), item 1: Job security contribute to my job productivity($\bar{x}=2.77$; $SD=0.27$),item 4: Remuneration impacts my job productivity ($\bar{x}=2.78$; $SD=0.28$) and item 2: Career advancement contribute to my job productivity ($\bar{x}=2.76$; $SD=0.26$).

On the other hand, two items produced low mean scores which were below the benchmark of 2.50. These items include item 7: Location of office does not affect my job productivity($\bar{x}=2.46$; $SD=0.04$) and item 5: Contribution to society impacts my job productivity($\bar{x}=2.39$; $SD=0.11$).

Research Question Four: What is the impact of years of experience on job productivity of academic staff in Federal Polytechnics in North-central, Nigeria?

Table 4.6 shows the responses of librarians on the impact of years of experience on their job productivity.

Table 4.6: Impact of Years of Experience on Job Productivity of Academic Staff

S/N	Statements	SA	A	D	SD	N	FX	\bar{x}	STD	Decision
		4	3	2	1	326				
1	Years of experience leads to professional and academic knowledge leading to job productivity	110	112	69	35	326	949	2.91	0.41	Agreed
2	Years of experience does not enhance job ability	26	46	117	137	326	613	1.88	0.62	Disagreed
3	Years of experience leads to effective and judicious use of library resources which leads to job productivity	101	98	85	42	326	910	2.79	0.29	Agreed
4	Years of experience does not lead to achieving organizational goals and objectives	57	76	103	90	326	752	2.31	0.19	Disagreed
5	Years of experience helps in maintaining competitive advantage over other library staff	91	78	113	44	326	868	2.66	0.16	Agreed
6	Years of experience does not help in resolving organizational problems	39	69	108	110	326	689	2.11	0.39	Disagreed
7	Years of experience enables co-operation among library staff to achieve results	114	116	80	16	326	1322	4.06	1.56	Agreed
8	Years of experience does not lead to work proficiency	35	62	107	122	326	662	2.03	0.47	Disagreed

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD)

The result from Table 4.6 shows that eight items were listed for academic staff to respond on the impact of years of experience on their job productivity. Four items produced high mean scores which were above the average benchmark of 2.50. These items include item 7: Years of experience enables co-operation among library staff to achieve results ($\bar{x}=4.06$; $SD=1.56$), item 1: Years of experience leads to professional and academic knowledge leading to job productivity ($\bar{x}=2.91$; $SD=0.41$), item 3: Years of experience leads to effective and judicious use of library resources which leads to job productivity ($\bar{x}=2.79$; $SD=0.29$) and item 5: Years of experience helps in maintaining competitive advantage over other library staff ($\bar{x}=2.66$; $SD=0.16$). On the other hand, four items produced low mean score below the average bench mark of 2.50. These items include item 4: Years of experience does not lead to achieving organizational goals and objectives ($\bar{x}=2.31$; $SD=0.19$), item 6: Years of experience does not help in resolving organizational problems ($\bar{x}=2.11$; $SD=0.39$), item 8: Years of experience does not lead to work proficiency ($\bar{x}=2.03$; $SD=0.47$) and item 2: Years of experience does not enhance job ability ($\bar{x}=1.88$; $SD=0.62$).

Research Question five: What is the impact of promotion on job productivity of academic staff in Federal Polytechnics in North-central, Nigeria?

Table 4.7 shows the responses of librarians on the impact of promotion on their job productivity in the federal polytechnics studied.

Table 4.7: Impact of Promotion on Job Productivity of Academic Staff

<u>S/N</u>	<u>Impacts</u>	<u>SA</u> <u>4</u>	<u>A</u> <u>3</u>	<u>D</u> <u>2</u>	<u>SD</u> <u>1</u>	<u>N</u> <u>326</u>	<u>FX</u>	<u>X</u>	<u>STD</u>	<u>Decision</u>
1	Promotion enables academic staff to shift in upward direction in organizational hierarchy to a place of greater responsibility thereby increasing their job productivity.	110	112	69	35		949	2.91	0.41	Agreed
2	Promotion does not enable the library management to identify the most productive employees in the library, at the same time, the employees are being recognized by the library management thereby enhancing job productivity	69	85	72	100	326	775	2.38	0.12	Disagreed
3	Promotion serves as a way of synchronizing organisational goals with personal goals thereby enhancing job productivity	91	78	113	44	326	868	2.66	0.16	Agreed
4	Promotion carries with it a significant change in the wage package of academic staff thereby enhancing job productivity	115	110	79	22	326	998	2.89	0.48	Agreed
5	Promotion does not carry with it increase in job amenities such as bigger office or spending amount thereby enhancing job productivity	57	73	113	83	326	756	2.32	0.18	Disagreed

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD)

The findings from Table 4.7 reveals that five items were listed for academic staffs to respond on the impact of promotion on their job productivity. Three items produced high means scores which were above the average benchmark of 2.50. These items include item 1: Promotion enables academic staff to shift in upward direction in organizational hierarchy to a place of greater responsibility thereby increasing their job productivity($\bar{x}=2.91$; $SD=0.41$), item 4: Promotion carries with it a significant change in the wage package of academic staff thereby enhancing job productivity($\bar{x}=2.89$; $SD=0.48$) and item 3: Promotion serves as a way of synchronizing organisational goals with personal goals thereby enhancing job productivity($\bar{x}=2.66$; $SD=0.16$). Two other items produced low mean scores which were below the average benchmark of 2.50. These items include item 2: Promotion does not enable the library management to identify the most productive employees in the library, at the same time, the employees are being recognized by the library management thereby enhancing job Productivity($\bar{x}=2.38$; $SD=0.12$) and item 5: Promotion does not carry with it increase in job amenities such as bigger office or spending amount thereby enhancing job productivity($\bar{x}=2.32$; $SD=0.18$).

Research Question Six: What are the challenges facing the availability of electronic journals as factor of job productivity of academic staff in Federal Polytechnics in Northcentral, Nigeria?

Table 4.8 shows the responses of academic staff on the challenges facing the availability of electronic journals on their job productivity in federal polytechnics in North-Central, Nigeria.

Table 4.8: Challenges Facing the Availability of Electronic Journals on Job Productivity of Academic Staff

S/N	Challenges	SA	A	D	SD	N	FX	\bar{x}	STD	Decision
		4	3	2	1	326				
1	Inadequate fund	124	104	46	52	326	952	2.92	0.42	Agreed
2	Inadequate facilities	117	96	65	48	326	934	2.87	0.37	Agreed
3	Lack of technical know-how manpower	110	112	69	35	326	949	2.91	0.41	Agreed
4	Erratic power supply	115	110	79	22	326	970	2.98	0.48	Agreed
5	Unstable Internet access	99	112	66	49	326	913	2.80	0.30	Agreed
6	Low bandwidth	103	109	82	32	326	935	2.87	0.37	Agreed
7	Institutional policies	117	110	68	31	326	965	2.96	0.46	Agreed
8	Publishers policies	69	85	72	100	326	775	2.38	0.12	Disagreed

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD)

The result from Table 4.8 shows that eight items were listed for academic staff to respond on the challenges facing the availability of electronic journals for their job productivity. Seven items produced high mean scores which were above the average benchmark of 2.50. These items include item 4: Erratic power supply($\bar{x}=2.98$; $SD=0.48$), item 7: Institutional policies($\bar{x}=2.88$; $SD=0.38$), item 1: Inadequate fund($\bar{x}=2.96$; $SD=0.46$), item 3: Lack of technical know-how manpower($\bar{x}=2.91$; $SD=0.41$), item 2: Inadequate facilities($\bar{x}=2.87$; $SD=0.37$), item 6: Low bandwidth($\bar{x}=2.87$; $SD=0.37$) and item 5: Unstable Internet access($\bar{x}=2.80$; $SD=0.30$). On the other hand, one item produced low mean score below the benchmark of 2.50 which is item 8: Publishers policies($\bar{x}=2.38$; $SD=0.12$).

3.4 Testing of Hypotheses

H₀₁: There is no significant relationship between the influence of electronic information resources on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria.

Table 4.9 shows the relationship between the influence, of electronic information resource and job productivity of academic staff.

Table 4.9: Relationship between Influence of Electronic Information Resources and Job Productivity of Academic Staff

		<u>Repository usage</u>	<u>Repository effects</u>
Electronic information resources	Pearson Correlation	1	-.948**
	Sig. (2-tailed)		.000
	N	326	326
Job productivity	Pearson Correlation	-.948**	.000
	Sig. (2-tailed)		1
	N	326	326

** . Correlation is significant at the 0.05 level (2-tailed).

Table 4.9 shows the relationship between the influence of electronic information resources and job productivity of academic staff in federal polytechnics in NorthCentral, Nigeria. Since sig-value (0.000)<0.05, the null hypothesis is rejected and conclude that there is significant relationship between the influences, of electronic information resource and job productivity of academic staff in federal polytechnics in North-Central, Nigeria.

H02: There is no significant relationship between user satisfaction and job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria.

Table 4.10: Pearson Product Moment Correlation (PPMC) showing the relationship between user satisfactions, and job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria

		Repository awareness	Repository benefit
User satisfaction	Pearson Correlation	1	.705** .000
	Sig. (2-tailed)		
	N	326	326
Job productivity	Pearson Correlation	.705**	1
	Sig. (2-tailed)	.000	
	N	326	326

** . Correlation is significant at the 0.05 level (2-tailed).

Table 4.10 shows the relationship between user satisfactions and job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria. Since sig-value (0.000) < 0.05, we reject the null hypothesis and conclude that there is significant relationship between user satisfactions, and job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria.

H₀₃: There is no significant relationship between years of experience and promotion on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria.

Table 4.11: Pearson Product Moment Correlation (PPMC) showing the relationship between years of experience and promotion on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria

		Repository awareness	Repository benefit
Years of experience	Pearson Correlation	1	.824** .000
	Sig. (2-tailed)		
	N	326	326
Promotion on job productivity	Pearson Correlation	.824**	1 326
	Sig. (2-tailed)		
	N	.000	326

** . Correlation is significant at the 0.05 level (2-tailed).

Table 4.11 shows the relationship between years of experience and promotion on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria. Since sig-value (0.000) < 0.05, we reject the null hypothesis and conclude that there is significant relationship between years of experience and promotion on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria.

4.5 Summary of the Findings

The findings of the study are as follows:

1. The electronic information resources available in federal polytechnics in NorthCentral Nigeria are: e-journals, e-books, e-magazines, e-newspapers, online databases, full-text (aggregated) databases, indexing and abstracting databases, reference databases (biographies, dictionaries, directories, encyclopaedias), e-images and e-audio/visual resources

2. The influence of electronic information resources on job productivity of academic staff is positive.
3. The respondents disagreed that their job productivity does not depend on electronic sources of information resources
4. Finding indicated that years of experience leads to professional and academic knowledge leading to job productivity
5. Promotion enables academic staff to shift in upward direction in organizational hierarchy to a place of greater responsibility thereby increasing their job productivity.
6. The academic staff indicated that inadequate fund, inadequate facilities, lack of technical know-how manpower, erratic power supply, unstable Internet access, low bandwidth and institutional policies are seen as challenges facing the availability of electronic journals on job productivity of academic staff
7. There is significant relationship between the influence, of electronic information resource on job productivity of academic staff in federal polytechnics in Northcentral, Nigeria.
8. There is significant relationship between user satisfaction, and job productivity of academic staff in Federal Polytechnics in North-central, Nigeria
9. There is significant relationship between years of experience and promotion on job productivity of academic staff in federal polytechnics in North-central, Nigeria

4.6 Discussion of the Findings

4.6.1. Research Questions

Research question 1: what are the electronic information resources available in selected Federal Polytechnics in North-Central, Nigeria?

The findings of the study revealed that there is availability of electronic information resources such as -journals, e-books, e-magazines, e-newspapers, online databases, fulltext (aggregated) databases, indexing and abstracting databases, reference databases (biographies, dictionaries, directories, encyclopaedias), e-images and e-audio/visual resources. This is in line with the findings of Johnson(2012) that electronic resources refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. They may either be accessed remotely via the Internet or locally which include: E-journals, E-books, Full-text (aggregated) databases, indexing and abstracting databases, Reference databases (biographies, dictionaries, directories, encyclopaedias), Numeric and statistical databases, E-images, E-audio/visual resources. On the other hand, full-text (aggregated) databases are not available in Federal Polytechnics, Nasarawa and Federal Polytechnic, Idah respectively. This could be as a result of poor Internet connection, shortage of fund and epileptic power supply which affects the availability and use of electronic information resources for job productivity of librarians. This is in agreement with the findings of Megameno-Ndinoshiho (2010) who found out that many electronic resources were substantially under-utilized by undergraduate nursing students at the University of Namibia's Northern Campus. The main barriers identified were the shortage of computers, unreliable Internet connections and lack of fund and lack of skills.

Research question 2: What is the influence of electronic information resources on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria?

The study revealed that the influence of electronic information resources on job productivity of academic staff is positive. The respondents indicated that the use of electronic information support them to complete job without errors, complete their job on time, improve their research output despite time pressure, complete their work in accordance with the specified standard, supporting them perform their duties efficiently and useful and electronic information resources improve their job productivity as compared with peers having similar qualifications. This is in line with the findings of Gakibayo and Okello-Obura, (2013) that the advantages of electronic resources over print include speed, ease of use, ability to search multiple files at the same time, ability to save, print and repeat searches, more frequent updating and the ability to access from outside the library (a particular advantage for the distance learner). However, the use of electronic information resources to support in completing task exceeding the required standard, making decisions without waiting for leadership orders and proposing new ideas regarding their duties were rated low among the respondents. This is in contrast with the findings of Adeniran (2013) that electronic resources are invaluable research tools that complement print-based resources in any traditional library with advantages which include: access to information that might be restricted to the user because of geographical location or finances, access to current information, and provision of extensive links to additional resources or related content.

Research question 3: What is the impact of institutional policies on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria?

The respondents indicated that the institutional policies such as job security, impact their job satisfaction, career advancement, level of responsibility, remuneration, intellectual challenge and supplementary benefits, seasonal allowances influences their job productivity and performance. However, location of office and contribution to society were rated low by the respondents to impact on their job performance and productivity. This is in line with the findings of Yaya (2019) institutional policies is essential element in management which facilitates work environment where employees derive a sense of accountability and feel motivated to achieve organisational goals along with their career development. Policies are designed to influence and determine all major decisions and actions and all the activities that take place within the boundaries set by them. This further corroborates the findings of Dugguh and Ayaga (2014) opined that an organisation policies administration and procedures can frustrate employee performance if the policies and procedures of an organisation are ambiguous. It is the responsibility of management to provide appropriate opportunities and environments for people at work to satisfy their needs. To ensure the achievement of set goals an organisation needs to create an atmosphere of commitment and cooperation for its employees, through policies that can facilitate employee satisfaction.

Research question 4: What is the impact of years of experience on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria?

The findings of the study revealed that respondents agreed that years of experience positively affect their job productivity which leads to their professional and academic knowledge, effective and judicious use of library resources, maintaining competitive

advantage over other library staff with lower experience on the job, enabling cooperation among library staff to achieve results, enhancing job ability, work proficiency, resolving organizational problems and also achieving organizational goals and objectives. This is in agreement with the findings of Rice (2019) that many occupations recognise employee's year of work experience as a relevant factor in human resource policies, including compensation systems, benefit packages, and promotion decisions. The idea is that work experience, gained over time, enhances the knowledge, skills, productivity, and performance of workers. However a worker having good experience in his job can become a leader due to his special gift of experience he acquired during the course of his work. This gives him an expert power. This further corroborates the findings of Bhargava and Anbazhagan (2014) that education and work experience-influence on the performance of employees indicates that the performance of the employees gradually increases with their experience. This is in accordance to the common adage "practice makes a man perfect.

Research question 5: What is the impact of promotion on job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria?

The findings of the study revealed that the impact of promotion on job productivity of academic staff is high. The respondents indicated that promotion enables them to shift in upward direction in organizational hierarchy to a place of greater responsibility, enable the library management to identify the most productive employees in the library, at the same time, enables them to be recognized by the library management, serves as a way of synchronizing organisational goals with personal goals, carries with it a significant change in the wage package of academic staff and also increase in job amenities such as bigger office or befitting salary thereby enhancing their job productivity. This is in line with the findings of Usman and Bushra (2013) that promotion enhances the yield of an

organization when an employee climbs a promotion ladder on the basis of his seniority and ultimately he gets an increased wage rate. This further corroborates the findings of Dessler (2015) that promotion occurs when an employee makes a shift in the upward direction in organizational hierarchy and moves to a place of greater responsibility.

Research question 6: What are the challenges facing the availability of electronic journals as factor of job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria?

The findings of the study revealed that the respondents agreed with all the items listed as challenges facing the availability of electronic resources on job productivity of academic staff ranging from inadequate fund, inadequate facilities, lack of technical know-how, erratic power supply, unstable Internet access and low bandwidth with the exception of institutional policies which majority of the respondents do not see as challenge to the availability and use of electronic resources towards the productivity of academic staffs. This is in line with the findings of Megameno-Ndinoshiho (2010) that many electronic resources were substantially under-utilized by undergraduate nursing students at the University of Namibia's Northern Campus with main barriers identified as shortage of computers, unreliable internet connections and lack of skills.

4.6.2 Findings on the Tested Hypotheses

H₀₁: There is no significant relationship between the influence of electronic information resources and job productivity of academic staff in Federal Polytechnics North-Central, Nigeria.

The test of null hypothesis one revealed that there is significant relationship between electronic sources of information resource and job productivity of academic staff in the federal polytechnics studied. This implies that making electronic information resources

available and readily accessible to academic staff will increase their research activities and job product. This is in line with the findings of Gakibayo and Okello-Obura, (2013) that the advantages of electronic resources over print include speed, ease of use, ability to search multiple files at the same time, ability to save, print and repeat searches, more frequent updating and the ability to access from outside the library (a particular advantage for the distance learner). However, the use of electronic information resources to support in completing task exceeding the required standard, making decisions without waiting for leadership orders and proposing new ideas regarding their duties were rated low among the respondents. This is in contrast with the findings of Adeniran (2013) that electronic resources are invaluable research tools that complement print-based resources in any traditional library with advantages which include: access to information that might be restricted to the user because of geographical location or finances, access to current information, and provision of extensive links to additional resources or related content.

H₀₂: There is no significant relationship between user satisfaction and job productivity of academic staff in Federal Polytechnics in North-Central, Nigeria.

The test of the null hypothesis between user satisfaction and job productivity of academic staff in the federal polytechnics studied has shown that there is significant relationship between them. This implies that the use of electronic resources enables the job productivity of academic staffs in federal polytechnic studied. This is in line with findings of Kiseleva *et al.* (2016) this area has not received attention because a high level of user satisfaction generally has been presumed to exist in a formal setting. Several demographic, institutional, and personal factors have been shown to impact user satisfaction levels for faculty members. A large number of researchers have used a combination of variables such as gender, ethnicity, job achievement, nature of work,

salary, collegial relationships, and rank and tenure to study their impact on faculty user satisfaction.

1. Gender as an explanatory variable

The majority of studies that focus on faculty satisfaction have explored the relationship between satisfaction and gender (Sivathaasan, 2013). The study found that male faculty members have higher levels of overall job satisfaction than female faculty members, particularly in terms of benefits and salary. On the other hand, Hossain and MdAnwarul (2012) did not find any significant differences between male and female faculty members in overall levels of job satisfaction. They did observe, however, that male faculty members had almost three times the satisfaction levels of female faculty members when it comes to promotion opportunities.

2. Disciplinary affiliation as an explanatory variable On the other hand, there is relatively little research on the impact of discipline on faculty satisfaction. Adeniran (2011) used several individual and environmental characteristics to construct a conceptual framework of faculty job satisfaction. She divided the variables that contribute to faculty job satisfaction into two main categories: (1) mediators and (2) triggers.

H₀₃: There is no significant relationship between years of experience and promotion on job productivity of academic staff in Federal Polytechnics in NorthCentral, Nigeria.

The test of null hypothesis three revealed that there is significant relationship between years of experience and promotion on job productivity of academic staff in the federal polytechnics studied. This implies that the more the experienced an-academic staff is, the higher their job productivity and promotion which is done every three and four years for both junior and senior levels. This corroborates the findings of Madu (2012) who asserted

that academic staff are evaluated for promotion every three and four years for both junior and senior levels based on their research productivity (output) especially in the form of publications made in referred works and patents.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study was undertaken to determine the provision of electronic journals and user satisfaction as correlates of job productivity of academic staff in selected Federal polytechnics in North-Central, Nigeria. The study revealed that there is availability of electronic information resources such as -journals, e-books, e-magazines, enewspaper, online databases, full-text (aggregated) databases, indexing and abstracting databases, reference databases (biographies, dictionaries, directories, encyclopaedias), eimages and e-audio/visual resources. The study also indicated that the use of electronic information resources support academic staff to complete their job without errors and on time, improve their research output despite time pressure, complete their work in accordance with the specified standard, supporting them perform their duties efficiently. However, factors such as inadequate fund, inadequate facilities, and lack of technical know-how, erratic power supply, unstable Internet access and low bandwidth were seen as factors affecting the provision of electronic journals and user satisfaction of academic staff towards their job productivity. With all these, there would not be effective provision of electronic journals and user satisfaction of academic staff towards their job productivity in the selected Federal polytechnics in North-Central, Nigeria.

5.2 Recommendations

Based on the findings of the study, the following recommendations are made:

1. The polytechnics managements in North-central, Nigeria should increase the acquisition of electronic information resources which have significant influence on academic staff job performance.

2. Polytechnics library managements in North-Central, Nigeria should initiate regular user orientation programme for the academic staff. This will not only sharpen their user skills but also create awareness on the availability of some library resources in the polytechnic libraries.
3. The Management of federal polytechnics libraries in North-central, Nigeria should adopt pragmatic measures in creating adequate awareness on the available electronic information resources in order to enhance their use.
4. The polytechnic management in North-Central Nigeria should encourage subscription to more electronic information resources on the subject needs of the institutions
5. The polytechnics and library management in North-Central, Nigeria should design appropriate work experience to enhance academic staff job performance like improving lengths of experience on certain skills and management functions in desired areas.
6. The polytechnics and libraries management in North-Central, Nigeria should formulate and implement institutional policies that are employee driven and recognises the peculiarities of academic staff in terms of their physical and psychological needs.

5.3 Contribution to Knowledge

The study contributed to knowledge in the following areas:

1. The study has revealed the state of electronic journals in the federal polytechnic libraries in North-Central, Nigeria and how journals are provided and utilised among academic staff for their job satisfaction and productivity.

2. The findings of the study also have theoretical implication. The results of the study established a link between electronic journal resources, their utilisation among academic staff for their job productivity and satisfaction
3. The study has added to the body of existing literature in regard to electronic information resources and user satisfaction.

5.4 Suggestion for Further Research

The following are here by suggested for further researches

1. A comparative analysis of the impact of electronic journal use towards research productivity of academic staff of North-West, Nigerian.
2. Availability of electronic information resources for research output: perception of academic staff members of polytechnics in South-South, Nigerian.
3. Library resources utilisation and publication output of academic staff of polytechnics in North-central and South-West, Nigerian.
4. Job satisfaction as correlates of academic staffs' productivity in public university libraries in South-East, Nigeria.
5. Evaluation of academic staff awareness, access and utilization of electronic journals by the academic librarians of Federal Polytechnics in South-West, Nigeria.
6. Effect of work environment and job satisfaction on employee performance in federal universities in South-South, Nigeria.

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APPENDIX A QUESTIONNAIRE

Department of Library and Information
Technology
Federal University of Technology Minna, Niger
State.
Date:

Dear respondents,

LETTER OF INTRODUCTION

I am a postgraduate student of Federal University of Technology, Minna with matriculation number MTECH/SICT/2018/8505, currently working on a research topic titled “ELECTRONIC JOURNAL PROVISION AND USER SATISFACTION AS CORRELATES OF PRODUCTIVITY OF ACADEMIC STAFF IN FEDERAL POLYTECHNICS IN NORTH- CENTRAL, NIGERIA”. I will appreciate it if you could kindly complete the attached questionnaire, as it will be instrumental to the completion of my research programme. The information requested for is purely for academic research purpose and will be treated with strict confidentiality. Please help to respond honestly to the questions as the identity of each respondent will not be required.

Thanks for your anticipated cooperation.

Yours sincerely,

BABA, Patience
M.TECH/SICT/2018/8505

SECTION A

1. School: _____
2. Gender: Male [] Female []
3. Rank: Assistant Lecturer [] Lecturer III [] Lecturer II [] Lecturer I []
Senior Lecturer []
Principal lecturer [] Chief Lecturer []
4. Years of experience: 0 – 5years [] 6 – 10 years [] 16 – 20years [] 21years and above []

Section B: OBSERVATION CHECKLIST

Determine the availability of electronic sources of information resources as a factor of productivity of academic staff in Federal Polytechnic in North-Central, Nigeria.

Electronic sources of information resources	Available	Not available
e-journals		
e-books		
Full text databases		
Indexing and abstracting databases		
e-dictionaries		
e-encyclopaedias		
e-images		
Audio-visual		
e-magazine		

SECTION C Influence of electronic sources of information resources on job productivity of academic staff in Federal Polytechnic in North Central Nigeria

Statement	SA	A	D	SD
The use of electronic sources of information support me to complete my job without errors				
Electronic sources of information resources support me to complete my job on time				
Electronic sources of information resources support me to complete task exceeding the required standard				
Electronic sources of information resources improve my research output despite time pressure				
Electronic sources of information resources support me to complete my work in accordance with the specified standard				
Electronic sources of information resources support me to perform my duties efficiently and useful				
Electronic sources of information resources help me to take decision without waiting for leadership orders				

Electronic sources of information resources does not allow me to propose new idea regarding my duties				
Electronic sources of information resources improve my job productivity compared to my peers with similar qualifications				
My job productivity does not depend on electronic sources of information resources				

Section D

Impact of user satisfaction on job productivity of academic staff in Federal Polytechnic in North Central Nigeria

Statement	SA	A	D	SD
Job security contribute to my job productivity				
Career advancement contribute to my job productivity				
Level of responsibility contribute to my job productivity				
Remuneration impacts my job productivity				
Contribution to society impacts my job productivity				
Intellectual challenge affects my job productivity				
Location of office does not affect my job productivity				
Supplementary benefits like seasonal allowances influence my job productivity				

Section E

Assess the challenges facing the availability of electronic journals as factor of job productivity of academic staff in Federal Polytechnic North Central Nigeria.

Statement	SA	A	D	SD
Inadequate fund				
Inadequate facilities				
Lack of technical know-how manpower				
Erratic power supply				
Unstable internet access				
Low bandwidth				
Institutional policies				
Publishers policies				

APPENDIX B Cronbach Alpha Reliability Analysis Result

Notes

Output Created	7-OCT-2021 00:10:51
Comments	
Input	Data C:\Users\dell\Desktop\DEFAULT BACKUP\ ANALYSIS\ Baba Patient.sav
	Active Dataset DataSet1
	Filter <none>
	Weight <none>
	Split File <none>
	N of Rows in Working Data File 24
	Matrix Input
Missing Value Handling	Definition of Missing User-defined missing values are treated as missing.
	Cases Used Statistics are based on all cases with valid data for all variables in the procedure.
Syntax	RELIABILITY /VARIABLES=SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA.
Resources	Processor Time 00:00:00.00
	Elapsed Time 00:00:00.01

Reliability Scale: Reliability value for learning ability Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.758	9

Scale: Reliability value for information resources utilisation Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.798	10

Scale: Reliability value for information resources utilisation

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.639	8

Scale: Reliability value for information resources utilisation

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.639	8

$$\text{Average} = \frac{0.758 + 0.798 + 0.639 + 0.639}{4} = \frac{2.834}{4} = 0.71.$$

This indicates that the instrument is reliable.