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| Author 1  | LIBRARY RESOURCES UTILIZATION AND PUBLICATION OUTPUT OF  
ACADEMIC STAFF OF POLYTECHNICS IN SOUTH-EAST AND SOUTH-SOUTH NIGERIA |
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CHAPTER ONE
INTRODUCTION

Background to the Study

The main function of academic institutions in Nigeria is the development of human resources through teaching, learning and research. This function is carried out at the different levels of academic institutions in Nigeria which include universities, polytechnics and colleges of education. To ensure specialization and efficiency in human resources development, the National Policy on Education (2004) assigned specific functions to each level of higher education. For the polytechnics, it provided the followings specific functions in addition to the general goals of education:

- Provide full-time or part-time course of instruction and training in engineering, other technologies, applied science, business, and management leading to the production of trained manpower;
- Provide the technical knowledge and skills necessary for agriculture, industries, commercial and economic development of Nigeria;
- Give training and impart the necessary skills for the production of technicians, technologists and other skilled personnel who shall be enterprising and self-reliant;
- Train people who can apply scientific knowledge to solve environmental problems for the convenience of man; and
- Give exposure on professional studies in the technologies (p. 41).
A closer examination of the above functions shows that the main objective of academic institutions in Nigeria is the provision of theoretical and practical training that will lead to intellectual and skills acquisition for the social, economic and political development of the country. In other words, academic institutions are meant to be development-oriented, whether in respect of the society or the individual and whether in physical or psychological dimensions (Ayeni, 2010). The realization of the foregoing functions demands sound academic research for publication output not only for the growth of the individual academic staff but for both academic institutions and the country at large.

The 21st Century Webster’s International Encyclopedia defined research as the “use of appropriate methods to discover new knowledge, or explore relationships between ideas or events”. On the other hand, the Office for Human Research Protections of the Cardinal Stritch University (2008:1) saw it as “a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge”. These definitions depict research as a planned activity which aims at creating new knowledge or expanding the existing ones. In addition, it should also aim at solving societal problems. However, for the purpose of this study, research is defined as a systematic search or investigation carried on in academic institutions for the purpose of discovering new ideas or elucidating on existing ones and generally contributing to knowledge.
Although research is carried out at different levels in many organizations, the ones conducted in academic institutions and perhaps those by the academic staff are the most important to the society. This is because of the connection between academic research and human resources development. Academic staff therefore, occupy a central position in research activities and publication output in the nation’s academic institutions.

The term academic staff has been variously defined. Egwunyenga (2008) defined academic staff as individuals employed in academic institutions whose responsibilities are to teach and conduct research leading to improvement in the society. In his study, Popoola (2008) referred to them as lecturers and defined them as staff in academic institutions whose duties pertain to teaching, learning, research and community services. Irrespective of the fact that these authors have different terms for academic staff, they agreed on their functions.

In the present study and with particular reference to the polytechnic system, academic staff is defined as staff in academic institutions whose primary duties concern teaching, research, acquisition, processing and dissemination of information and are required to show evidence of publication output for their career development. A major distinguishing characteristic of academic staff from technologists, instructors and other staff of the polytechnics is that whereas they are required to show evidence of publication output for their career advancement, those other staff are not required to do so. In other words, although technologists and instructors also teach in the polytechnics,
their appointments, promotion and general career development is not determined by their ability to provide the required number of publication output. Publication output is a necessary requirement for the appointments, promotion and career advancement of all academic staff of polytechnics in Nigeria (Scheme of Services for Federal Colleges of Education and Federal Polytechnic, 1989).

The term publication output has been variously defined. Zainab (2001) defined publication output as an outcome of research which appears in print and are usually embodied in research communications in the formal sense. He provided a long list of publication output to include reports, books, journal articles, sections of books, technical reports, transactions, edited works, patents, standards and preprints. Similarly, Edem (2004) defined publication output as the number of books, chapters in books, journal articles and other related research output such as bibliographies, abstracts and indexes that are published. In another development, the Department of Education of South African University as cited by Madye (2007) defined publication output as any research publication accepted by any evaluation body for promotion and other evaluation exercises.

The above definitions share the same view on what constitutes publication output. It is also clear that these authors exclude conference papers from what constitutes publication output. This exclusion may not be justified because conference papers are also important outcome of research through
which academic staff communicate their research findings as well as increase the information available in a given field or area of knowledge. It is also important to point out that in Nigerian polytechnics, conference papers are recognised alongside other publication output such as journal articles, chapters in books and books for career progression and promotions in line with the 1989 Scheme of Services for Federal Colleges of Education and Federal Polytechnics. In view of this and for the purpose of the present study, publication output is defined as all products of research by academic staff and it is made up of book publications, journal publications, and conference papers presentations.

Publication output is very important not only to the academic staff but to academic institutions in general. Holden, Rosenberg and Blaker (2005) observed that the peer-reviewed publications are the primary unit by which academic faculties and educational programmes are judged while Popoola (2008) claimed that publication output is one of the major determinants of academic staff productivity. It enables academic staff members to share insight, demonstrate academic scholarship, gain recognition for creative thinking and finally to develop a reputation for expertise in a specialty area. Publication output partly determines both local and international recognition and respect for academic staff and academic institutions generally. In any field of specialization, it provides current information for growth, progress and improved society. Similarly, Bassey, Akwegwu, Udida and Udey (2007)
observed that publication output is very significant in the lives of academic staff hence their promotions are almost entirely dependent on it.

From the foregoing, it is obvious that publication output does not only influence the career development of academic staff, it also attracts both local and global attentions to academic institutions. Such attentions could be in the form financial grants, partnership and research collaborations. Wise and Fisher (2004) believe that the benefit to institutions could be seen from the influence publication output has on academic programmes accreditation by professional organizations and the level of funding universities and higher other educational institutions enjoy from the government. Accordingly, Adomi and Mordi (2003) stated that:

Publishing in foreign journals helps to project the image of not only the author but his or her institution in other parts of the world. It has been noted that faculty publishing productivity is often used as index of departmental and institutional prestige and is associated strongly with an individual faculty member’s reputation, visibility and advancement in academic reward structure (p. 26).

In the same direction, Sabo (2005) claimed that the main criterion for ranking world class universities is not so much the volume of teaching, students’ population or community services but publication output. According to him, knowledge discovery, accumulation and dissemination is what placed the advanced countries at the top, by their control of social and human capital information, economic development and improved conditions of living.
In view of the importance of publication output in the lives of academic staff and institutional development, academic staff have continued to seek for the right quality and quantity of library resources that will enhance their publication output. Apparently, the level of academic activities including research in any tertiary institution is directly a function of the quality and quantity of library resources available in the institution’s library, their accessibility and utilization by both staff and students.

A resource is defined by Collins English Dictionary (2003) as the total means available for economic, political and educational development, such as mineral, labour force and armaments. It is something that is available and can be used for support or help. This includes human and materials items available in an environment or in an organization. Library resources are made up of these two components – human and materials. However, for the purpose of the present study, library resources refer to information materials available for users’ educational and research needs.

In line with the above view Popoola and Haliso (2009:65) defined library resources as “those information bearing materials that are both in print and in electronic format.” Similarly, Oyewusi and Oyeboade (2009:46) defined library resources as “collections of texts and bibliographic information sources and information technology such as those that support browsing and authoring and communication like computer and the internet.”
The foregoing definitions share a lot in common and summarize the composites of library resources to be either in print or non-print or both. They identified library resources to include textbooks, journals, abstracts and indexes. Others include newspapers and magazines, reports, CD-ROM, databases, videotapes/cassettes, diskettes magnetic tapes, computers and microforms.

In the present study, library resource is defined as a collection of non human educational materials in the library relevant to the information needs of users. These consists of books/monographs, journals collections, newspapers/magazines, conference proceedings, CD-ROM databases, online resources, students’ research projects, abstracts and indexes, bulletins/newsletters and government documents. These resources are very essential in the attainment of academic institutions’ overall objectives which usually revolve around the development of national human resources. They are the essential commodities needed for improved productivity of all members of academic community especially the academic staff. Meadow and Yuan as cited in Popoola (2008) noted that library resources are the message that changes the recipient’s knowledge base. Through the utilization of these resources, users acquire new knowledge as well as expand the existing ones.

The library resources and services available in academic libraries are, therefore, expected to be able to support the publication needs of all the members of the academic community. Through the interplay of library resources and services, academic staff will obtain the necessary information for
their publication output. Popoola and Haliso (2009) have noted the need for all academic staff to use the library in order to be efficient in teaching and to improve their publication output.

In Nigeria, polytechnics like other academic institutions are provided with libraries to ensure regular and adequate supply of information resources and services. The functions of such libraries would be among others to acquire and organize library resources in retrievable formats and create suitable learning environment in which staff and students are provided with varieties of such library resources and services for learning and research. To guarantee efficient performance of these libraries, the following library resources are usually acquired; textbooks, monographs, directories, handbooks, dictionaries and encyclopedias. Other resources that make up their stocks are journals, newspapers and magazines, bulletins, abstracts and indexes, government documents, conference proceeding and students’ research projects.

With the introduction of information and communication technologies (ICT) into library services, electronic resources such as CD ROM databases, computers and other online resources are now found in some polytechnic libraries. All these resources are channeled toward providing information to the library users in line with the courses offered in these institutions which are mainly engineering, sciences, management and for general interest reading and to support academic staff publication output. These resources are very essential in the attainment of academic institution’s overall objectives which usually
revolve around the development of national human resources. Zainab (2000) supported this stressing that libraries’ bibliographic databases and collections are very strategic to an institution’s staff publication output. For academic staff to achieve the desired level of publication output, utilization of their institutional library resources is of utmost necessity.

Uhegbu (2007) defined utilization as the actual putting into appropriate use of acquired information. He was of the view that library resources utilization differs from person to person and from one corporate organization to another in accordance with their information needs and other socio-economic imperatives. Need, therefore, is a critical factor in the utilization of library resources. In another development, Shokeen and Kauslik (2002) defined utilization of library resources as taking advantage of the resources available in the library by a user for learning and research purposes. The above definitions of utilization point to the fact that library resources fulfill their roles and contribute to solving the problem of information needs through utilization. In the present study, utilization is defined as accessing information from library resources and putting it into practical use in order to cause a change in the user or in the society. Through utilization, library users avail themselves of the information in the library resources and put it into other purposes. Library resources are utilized for different purposes by different people. Some utilize library resources for general information on everyday life, economic, social and political while some others utilize them for educational purposes. For the
academic staff, publication output forms one of the major reasons for the utilization of library resources. It stands to reason that for academic staff to attain the desired publication output, effective utilization of library resources is of utmost important. This is because utilization helps to bring out the value of library resources and make them relevant to the information needs of the users including academic staff. Utilization also ensures that the function of the library as the backbone of academic activities in an institution is attained. It enables the academic staff to achieve their desired level of publication output. Although academic staff in South-East and South-South Nigeria engage in research and publication output like their counterparts in other parts of Nigeria, as a requirement for their promotions and career advancement, it is not known whether such publication output is influenced by their utilization of library resources.

Statement of the Problem

Publication output is a major indicator of academic staff productivity. Its importance is evident in faculty decisions on academic staff appointments, tenure, career development, promotions, institutional assessment, ranking and recognition both locally and internationally. In view of this, academic staff need to conduct research regularly in order to meet the required publication output hence their career advancement hinges on it.
A few studies have linked academic staff publication output in Nigerian universities with utilization of library resources available in the institutional libraries. However, these studies failed to show whether library resources utilization really influence publication output of academic staff. It is pertinent to determine the extent of support the library provides to the academic staff of polytechnics for enhanced publication output. Besides, available literature has also shown that most studies in the developing countries including Nigeria on academic staff publication output only focused on the universities, neglecting entirely the polytechnics and other higher academic institutions. In other words, not much is known about the influence of library resources utilization on publication output of academic staff of polytechnics in Nigeria. This lack of information creates a gap in our knowledge of the influence library resources utilization has on academic staff publication output. Despite the huge amount of money spent on staff salary and in acquiring resources for polytechnic libraries as well as the amount of time and efforts put into the utilization, it is not certain whether maximum benefit of these resources is derived by the users, especially the academic staff with regards to their publication output.

In the light of the foregoing, it has become imperative to investigate the influence of library resources utilization on publication output of academic staff of polytechnics in South-East and South-South Nigeria with a view to identifying the library resources that are actually influencing the publication output of Nigerian polytechnic academic staff.


**Purpose of the Study**

The general purpose of the study is to investigate the influence of library resources utilization on publication output of academic staff of polytechnics in South-East and South-South Nigeria. The study was conducted to achieve the following specific objectives:

1. To find out the levels of library resources utilization of academic staff of polytechnics in South-East and South-South Nigeria.
2. To find out the levels of publication output by academic staff of polytechnics in South-East and South-South Nigeria.
3. To determine the influence of library resources utilization on book publications by academic staff of polytechnics in South-East and South-South Nigeria.
4. To ascertain the influence of library resources utilization on journal publications by academic staff of polytechnics in South-East and South-South Nigeria.
5. To ascertain the influence of library resources utilization on conference paper presentations by academic staff of polytechnics in South-East and South-South Nigeria.
6. To find out the constraints to utilization of library resources for publication output by academic staff of polytechnics in South-East and South-South Nigeria.
7. To find out strategies for enhancing utilization of library resources for enhanced publication output by academic staff of polytechnics in South-East and South-South Nigeria.

**Research Questions**

The following research questions were formulated to guide the study:

1. What are the levels of library resources utilization for publication output by academic staff of polytechnics in South-East and South-South Nigeria?

2. What are the levels of publication output of academic staff of polytechnics in South-East and South-South Nigeria?

3. What is the influence of library resources utilization on book publications by academic staff of polytechnics in South-East and South-South Nigeria?

4. What is the influence of library resources utilization on journal publications by academic staff of polytechnics in South-East and South-South Nigeria?

5. What is the influence of library resources utilization on conference papers presentations by academic staff of polytechnics in South-East and South-South Nigeria?
6. What are the constraints to utilization of library resources for publication output by academic staff in polytechnic in South-East and South-South Nigeria?

7. What are the strategies for enhancing utilization of library resources for enhanced publication output by academic staff in polytechnics in South-East and South-South Nigeria?

**Significance of the Study**

A study of the influence of library resources utilization on the publication output of academic staff of polytechnics in South-East and South-South Nigeria will be significant to the following people and institutions, namely; academic staff, library management, academic libraries, polytechnic management and researchers in general in view of the important role publication output plays in the lives of academic staff and in institutional development.

In the first place, the findings are hoped to benefit academic staff in two ways. First, it is expected to furnish them with useful information on those library resources that have significant influence on publication output. This revelation, no doubt, will make research activity less time consuming leading to higher publication output among academic staff. Secondly, it will provide academic staff with useful information on literature that is available in the area of publication output.
The findings will also benefit library managements in many ways. In the first place, the evaluation of the utilization of the resources of the library is a component of the planning process that provides librarians with feedback that could be utilized to improve the total effectiveness of the academic libraries in response to the needs of their target users. This will likely encourage greater collaboration between library managements and academic staff in the polytechnics on strategies for more effective development, access to and use of library resources for research and publication.

Secondly, in this period of declining budgetary allocation to libraries, the findings of the study will be useful in guiding polytechnics and other academic library managements in embarking on strategies that will meet the research needs of academic staff through relevant acquisitions. The findings will also provide the justifications for demand for more funds by library managers from their institutional managements in other to meet both the present and expected future increase in the use of certain library resources by academic staff for their publication output.

The findings may also lead to policy change in library fund allocation. It may affect the acquisition policy of academic libraries in favour of those library resources which are found to have significant influence on publication output of academic staff, attracting higher percentage of the available acquisition fund.

The findings will also be of benefits to the polytechnics in their budgets by making a case to the National Board for Technical Education (NBTE) and
other funding agencies for increase in fund allocation to take care of the expected increase in their capital expenditure. This will occur when the librarians begin to demand for increase in fund to enable them acquire the library resources that are in high demand by the academic staff for enhanced research and publication.

The findings are hoped to form a major contribution to studies in the area of utilization of library resources for publication output by academic staff in Nigeria especially in the polytechnics which has been highly neglected in favour of the universities. Thus, it will prove valuable addition to the scanty literature locally in the area of the influence of library resources on publication output of academic staff. Additionally, other researchers especially in the field of library and information science will benefit immensely from the study with regards to the instrument and theoretical framework.

**Scope of the Study**

The study covered the influence of library resources utilization on publication output of academic staff of polytechnics in South-East and South-South Nigeria. Library resources covered in this study consist of only books/monographs, journals, newspapers/magazines, conference proceedings, students’ research projects, CD ROM databases, bulletins/newsletters, abstract and indexes, online resources and government documents.
In this study and with particular reference to the polytechnic, academic staff covered were only lecturers and librarians. Publication output of academic staff in this study consists of book publications, journal publications and conference paper presentations. Utilization of library resources in the present study is only for publication output and not for any other purposes. The polytechnics covered in this study were only government-owned polytechnics in South-East and South-South. Government-owned polytechnics were chosen on the assumption that they have regular and statutory sources of fund unlike the privately-owned ones and as a result may be better placed financially to provide the required library resources in these institutions for research and other educational activities.
CHAPTER TWO
REVIEW OF LITERATURE

The review of literature for the study is carried out under the following subheadings:

A. Conceptual Framework
   - Concept of Library Resources
   - Concept of Publication Output
   - Utilization of Library Resources
   - Constraints to Utilization of Library Resources
   - Strategies for Enhancing Utilization of Library Resources for Enhanced Publication Output

B. Theoretical Framework
   - Shannon-Weaver Model of Communication
   - Information Utilization Theory

C. Review of Related Empirical Studies
   - Utilization of Library Resources
   - Publication Output

D. Summary of Literature Review
Conceptual Framework

Concept of Library Resources

Library resources is seen by Attama (2005) as all the collection of a library which is designed to aid learning, teaching and research. He enumerated such resources as books, journals and information technology which he considered essential to users information needs. In another development, Olanlokun and Momoh (1994) see library resources as the essentials of academic library existence. They affirmed that academic staff, post-graduate students and most library users spend more time consulting such library resources as journals, proceedings, theses/dissertations and technical reports of specialized organizations and society even more than textbooks and monographs. In the view of Leonicio (2001), library resources are all the print and non print materials in the library such as books, monographs, handbooks, maps, gazettes, serials and directories. He pointed out that with the introduction of information technology, ‘library resources’ has incorporated such other things as CD ROM, computers, internet and online resources. These resources contribute significantly to the realization of the information needs of library users.

Contributing to the discussion on the importance of library resources in the realization of the objectives of library establishment, Peters (2001) observes that information users are constantly desirous of current information resources which have direct influence on the satisfaction of their information needs. In
support of this, Banwet and Datta (2002) claim that serial publications and online resources have remained the choice of most researchers because of the ability of these resources to keep in touch with current information especially in the areas of science and technology.

Obviously, library resources are the essentials of information needs satisfaction including publication output. However, the up-to-dateness of these resources is the first point of consideration in the choice of library resources in relation to information needs. There is no doubt that journal collections and online resources would top the list of relevant resources to be utilized by academic staff for publication output because of the regularity and timeliness. When these resources are integrated with the services, they lead to the satisfaction of users’ information needs.

The concept of library resources most time is considered alongside library services. This is because, in practice, the two concepts go together as the use of resources in the library is usually enhanced by the services. While Popoola and Haliso (2009) observed that library services are essentially complementary in the utilization of library resources, Ocholla (1996) maintains that library services are merely the necessary assistance by library personnel to information seekers in the exploitation of information resources available in the library. The emphasis here is on the need to have corresponding efficiency in services for resources utilization to be achieved.
Library services are complementary to the resources available in the library (Loho, 1992, Manson, 2003, Nwalo, 2003, Aina, 2004 and Popoola and Haliso, 2009,). In this regard they elaborately discussed the importance of library services in the realization of library objectives through the use of the resources. They identified the following; Current Awareness Services (CAS), inter-library loan services, reference services, book loan services, Selective Dissemination of Information (SDI), online services, photocopying as well as user education as some of the important services which enable users to harness the potentials of library resources.

From the foregoing discussion, it is obvious that without the services the utilization of library resources by academic staff for publication output would be hampered. It is in this regard that Rowley (1994) sees library services as an interface between the users and the library resources in a manner that strategically places library users in advantageous position to enable them obtain information from the library system. He listed eight conditions which make library users feel satisfied with the information resources offered by the library as follows; speed of service delivery, convenience, choice, lifestyle, new materials are brought to the awareness of users, value adding, customer service and missing books and journals are dealt with promptly.

The above conditions remind library personnel that the users are the target of all library operations from the inception of library programmes, and their satisfaction determines the success or failure of the system objectives. For
the academic staff, the timely provision of library resources that sustain their publication output and other information needs is of utmost importance.

**Concept of Publication Output**

Publication output has remained one of the indices for measuring academic staff success or failure in academic institutions. The concept of publication output has been variously described. Ashworth (1994) sees publication output as a clear and tangible evidence of research. According to him researchers can only claim to have carried out any meaningful scholarly research when there is a publication output. In her own view, Lindauer (1998) defines publication output as the total number of publications in journals, books, presentations in conferences, chapters in edited works, grants secured and creative works. On the other hand, Whitmire (2003) defines publication output as the number of journals published in refereed or non-refereed journals; the number of books published; the number of book reviews, the number of conference presentations and the number of grants obtained during the last two years by an academic staff. A similar definition is that given by Moed, Glanzel and Schmoch (2005) referring to publication output as those publications in refereed journals and scholarly books through which academics’ research outcomes and ideas are circulated among peers and subsequently contribute to debates in the relevant field. Such publications, according to them should be worthy of provoking reactions and throwing up challenges to colleagues. From
the foregoing, one may define publication output as the outcome of research which may be published or not published. Publication output is very important not only to the academic staff but also to academic institutions. It has remained an invaluable yardstick for measuring academic staff productivity. On the other hand, publication output has also become a measure of academic institutions’ overall performance.

However, placing too much emphasis on publication output has been criticized as it may lead to less quality work being published. Effendi and Hamber (1999:173) observed that “obsession with publication output can become a source of stress for individual researcher and can lead to proliferation and trivial works being published in journals and books.” In the same vein, Le Grange (2003) also noted that trivial works might be the outcome of the pressure to produce adequate number of publications to meet the requirements for promotion and other benefits. In spite of these criticisms, publication output has remained an invaluable yardstick for measuring academic staff productivity and to a large extent, academic institutions’ overall performance.

Publication output, which Brindly (1991) sees as the gateway for both local and international recognition for academic staff, can also be a veritable instrument for influencing policy decisions in academic institutions. According to Martin as cited in Baro, Oni and Onyenania (2009), there are two basic avenues for building academic power, which is through research function and by providing knowledge for practical applications. The New Zealand Tertiary
Education Committee as cited in Tower, Desai, Carson and Cheng (2005) also understands the importance of publication output in the same manner and observed that:

The purpose of conducting research in tertiary education institution is two fold; to advance knowledge and understanding across all fields of human endeavour; and to ensure that learning, and especially research training at the post graduate level, occurs in an environment characterized by rigorous and high-quality research activity (p. 54).

The concept of publication output will be better appreciated when explained in the context of its importance to academic institutions, researchers and even to students. Fresko (1997) and Gray (1998) explained the importance of publication output in the light of its role in academic staff teaching effectiveness. They observed that academic staff teaching effectiveness depends to a large extent on research productivity. This is because efforts to produce quality publication output require extensive and effective utilization of the resources in the library. This in turn exposes the academic staff to valuable information and better method of teaching. In like manner, Babbar, Prassed and Tata (2000) observed that publication output constantly keeps academic staff in touch with the latest development in their fields of study. They claimed that lecturers who are striving for high number of publication output are more likely to be at the forefront of their disciplines. Publication output, no doubt, adds to both the quality and the level of classroom experiences. Accordingly, academic
staff with higher publication output are assumed to be generally more effective at instilling a critical approach to understanding complex research findings rather than a passive acceptance of facts.

The media of communicating publication output is also important to scholars. In this regard, Ashworth (1994) believes that where a publication output is published goes a long way to determining its acceptance. He enumerated such media as academic journals, professional journals, books, reports, edited works and proceedings as the appropriate media for communicating publication output. Lindauer (1998) and Whitmire (2003) who also shared this view, however, added that paper presentation in conferences is an important means of communicating an outcome of research to the public.

On the contrary, Van Raan (2005) believes that students’ research projects, theses and dissertations are essential components of publication output. The lack of consensus on what constitute academic staff publication output and the appropriate media may have arisen from individual scholar’s background and institutional affiliations. However, while it may be improper to regard students’ research reports, theses and dissertations as publication output, the exclusion of conference papers is unacceptable. In Nigerian polytechnics, promotions of staff are carried out in line with the Scheme of Services for the Federal Colleges of Education and Federal Polytechnics, 1989 which accepts conference papers as academic staff publication output. Secondly, conference
papers are also expressive of knowledge development which in essence is to find solution to human problems.

**Utilization of Library Resources**

The primary function of the academic library is to provide full range of information resources and services necessary to carry out the goals and duties of the institution which the library was established to serve (Imeremba, 2000). However, the provision of these resources and services is not enough and cannot promote the intended institutional goals if the library is not effectively utilized. Chiemeke, Longe, Umar and Shaib (2007) believe that users approach the library with needs which they hope to satisfy. They categorized library users into four groups namely; general readers, creative readers, adult students and researchers with special interests. According to these authors, all these people utilize library resources for one purpose or the other. The purpose also informs the choice of resources to be consulted. They observed that the last category, that is researchers; concentrate on the utilization of textbooks, journals and other relevant resources for research as demanded by their different professions.

Similarly, Doraswamy (2009) is of the view that the motives and purpose of the users for approaching the library determine the information resources that users are likely to consult. He claimed that most faculty members need information for the purpose of research and teaching and as such, they are desirous of information sources such as journals, theses and dissertations,
government publications, conference proceedings and reference materials. He opined that libraries that can provide these resources adequately would have gone a long way in satisfying the information needs of their users and promoting research productivity among academic staff. The ideas being put across here is that professional engagement and other assignments also determine the type of library resources utilized in libraries. It is only when the faculty themselves are aware of library resources that they can develop a positive attitude towards library use.

Academic staff in tertiary institutions utilize library resources in order to carry out their functions of teaching, learning and more importantly to publish. Hobohm (1999) observed that academic staff rely heavily on monographs, textbooks, theses and dissertations as well as periodical literature for their research productivity. In the same vein, Olanlokun (1995) confirmed that journal articles, textbooks, theses and dissertation, monographs, treatises and government documents were considered very important to the job performance of the Nigerian academics. In their own contribution Nazan and Kurbanoglu (1998) claimed that social sciences and humanities scholars in a Turkish University made use of library resources such as encyclopedia, dictionaries and periodicals for their teaching programmes and research productivity.

The availability of information and communication technologies and their applications to information delivery in the libraries, especially in the 21st Century have opened up a new and wider horizon for users of libraries. Its
products such as computer, the internet, online databases, CD-ROMs and networks have provided academic libraries with avalanche of opportunities to widen the scope of their resources and services. Accordingly, Adams as cited in Ezema (2008) reported that electronic information made available by networks has opened a new vista to African researchers, academics and students as well as technocrats. This is because electronic networks have largely addressed the problems of physical document delivery and unavailability of many of these documents in the nation’s libraries. In this way, links among academic institutions and staff in Nigeria will not only help in addressing the problem of lack of relevant information needed for research but will also help in increasing collaborations among these institutions and researchers. Also contributing, Lancaster and Sandore (1997) see the internet as:

An electronic resource that is now having the most significant impact on library services, operations and on professional activities of librarians. This strength of impact is due to its multi-accepted nature since it simultaneously fulfils three important roles in the library. First, it is a source that can be consulted and used like any other reference tool. Second, it is more dynamic and far-reaching than any other resources use in a library setting. Finally, it provides a medium of communication that has extended the potentials of librarians and the interaction beyond the physical library to users, colleagues and other professional activities and relationship with library to users (p. 101).

The overwhelming acceptance and use of the internet is not surprising because of the enormous capacity of the internet and other e-resources to
provide unlimited access to information irrespective of location. In this regard, Kamba (2008) maintains that the internet provides users with the means of carrying out research online by acting as the main engine for exchanging information and publishing. He observed that the use of the internet by Nigerians has reduced the shortage of information resources in Nigeria and consequently enhanced research and publication output. The reason, according to him, is because the internet has the capacity to provide an enabling environment for Nigerian scholars and researchers to overcome the barriers of locations, communication and collaboration.

In his own contribution, Mosuro (2000) identified seven roles the internet play in utilization activities to include: unrestricted access to research information / data; provision of search engines; facilitating the communication of research information; reduction in travelling from place to place for information; allowing research collaboration among researchers; saves time in literature searching; and creating more services that the library renders to researchers.

In the same vein, Ajibola (2000) remarked that information and communication technology (ICT) helped users to have cheap access to database with multimedia capacities as well as helped to improve bibliographic control, error reduction in data analysis and increases the range and scope of research operations. There is no doubting the fact that information and communication technology has tremendously altered the way and even the resources available
to researchers and other library users including academic staff. Lofty as the above roles adduced by these authors may be in relation to research activities, they failed to show the level of influence the utilization of internet or other online resources have on academic staff publication output.

Academic staff of different disciplines have shown various levels of use of different types of e-resources in their research engagements. Curts, Weller and Hurd (1997) studying the use of ICT and other online resources by health science faculty (medicine, nursing and pharmacy) at the University of Illinois revealed that there is high use of printed Index Medicus and MEDLINE through electronic means. In another development, Lazinger, Barllan and Peritz (1997) claimed that majority of academic staff of science and technology backgrounds of Hebrew University of Jerusalem have rich history of the use of e-resources and conducted research with distant colleagues online. Similarly Kaminer and Braunstein (1998) observed that academic staff use the e-mail and some other e-resources to communicate with research colleagues for researcher purposes and for other needs. Other online resources common among them included telnet, World Wide Web (www), and e-journals. Other researchers (Cohen, 1996; Zhang, 1998 and Zainab, 2000) have also noted the various uses of ICT by academic staff and other library users and its significant influence on job efficiency and improved publication output.

The foregoing shows the various levels of library resources utilization by the academic staff and the purposes for such utilization. However, it is not clear
from the literature whether the utilization of these library resources influences the publication output of the academic staff.

**Constraints to the Utilization of Library Resources**

The utilization of library resources especially in the developing countries has not been without some problems. Tahir, Mahmood and Shafique (2008) have identified some of the problems to include but not limited to the following: poor library organization; lack of user skills; poor funding of libraries, lack of current information resources; lack of adequate/relevant materials; poor IT infrastructure; uncondusive reading environment; poor power supply; lack of technical support; and lack of user education.

The above problems no doubt will be more pronounced in countries such as Nigeria where issues concerning education are many a time relegated to the background in policy implementations. Earlier Robert (1980), Tyagi (1994) and Kisiedu (1999) in their separate studies commented on the declining budgetary allocations in most tertiary institutions in Africa which have great negative impact on the availability and use of information resources in their libraries. Consequently, African scholars depend heavily on gifts and donated materials from foreign countries for information for their research even on local issues. This scenario seriously affects publication output of academic staff in developing countries, including Nigeria, as much time, fund and energy are wasted trying to track down these foreign information resources.
It has also been observed that poor infrastructural facilities supply affect library use (Neelemegban, 1985 and Unomah, 1986). On the other hand, Oyenike and Okonoko (2009) observed that irregular power supplies as well as lack of new information and communication technologies (ICT) pose serious challenges to effective utilization of institutional library resources. Similarly, Salaam and Adegbore (2010) also maintained that poor power supply and lack of necessary equipment have become a major hindrance to effective utilization of library resources in Nigeria.

Lack of steady power supply not only makes the library unconducive for users to effectively utilize the resources but also affects some of the resources which require certain level of temperature to function effectively. Other problems affecting effective utilization of library resources as identified by Ugah (2007) and Olayide and Yusuf (2009) are lack of awareness on the availability of certain library resources, bibliographic obstacles and inadequate user education.

One the problems affecting the utilization of electronic resources, Ibrahim (2004) identified lack of user skills, lack of technical support and insufficient spare parts as some of the major constraints to effective utilization of electronic resources in many libraries in the developing countries including Nigeria. As a result, many of the e-resources in these libraries are under-utilized or not utilized at all. Again due to poor technical support and insufficient spare parts, some of the ICT equipment easily broke down and are hardly replaced.
Strategies for Enhancing Utilization of Library Resources for Enhanced Publication Output

In view of the problems confronting effective utilization of library resources for publication output, some strategies have been suggested. Oyenike and Okonoko (2009) observed that there is lack of ICT facilities in Nigerian educational institutions especially in the polytechnics. This according to them is a major hindrance to effective utilization of library resources. They suggested a general improvement in infrastructural facilities especially ICT infrastructure to ensure enhanced utilization of the nation’s information resources.

Similarly, Salaam and Adegbore (2010) considered equipping the nation’s academic libraries with ICT facilities as a major step for improving effective utilization of the resources. They further suggested the training of Nigerian technicians on the maintenance of ICT infrastructure to ensure their regular maintenance and prevent these facilities from breaking down easily. Other measures they suggested include provision of alternative power supply for libraries attached to academic institutions and inclusion of user education in the educational curriculum.

On the other hand, Afebende and Ebanye (2008) consider lack of user skills as one of the major constraints to effective utilization of library resources. They were of the view that improved user skills through user education, current awareness services and public enlightenment on the resources available in the
library will go a long way in enhancing effective utilization of the nation’s libraries.

As a result of rapid changes that occur in the information environment today, academic staff and most other library users prefer online resources and the internet as sources of information. Agada (2010) shared this view and pointed out the importance of these resources to academic staff. As a result, he suggested the provision of electronic resources, internet facilities and ICT networks in academic libraries as ways of attracting users to these libraries.

Baro, Oni and Onyenania (2009) supported this view and further called for the creation of conductive reading environment in these libraries through regular supply of electricity. In her own view, Okafor (2010) suggested the equipment of academic libraries with relevant books, journals e-journals, internet facilities and other necessary resources as major strategies for enhancing utilization of library resources for publication output.
Conceptual Model

Fig. 1. Conceptual Model of Influence of Library Resources Utilization on Publication Output of Academic Staff of Polytechnics in Nigeria (Self-Constructed)

The conceptual model in Figure 1 depicts the relationship between the independent and the dependent variables in this study. Library resources as the independent variable consists of books/monographs, journal collections, students’ research projects, bulletins/newsletters, abstracts and indexes and others while the dependent variable is made up of such publication output as books, journal publications and conference papers. The utilization of these
library resources by male and female (intervening variable) academic staff of different ranks results in publication output and other purposes. These publication output are the evidence or the feedback which shows that the communication between the library and the academic staff through the resources was effective. These publication output (books, journals and conference papers) eventually go back to the library through acquisitions, donations or gifts. The model therefore is an illustration of the cyclic relationship between the library, its resources, utilization and academic staff publication output.

**Theoretical Framework**

**Shannon-Weaver Model of Communication**

![Shannon-Weaver Model of Communication](image)

**Fig. 2. Shannon-Weaver Model of Communication**

Figure 2 is a typical Shannon-Weaver Model of Communication. Shannon-Weaver Model of Communication was developed in 1947 by Claude Shannon and Warren Weaver. The model was originally meant to handle effective communication between two people; a sender and a receiver. Shannon
and Weaver designed the model to be used by engineers dealing with information to improve technical communication but later “the model became widely applied in the field of communication and in other disciplines and today has become one of the most popular inter-personal communication models in use” (Chandler, 1994:6).

Shannon-Weaver model is all about information generation, communication, utilization and feedback/output. The essential elements are sender, channel/message, receiver and feedback/output. The sender provides or originates the information and this is sent through a channel that carries the message which is passed on to the receiver. The receiver utilizes the information from the sender and produces a feedback which goes back to the sender as evidence that the communication was effective.

The strength of this theoretical model lies in its simplicity and adaptability. Another important feature of the model is that it can be applied to different situations. Chandler (1994) observed that it has attracted both the academics of human communication and information theorists to lead their further research in communication. The present study is anchored on this theoretical model because of its relevance in explaining the relationship between the library resources available in the polytechnic libraries, their utilization by academic staff and their publication output.
Fig.3. Adaptation of Shannon-Weaver Model of Communication

In Figure 3 which is an adaptation of Shannon-Weaver model of communication, the sender or the originator of the message are the library staff/authors of books and other library resources found in the library. The resources in the library are the channels of information to the academic staff which are made available by library personnel to the academic staff, who in turn utilize them for their publication output. The publication output return to the library in the form of books, journal articles and conference papers to form part of the library resources. In Figure 3, the Sender replaced the Source of information in Figure 2. Library Resources in Figure 3 becomes the message which replaced the Channel in Figure 2. The Receiver in the original model is also replaced by Academic staff in the adaptation while publication output replaces the feedback in the Shannon-Weaver original model.
**Information Utility Theory**

Information Utility Theory is a fundamental concept in the discussion of information seeking and user behaviour. This theory was developed in 1994 by Ross J. Todd. The theory is all about information products and their utilization. It states that a user of information products will keep on demanding and using information resources provided that he or she derives maximum satisfaction from their use, or that the source being utilized continues to meet his or her information needs. Information utility theory is based on Bertran Brookes’ “Fundamental Equation of Science” published in 1980. Todd reviewed this work and conceptualized a theoretical framework known as the information utility theory for furthering the understanding of the cognitive aspect of information utilization. This theory was initially applied in collection development as it provided acquisition librarians the guide to buy more of titles which are heavily utilized while discarding those that are no longer useful to users. In another development, Cole and Todd as cited in Bawden (2011:2) reported its application to a very limited degree in practice, “qualitatively as a framework for the study of general public information utilization for health information and quantitatively in a study of archeological research.” Similarly, Cornelius (2002) applauded the theory claiming that it has remained operational as a general consideration within information retrieval and utilization theory.

This theory is relevant to this study in the sense that it provides a framework for understanding users’ attitude towards the utilization of library
resources. Academic staff no doubt will continue to use the library resources available in their institutional libraries so long as these resources meet their needs which are the fundamental reasons for the utilization of library resources by academic staff.

**Review of Empirical Studies**

Some empirical studies have been conducted on utilization of library resources and publication output both within and outside Nigeria. Some of these studies concentrate mainly on library resources utilized while others investigated publication output of academic staff.

**Utilization of Library Resources**

The factors that influence the use of library resources by faculty members in Technological Educational Institute (TEI), Greece were investigated by Korobili, Tilikidou and Delistavrou (2006). The design of the study was a census survey and a structured questionnaire was the instrument for data collection. The population for the study was 350 academic staff in the institution. The findings show that the majority of faculty members of TEI used printed sources more than e-resources. Books and journals were more frequently used than other printed resources. The e-resource mostly used was websites. The results further show that the use of e-resources was positively influenced by respondents’ perceived usefulness of e-resources, convenience of access to the resources and their academic productivity. The major
inhibiting factors were inability to locate most of the information resources, inaccessibility of the internet, low speed and capacity of computers, retrieval problems as well as poor internet search techniques. In conclusion, the study suggested improvement in the institution’s information resources and general upgrading of the computers and internet bandwidth.

In the same vein, Awojobi (2004) conducted a study on library use by lecturers in the Faculty of Science and College of Agriculture in Olabisi Onabanjo University, Ago-Iwoye, Nigeria using a survey design. The instrument for data collection was a structured questionnaire. The population of the study was 162 academic staff drawn from two faculties of the University. Using a stratified quota sampling technique, the researcher drew a sample of 98 respondents for the study. The data collected was analyzed using descriptive and inferential statistics and presented in Tables.

The findings of the study show that 82.2% of the lecturers use the library for research purpose, 69% use it for lecture preparation while 31% use the library for leisure reading. The study also found a relationship between library registration and frequency of use. This study is relevant to the present study only to the extent that it is on academic staff utilization of library resources. However, the difference in the two studies is that Awojobi studied only two faculties in one university and used a sample of 98 respondents while the present research was on 13 polytechnics using a sample population of 536 respondents drawn from all the faculties (schools) in the affected polytechnics.
Similarly, Ugah (2008) undertook a study entitled “Effect of availability and accessibility on the utilization of library resources at Michael Okpara University, Umudike, Nigeria.” The study was a survey design. A simple random sampling technique was used to select 168 respondents. The instrument for data collection was a questionnaire. The data collected was analyzed using simple percentages and frequency tables. The results show that 51.2% of the respondents have the view that information resources were not easily available in the university library. On the issue of accessibility, 46.4% only was satisfied with information accessibility in the university library while the majority, 53.6% was not satisfied. Nearly 80% of the respondents agreed that the use of library resources depended on accessibility of information resources since many materials may be available in the library but not accessible. It concluded that access to information resources were very significant in their utilization. Although the study achieved its purpose, it suffers from the same problems of narrow scope and emphasis on the university sector.

Another study on the utilization of library resources was conducted by Ajayi and Adetayo (2005) at the Obafemi Awolowo University. The study was aimed at finding out the extent of use of library books by staff and students in Hezekiah Oluwasanmi library, Obafemi Awolowo University, Nigeria. The study adopted a survey approach. The population was all the library users from 1998 – 2001. Data for the study was collected using a questionnaire. The sample for the study was 1110 respondents. Data collected was analyzed using
The study found that maximum use of the library was made by both staff and students of the institution. It further revealed that 88,835 volumes of books were borrowed while 981,880 books were consulted in the library. The study is related to the present study because it investigated the utilization of library resources which is also the focus of the present research. However, while Awojobi studied both academic staff and students, the present study investigated only academic staff of polytechnics.

Similarly, Afebende and Ebaye (2008) carried out a study entitled “Utilization of university library facility: A case study of Cross River State University of Technology, Calabar.” The design of the study was a survey. A self-structured questionnaire was the instrument for data collection. The population of the study was 600 academic staff. A simple random technique was employed in the sampling of 436 respondents representing 72.6% of the population. The data collected were analyzed using descriptive statistics of mean and standard deviation. The results of the study show that only 12.6% of the academic staff make effective use of the library resources. 41.8% occasionally use the resources in the library while 28.2% hardly make use of the library resources and services. The result further showed that about 47.4% of lecturers in the university used library resources and services only for the preparation of lectures and teaching whereas the rest used the library for other unspecified purposes. The study further revealed some problems militating
against the use of library resources which the respondents ranked. First was lack of current books and journals (31.2%), lack of e-resources/relevant databases (28%) and irrelevant materials (11%). One disturbing finding of this study is the insignificant use made of library resources by the academic staff of the institution as shown by the respondents. Some of the recommendations of the study are: provision of current and high quality books and other research materials, provision of e-resources alongside books and journals, improved user skills, user education and public enlightenment on the resources available in the library through current awareness services. This study is relevant to the present research. Though this study was successful, the use of students limits its findings, hence students’ information needs for utilizing the library is not the same with those of the academic staff.

In a similar research, Oyewusi and Oyeboade (2009) examined accessibility and use of library resources by undergraduates in Ladoke Akintola University of Science and Technology, Ogbomosho, Nigeria. A survey approach was adopted. The population of the study was 5720 students who used the library within one month while a simple random sampling technique was used to select 600 respondents. Data for the study was collected using a structured questionnaire while descriptive statistics was employed for data analysis using the Statistical Package for Social Science (SPSS). The study found out that 76.8% of the respondents used the library to read, 7.9% used the
library for research and 4.3% visit library only when they want to borrow books.

In another development, 2.9% found the library resources useful to their academic pursuit while 17.1% sees no relevance in the use of the library resources and in relation to their academic programmes. The study also found out that about 75.6% found books and journals more relevant than other resources while use of the internet was considered more important by 20.1% of the respondents. The study further showed that majority of the students did not use e-resources.

The difference between this study and the present research is in the respondents. While the present researcher used academic staff as the respondents, this study made use of students as the respondents. This makes the need to investigate the utilization of library resources and academic staff of polytechnics publication output very important.

In the same vein, Agada (2010) investigated the utilization of Makerere University, Uganda Library resources in a study entitled “Assessment of the utilization of Makerere university electronic information resources by academic staff: Challenges and prospects.” The study adopted a qualitative and quantitative research design. The population of the study was 1024 academic staff of Makerere University drawn from the 17 faculties, institutes and schools. Stratified sampling technique was used to select 300 respondents used in the study. Instruments for data collection were questionnaire, interview and
document analysis. Data collected were analyzed using Statistical Package for Social Sciences (SPSS). Out of the 300 copies of the questionnaire distributed 157 were duly filled and used for the study. On the availability of computers, 77.7% of the respondents responded in the affirmative and 97.5% claimed that there was full internet connectivity.

The study found that the majority of the respondents were aware of the e-resources available in the library. It also revealed that majority of them utilized these resources. Publication purposes, preparing for conferences and teaching are the major reasons for using the resources. The study identifies the following problems as hindrances to effective utilization of e-resources in Makerere University; inadequacy of existing resources, slow speed of the internet or poor bandwidth, lack of publicity of the available facilities, limited subscription to databases, irrelevant databases and poor user skills. The study recommended increase in the ICT network, provision of adequate e-resources, increased awareness on the available facilities and intensive user education. This study is a successful one because it achieved its objectives. The findings and recommendations are also relevant to the present study. However, the design, the instruments for data collection and the method of data analysis are not appropriate for the present study. This study is similar to the present research except that it investigated the utilization of only e-resources as against the present one that investigated the utilization of different types of library resources including e-resources.
The importance of e-resources in library information delivery and in addressing user information needs is of primary concern to researchers. As a result, some studies have also been conducted on the utilization of e-resources by library users. Zainab and Meadows (1999) compared the use of computers for research productivity in two universities, University of Malaya and National University of Malaysia using 83 academic engineers and 239 academic scientists. A structured questionnaire was the instrument for data collection. Data collected was analyzed using percentages, frequencies and tables. The result of the study shows that 97.5% of academic scientists and 43.4% academic engineers use computers for research purposes. The study also found out that although more than half of the academic engineers used computers for research purpose, it did not significantly influence their publication output. On the other hand, the study revealed that the highly published academic scientists were those who made frequent use of computers.

In a related study, Khan and Dominic (2009) investigated internet use by faculty members of Engineering College of Moradabad, India, using all the 50 faculty members of the college. Questionnaire was the instrument for data collection. The study was aimed at finding out the frequency of use of the internet by the respondents, location of the services (inside or outside the library), purpose of use, influence on academic research output and problems encountered. The result revealed that 75% of the respondents made frequent use of the internet for research purposes while 20% used it for other reasons other
than research while 5% used it frequently for entertainment. It also found out that 70% used the internet in the college library while 30% used it in their offices and at home. On the influence on their publication output, 50% of the respondents claimed it had great influence, 30% reported partial influence while 20% reported no influence at all. The following problems were also identified, slow speed, downloading problems, difficulty in finding relevant information, overload of information and privacy.

A study of the use of internet by faculty and research scholars at India Gulbarga University was conducted by Parameshwar and Patil (2009). They employed a survey approach in the study. Simple random sampling technique was also used in the selection of 305 respondents made up of 112 faculty members and 193 research scholars. Questionnaire was the instrument for data collection. A total of 214 valid copies of the questionnaire were used for the study while data collected were analyzed using percentages, frequencies and tables. The study revealed that 45.3% used the internet for research purposes while 43% used it for other educational purposes. It also showed that the use of e-journals was very high with 60.8% responses while Google was by far the most preferred search engine with an 80.4% response rate. The study further showed that 44.8% of the respondents were satisfied with the level of internet facilities in the library and their use had also contributed significantly to their publication output.
The major problems affecting the respondents’ use of internet identified by the study were downloading and irrelevant information with response rates of 58.8% and 51.8% respectively as well as lack of user skills. The study suggested improvement in the facilities and extensive user education by the librarians in order to increase the awareness and the capacity of the users. This study was very successful as it achieved its purpose. The instrument for data collection was also relevant to the present study. The issue of gender attracted the attention of Bassi and Camble (2011) in a study entitled “Gender differences in the use of electronic resources in university libraries of Adamawa state Nigeria.” A survey approach was adopted for the study. The population of the study was 5269 students in the Federal University of Technology Yola, American University of Nigeria, Yola and Adamawa State University, Mubi. A proportionate stratified sampling technique was employed to determine the appropriate sample size of 1053 students. Questionnaire was the only instrument for data collection while the data collected were analysed using frequency count and percentages. A t-test statistics was also used to test the only null hypothesis for the study. The results of the test show a significance difference in the attitude of male and female students towards the use of electronic information resources.
Publication Output

In a study entitled “Exploration of the factors that related to academic publication productivity among selected Malaysian academic engineers and scientists”, Zainab (2001) investigated the publication productivity of Malaysian engineers and scientists. The design of the study was exploratory. The population was 436 academics made up of 125 engineers from the National University of Malaysia and 311 scientists from the University of Malaya. Data for the study were obtained using questionnaires, university calendar and academic research reports from both universities while data collected were analyzed using descriptive statistics. A test of significance and correlation was also carried out with chi-square test for normal type variables and the Spearman rank test. The results showed that in more cases, the correlates were significantly related to publication productivity of academic scientists than engineers. The significant correlates were experience, percentage of time spent on research, total amount of funding, laboratory supports and using formal resources (journals, library accession lists, and special bibliographies) to keep abreast with research information. This study resembles to the present research because it investigated the use of library resources as a related factor to academic staff publication output. However, the two studies have different scopes and area of study. Again the design, instruments for data collection and method of data analysis are also different from those of the present study.
Tower, Desai, Carson and Cheng (2005) also conducted a survey of 573 Australian academic staff in accounting discipline to explain what current accounting research activities are in Australian universities and why differences existed. The study showed that only 5% of Australian accounting academic staff engaged in research and 1.6% had postgraduate student research completions. The major findings of the study were that there were very low research output in accounting and the few research activities in this discipline were found among lower level academic staff in accounting department. The study also revealed the following as the factors influencing publication output: rank, ability to secure research grants, qualification and gender. The similarity between the two studies lies in trying to find out how rank influences the publication output of academic staff. However, while Tower, Desai, Carson and Cheng studied only academic staff of accounting discipline, the present study investigated all academic staff irrespective of their disciplines.

Edem (1995) also carried out a study entitled “The gender factor in publication output of librarians in Nigerian universities”. The design of the study was survey. The population sample was 202 librarians made up of 121 males and 81 females drawn from 22 out of 35 university libraries. A structured questionnaire was the instrument for data collection. Two hypotheses were stated and tested using t-test statistics. The findings of the study showed that there is no significant difference between male and female librarians with respect to their publication output. In order words, gender is not an influencing
factor in the publication output of librarians in Nigerian universities. The implication of these findings is that if publication output is considered an important factor in the professional development of librarians their discrimination in terms of gender when recruiting librarians should be completely avoided.

The study is related to the present one to the extent that it is on publication output and gender is implicated in the two studies. Also important to the present study is the use of t-test for data analysis. However, Edem conducted the study in the universities using only librarians while the present study was in the polytechnics and every academic staff irrespective of discipline was involved.

Similarly, Baro, Oni and Onyenania (2009) examined gender differences in librarians’ publication output in a study entitled, “Gender and publication output of librarians in Edo and Delta State University libraries in Nigeria.” The design of the study was a descriptive survey approach. The population of the study was 55 academic librarians from the 5 university libraries in Delta and Edo States. Questionnaire and semi-structured interview schedule were used to generate data for the study. Data collected using the questionnaire and interview schedule were analyzed using percentages, frequencies and tables. A t-test of significance was used to test the four hypotheses stated in the study. One of the findings of the study is that male academic librarians published more than their female counterparts.
The above finding contradicted the earlier study by Edem (1995) which found out that there was no significance difference between male and female librarians in Nigerian universities with respect to their publication output. The differences in the findings of these two studies may be associated with the passage of time, since Baro, Oni and Onyenania’s study was conducted more than ten years after that of Edem. It also found that female academics are hampered by family responsibilities in their publication efforts. The study further revealed that the respondents associated promotion/career advancement, contribution to knowledge and personal/institutional prestige to publication output.

Some of the recommendations of the study are the creation of conducive and enabling environment for librarians particularly females to conduct research and publish their findings and research grants given to librarians in order to increase their research productivity. This study was successful and the recommendations relevant. However, like other studies, it suffers from narrow scope. The population of the study is also too small for generalization of the findings. Lastly, the study considered only academic librarians in two institutions while the present study is on the influence of library resources utilization on publication output of academic staff, including librarians in polytechnics in Nigeria.

A study of librarians’ publication output was also conducted by Ogbomo (2010) in a study entitled “Publication output of librarians in tertiary
institutions: A case study of Delta State University, Abraka, Nigeria.” A descriptive survey design was employed in the study. The entire 29 academic librarians in the university were involved in the study while a questionnaire was used to collect data from the respondents. Data collected were analyzed using percentages, frequencies and tables.

The study found that majority of the respondents had not published any paper within a period of three years. It further found that attendance to conferences by the respondents was poor. About 58% also lacked knowledge on the journals they could publish. The respondents identified the following as the importance of publication output; promotion, contributions to knowledge and pleasure. The study also found the following factors as barriers to publication output among the respondents; too much demand from their daily/official duties, lack of academic freedom, lack of knowledge on where to publish and lack of interest.

The study recommended the creation of research time for librarians, organization of workshops and seminar on research skills for librarians, and a review of library and information science curriculum to accommodation new research skills and methods. This study is related to the present one to the extent that it investigated academic staff publication output. However, Ogbomo carried out the study in one university using only librarians while the present study was conducted in the polytechnics using all academic staff irrespective of discipline.
Bassey, Akuegwu, Udida and Udey (2007) studied academic staff research productivity in universities in South-South geopolitical zone of Nigeria. An ex-post facto design was adopted for the study. The population was 3120 academic staff in the 11 universities in the zone. Stratified random sampling technique was employed in the selection of 480 respondents made up of 280 males and 200 females. A structured questionnaire was the instrument for data collection while data collected were analyzed using t-test and contingency Chi-Square at 0.05 level of significance.

The findings of the study were that male academic staff in Nigerian universities engage in more research activities that their female counterparts and that married academic staff turn out more publications than their unmarried colleagues with a mean score of 17.12 research productivity for married academics against 14.05 mean score for the single academics. The study also revealed that academic staff area of specialization significantly influenced their publication output.

The following recommendations were made by the study; provision of enabling environment in the universities for more research-oriented activities, equal opportunities for academic staff with regards to research work and government making more fund available to universities for the purpose of fostering research activities. The recommendations of this study are important to the present research. Also relevant to the present study is the use of t-test for data analysis, the design and the scope.
In a related research, Okafor (2010) undertook a study entitled, “Analysis of research output of academics in science and engineering faculties in southern Nigeria.” The study adopted a descriptive survey approach. A stratified random sampling method was used to select 6 universities out of 13 in the area of study. The sampled population was 291 academics. Questionnaire was used as instrument for data collected. Descriptive statistics and t-test was used to analysis the data collected.

The study found that the mean of publication output varied in two faculties with science faculties publishing more articles with a grand mean score of 10.02 while engineering faculties published less with a grand mean score of 7.58. It equally found out that there was a significant difference in the publication output between the academic staff in the faculties of sciences from those in the engineering faculties. It further revealed that within the science faculty, academic staff in zoology department published more than those in computer science. It also revealed that within the faculty of engineering, academic staff in petroleum/chemical engineering turned out more publication output than others.

The followings were some of the recommendations of the study; provision of research equipment and materials in areas of sciences, provision of conducive research environment in order to enable academic staff in science and engineering increase their publications output, equipping the library with relevant books, journals, e-journals, internet facilities and other necessary
library resources to facilitate research output of academics in Nigerian universities.

Summary of Literature Review

The literature review focused on the utilization of library resources and publication output of academic staff. It shows that library resources are generally believed to be all the print and non-print materials available in the library. Publication output on the other hand is seen as the number of journal articles, book publications, and conference papers presentations by an academic staff within a specified period.

The review shows utilization as the actual use made of information obtained from the resources available in the library. The literature also shows that the following library resources are regularly utilized by academic staff; journals, books, conference proceedings, government documents, newspapers/magazines and non print media such as CD-ROMs and online resources.

The literature review further showed that some problems hinder effective utilization of library resources. Some of the hindrances to effective utilization of library resources are as follows: paucity of relevant materials, insufficient fund for the library, irregular/lack of quality services, outdated resources, poor infrastructure (power supply, accommodation, sitting facilities, etc.), poor attitude of staff to services and lack of e-resources in the libraries.
Some theories and model related to utilization of library resources were also identified and reviewed. First was Shannon-Weaver model of communication which provides a theoretical explanation of the relationship that exists between utilization of library resources by academic staff and their publication output. It is on this model that the present study is based. Todd’s information utility theory was another theoretical framework that was review. Also reviewed was Richard L. Daft and Robert H. Lengel information richness theory otherwise referred to as media richness theory.

Some relevant empirical works both locally and internationally were also identified and reviewed. These studies were mainly on utilization of library resources and publication output of academic staff.

From the available literature, it is apparent that majority of the studies were conducted outside Africa. A few of these studies were carried out in Nigeria. The obvious implication is that Africans and Nigerian scholars in particular have not contributed significantly to the debate on utilization of library resources by academic staff for publication output. It goes further to suggest that the issue of utilization of library resources and how that influences publication output of Nigerian academics has therefore not been properly investigated.

Another important revelation from the literature is that in spite of the importance of polytechnic education in Nigeria no empirical study has been conducted in the polytechnic with regard to utilization of library resources and
publication output of academic staff as far as this researcher could discover. Hence, all the local and international studies found and reviewed in this study concentrated on the university system. It is, therefore, not known through research whether the utilization of library resources influences publication output of polytechnics’ academic staff. Literature reviewed also failed to show clearly the library resources which their utilization influences academic staff publication output and the level of influence. This is the gap in knowledge that this researcher seeks to fill.
CHAPTER THREE

RESEARCH METHOD

In this chapter, a discussion is made of the methods and procedures which were used in the study. These consist of the design of the study; area of the study; population of the study; sample and sampling techniques, instrument for data collection, validation of the instrument; reliability of instrument; method of data collection and method of data analysis.

Research Design

The design of this study was an *Ex post facto* design type of survey research. This design was considered appropriate because the study investigated the utilization of library resources and the publication output of academic staff in the polytechnics in South-East and South-South Nigeria. Nworgu (2006) considers *Ex post facto* design as the appropriate design when a study is seeking to link some already existing phenomenon or observation to some variable(s) as causative agents. The existing phenomenon in this study is the academic staff publication output while library resource which is the independent variable is the causative agent.

Area of the Study

The study was carried out in South-East and South-South Nigeria. South-East and South-South Nigeria have had some long standing relationship. There are some cultural and social relationships and similarities among South-East
and South-South areas which is evident in the language of the people. Furthermore, the two zones formed the former Southern Region of Nigeria and shared the same colonial administration and pattern of educational development. These experiences have influenced their life pattern and the establishment of educational institutions including polytechnics in the area. Observations have also shown that academic staff of polytechnics in these two areas share ideas and research experiences through regular conferences and workshops. It is, therefore, necessary to investigate library resources utilization and publication output of academic staff in this area.

There are a total of 11 states in the area of study. South-East is made up of 5 states namely, Abia, Anambra, Enugu, Imo and Ebonyi while South-South is made up of six (6) states namely, Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers States. There are 6 government-owned polytechnics the South-East, namely, Abia State Polytechnic, Aba; Akanu Ibiam Federal Polytechnic, Unwana; Federal Polytechnic, Nekede; Federal Polytechnic, Oko; Imo State Polytechnic, Umuagwo-Ohaji and Institute of Management and Technology, Enugu. In the South-South, there are seven (7) government-owned polytechnics. These are Akwa Ibom State Polytechnic, Ikot-Osuru; Auchi Polytechnic, Auchi; Delta State Polytechnic, Ogwushi-Uku; Delta State Polytechnic, Olefe-Oghara; Delta State Polytechnic, Ozoro; Edo State Institute of Technology and Management, Usen; and Rivers State Polytechnic, Bori. There are altogether 13 government-owned polytechnics in the area of study (NBTE, 2011).
Population of the Study

The population of the study consisted of all the academic staff in the 13 government-owned polytechnics in South-East and South-South Nigeria. There were 5364 academic staff in these polytechnics in 2011/2012 academic session (Registrars’ Offices of the Polytechnics). This is made up of 4,070 males and 1,294 female (See appendix 1).

Sample and Sampling Technique

The sample consisted of 536 respondents selected from a population of 5364 academic staff in 13 government-owned polytechnics in the area of study. A combination of stratified random sampling and proportionate sampling techniques were used in the study. Stratified random sampling technique was used to group the population into male and female while proportionate sampling technique based on 10% as recommended by Aina cited in Omeje (2010), for a few thousand populations, was used to select 406 males and 130 females respondents that make the sample (See appendix 1).

Instrument for Data Collection

The instrument for data collection for this study was the self-designed questionnaire entitled “Influence of Library Resources Utilization on Publication Output Questionnaire (ILRUPOQ).” The instrument consists of five (5) sections: A - E. Section A is on the personal data of the respondents. Section B is on utilizing of library resources and contains ten (10) items. It was
used to elicit data from the respondents on the number of times each library resources is utilized per a week. The response scale was; none, once, two times, three times, four times, five times and six or more times and was weighted 1, 2, 3, 4, 5, 6 and 7 respectively.

Section C is on the academic staff publication output in the last three years. This section contains eleven (11) items and was used to elicit data from the respondents on the number of their publication output in the last three years. The response scale was; none, once, two times, three times, four times, five times and six or more times and was weighted 1, 2, 3, 4, 5, 6 and 7 respectively.

Section D is on the problems hindering effective utilization of library resources for publication output. This section contains fourteen (14) items. Section E is on the strategies that will enhance effective utilization of library resources for publication output. The section also contains fourteen (14) items. The responses in these two Sections D and E were measured using a 4-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) and weighted as 4, 3, 2 and 1 respectively (See Appendix 2).

Validation of the Instrument

The instrument was subjected to face-validation by three lecturers in the Department of Library and Information Science and one other expert in Measurement Evaluation, Faculty of Education, University of Nigeria, Nsukka. The researcher requested the validators in writing to examine the clarity of
expressions and language appropriateness of the instrument in relation to the purpose of the study as well as the research questions. Copies of the purpose of the study and of the research questions were attached to the instrument to facilitate the validation. The corrections and modifications were incorporated in the final copy of the research instrument used for the study.

**Reliability of the Instrument**

The questionnaire was subjected to a trial testing using 19 academic staff of Our Saviour Institute of Science and Agricultural Technology (OSISATECH) Enugu. Cronbach Alfa coefficient was calculated from the filled questionnaire to determine the internal consistency of the instrument. The Alpha coefficient, α, for Cluster D on constraints to utilization was found to be 0.84 and for Cluster E on the strategies for effective utilization, it was found to be 0.73 (see Appendix 3).

**Method of Data Collection**

The questionnaire was administered by the researcher and 22 research assistants on the respondents. These research assistants were trained on how to distribute the questionnaire. The researcher administered and collected 60 copies of the instrument in a usable form from Akanu Ibiam Federal Polytechnic, Unwana and Institute of Management and Technology (IMT), Enugu while the research assistants administered and collected 390 copies of the instrument in a usable form from the other 11 polytechnics. These were sent
back to the researcher within an average of three months by mail. On the whole, 536 copies of the questionnaire were administered on the respondents of which 450 were returned in a usable form. This represented a return rate of approximately 84%.

**Method of Data Analysis**

Data collected on research questions 1, 2, 8 and 9 were analyzed using descriptive statistics of Mean ($\bar{x}$) and Standard Deviation (SD). Data collected on research questions 3, 4 and 5 were analyzed using Multiple Regression.

In taking decisions with the use of mean rating for research questions 1 and 2 the following parameters were used: Mean rating between $0.50 - 1.49 =$ Very Low (VL); Mean rating between $1.50 - 2.49 =$ Low (L); Mean rating between $2.50 - 3.49 =$ Moderately Low (ML); Mean rating between $3.50 - 4.49 =$ Average (A); Mean rating between $4.50 - 5.49 =$ Moderately High (MH); Mean rating between $5.50 - 6.49 =$ High (H); Mean rating between $6.50 - 7.49 =$ Very High (VH) while the Criterion Mean was 3.50.

For research questions 8 and 9, the parameters used were: Mean rating between $3.50 - 4.00 =$ Strongly Agree (SA); Mean rating between $2.50 - 3.49 =$ Agree (A); Mean rating between $1.50 - 2.49 =$ Disagree (D) and Mean rating between $0.50 - 1.99 =$ Strongly Disagree (SD) while the Criterion Mean was 2.50.
CHAPTER FOUR

RESULTS

This chapter deals with the presentation of analysis of data collected for this study. Data are presented here based on the seven research questions that guided the study.

Research Questions One

What are the levels of library resources utilization for publication output by academic staff of polytechnics in South-East and South-South Nigeria?

Table 1: Levels of Library Resources Utilization by Academic Staff of Polytechnics in South-East and South-South Nigeria

<table>
<thead>
<tr>
<th>S/N</th>
<th>Library Resources Utilization</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>Decision **</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Online Resource (OR)</td>
<td>5.79</td>
<td>1.28</td>
<td>H</td>
</tr>
<tr>
<td>2</td>
<td>Student’s Research Projects (SRP)</td>
<td>1.84</td>
<td>1.14</td>
<td>L</td>
</tr>
<tr>
<td>3</td>
<td>Bulletin’s/Newsletters (B/N)</td>
<td>3.40</td>
<td>1.46</td>
<td>M L</td>
</tr>
<tr>
<td>4</td>
<td>Government Documents (GD)</td>
<td>2.61</td>
<td>1.26</td>
<td>M L</td>
</tr>
<tr>
<td>5</td>
<td>Abstracts and Indexes (AI)</td>
<td>3.78</td>
<td>1.87</td>
<td>A</td>
</tr>
<tr>
<td>6</td>
<td>CD-ROM Databases (CDD)</td>
<td>4.73</td>
<td>1.57</td>
<td>M H</td>
</tr>
<tr>
<td>7</td>
<td>Conference Proceedings (CP)</td>
<td>5.28</td>
<td>1.51</td>
<td>M H</td>
</tr>
<tr>
<td>8</td>
<td>Newspapers/Magazines (N/M)</td>
<td>4.99</td>
<td>1.43</td>
<td>M H</td>
</tr>
<tr>
<td>9</td>
<td>Textbooks/Monographs (T/M)</td>
<td>5.66</td>
<td>1.29</td>
<td>H</td>
</tr>
<tr>
<td>10</td>
<td>Journal Collections (JC)</td>
<td>6.16</td>
<td>0.92</td>
<td>H</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>4.42</td>
<td>1.373</td>
<td>A</td>
</tr>
</tbody>
</table>

** H = High; MH = Moderately High; A = Average; ML = Moderately Low; L = Low

Table 1 shows the level of utilization of library resources by academic staff of polytechnics in South-East and South-South Nigeria. The findings reveal a moderately high level of utilization of library resources by academic staff of polytechnics for publication output. For instance, there is a high level utilization of journal collections \( (\bar{x} = 6.16, SD = 0.92) \) and online resources \( (\bar{x} = 5.79, SD = 1.28) \).
= 5.79, SD = 1.28) while newspapers (\( \bar{x} = 4.99, \ SD = 1.43 \)) and conference proceedings (\( \bar{x} = 5.28, \ SD = 1.51 \)) reveal moderate level of library resources utilization. The results also show that government documents (\( \bar{x} = 2.61, \ SD = 1.26 \)) and students’ research projects recorded low utilization (\( \bar{x} = 1.84, \ SD = 1.14 \)) (see appendix 4). What these findings depict is that academic staff of polytechnics in South-East and South-South utilize mostly online resources, conference proceedings, books/monographs, journal collection and newspapers/magazines for their publication output.

**Research Questions Two**

What are the levels of publication output by academic staff of polytechnics in South-East and South-South Nigeria?

**Table 2: Levels of Publication Output of Academic Staff of Polytechnics in South-East and South-South Nigeria**

<table>
<thead>
<tr>
<th>S/N</th>
<th>Publication Output</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>Decision **</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Books/monographs/manuals</td>
<td>2.58</td>
<td>1.21</td>
<td>ML</td>
</tr>
<tr>
<td>2.</td>
<td>Books’ chapters published</td>
<td>2.58</td>
<td>1.36</td>
<td>ML</td>
</tr>
<tr>
<td>3.</td>
<td>Books reviewed</td>
<td>1.98</td>
<td>1.13</td>
<td>ML</td>
</tr>
<tr>
<td>4.</td>
<td>Articles published in prof. local journals</td>
<td>4.55</td>
<td>1.86</td>
<td>MH</td>
</tr>
<tr>
<td>5.</td>
<td>Articles published in prof. intern. journal</td>
<td>2.89</td>
<td>1.79</td>
<td>ML</td>
</tr>
<tr>
<td>6.</td>
<td>Articles published locally outside your area</td>
<td>2.23</td>
<td>1.32</td>
<td>L</td>
</tr>
<tr>
<td>7.</td>
<td>Articles published intern. outside your area</td>
<td>1.80</td>
<td>1.47</td>
<td>L</td>
</tr>
<tr>
<td>8.</td>
<td>Papers presented at local conf./seminars</td>
<td>4.13</td>
<td>1.92</td>
<td>A</td>
</tr>
<tr>
<td>9.</td>
<td>Papers presented at intern. conf./seminars</td>
<td>1.95</td>
<td>0.97</td>
<td>L</td>
</tr>
<tr>
<td>10.</td>
<td>Papers presented at local workshops</td>
<td>2.29</td>
<td>1.18</td>
<td>L</td>
</tr>
<tr>
<td>11.</td>
<td>Papers presented at intern. workshops</td>
<td>1.45</td>
<td>1.10</td>
<td>VL</td>
</tr>
<tr>
<td></td>
<td><strong>Overall</strong></td>
<td><strong>2.58</strong></td>
<td><strong>1.39</strong></td>
<td><strong>ML</strong></td>
</tr>
</tbody>
</table>

**ML = Moderately High; A = Average; ML = Moderately Low; L = Low; VL = Very Low**

Table 2 shows the levels of publication output of academic staff of polytechnics in South-East and South-South, Nigeria. The findings reveal that
there is a general moderately low level of publication output among the academic staff of polytechnics in South-East and South-South Nigeria. Apart from articles published in professional local journals ($\bar{x} = 4.55$, SD = 1.86) and local conference paper presentations ($\bar{x} = 4.13$, SD = 1.92), where academic staff recorded moderately high and average level of publication output respectively, the results show that their output in other publications were low as could be seen in articles published locally outside their area($\bar{x} = 2.23$, SD 1.32) and papers presented in international conferences ($\bar{x} = 1.95$, SD 0.976) and in local workshops ($\bar{x} = 2.29$, SD = 1.18) (See appendix 4). The findings reveal that publication output of academic staff of polytechnics in South-East and South-South Nigeria comprises mostly of articles in local professional journals and conferences/seminars papers presented at locally organized conferences/seminars.

**Research Question Three**

What is the influence of library resources utilization on books’ publications by academic staff of polytechnics in South-East and South-South Nigeria?
Table 3: Regression Analysis on the Influence of Library Resources on Book Publications

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>Std Error</td>
<td>beta</td>
<td></td>
</tr>
<tr>
<td>(Consistent )</td>
<td>-0.950</td>
<td>0.395</td>
<td>-2.405</td>
<td>0.017</td>
</tr>
<tr>
<td>OR</td>
<td>0.391</td>
<td>0.055</td>
<td>0.247</td>
<td>7.155</td>
</tr>
<tr>
<td>SRP</td>
<td>-0.284</td>
<td>0.058</td>
<td>-0.160</td>
<td>-4.886</td>
</tr>
<tr>
<td>B/N</td>
<td>0.003</td>
<td>0.052</td>
<td>0.002</td>
<td>0.066</td>
</tr>
<tr>
<td>GD</td>
<td>0.116</td>
<td>0.045</td>
<td>0.072</td>
<td>2.575</td>
</tr>
<tr>
<td>AI</td>
<td>-0.0171</td>
<td>0.044</td>
<td>-0.158</td>
<td>-3.873</td>
</tr>
<tr>
<td>CDD</td>
<td>-0.090</td>
<td>0.048</td>
<td>-0.069</td>
<td>-1.871</td>
</tr>
<tr>
<td>CP</td>
<td>-0.046</td>
<td>0.046</td>
<td>-0.034</td>
<td>-0.987</td>
</tr>
<tr>
<td>N/M</td>
<td>0.305</td>
<td>0.061</td>
<td>0.215</td>
<td>4.972</td>
</tr>
<tr>
<td>T/M</td>
<td>-0.222</td>
<td>0.062</td>
<td>-0.141</td>
<td>-3.579</td>
</tr>
<tr>
<td>JC</td>
<td>0.197</td>
<td>0.095</td>
<td>0.088</td>
<td>2.066</td>
</tr>
<tr>
<td>Books (B)</td>
<td>0.229</td>
<td>0.068</td>
<td>0.136</td>
<td>3.352</td>
</tr>
<tr>
<td>Book Chapters (BC)</td>
<td>0.613</td>
<td>0.068</td>
<td>0.411</td>
<td>8.994</td>
</tr>
<tr>
<td>Books Reviews (BR)</td>
<td>0.533</td>
<td>0.069</td>
<td>0.298</td>
<td>7.765</td>
</tr>
</tbody>
</table>

Table 3 shows a regression analysis on the influence of library resources on book publications. The results reveal that library resources utilization has high significant influence on book publications (β = 0.136, P < 0.05); book chapters published by academic staff (β = 0.411, P < 0.05) and also on book reviewed (β = 0.298, P < 0.05) by the academic staff of polytechnics (See appendix 4). The table further reveals that library resources which influence book publications, book chapters and books reviewed include online resources, students’ research projects, government documents, abstracts and indexes, newspapers/magazines, books/monographs and journal collections. However, bulletins/newsletters, CD-ROM databases and conference proceedings do not influence academic staff book publications as could be seen from the table.
Research Question Four

What is the influence of library resources utilization on journal publications by academic staff of polytechnics in South-East and South-South Nigeria?

Table 4: Regression Analysis on the Influence of Library Resources on Journal Publications

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Consistent)</td>
<td>-0.706</td>
<td>0.401</td>
<td>-1.762</td>
<td>0.079</td>
</tr>
<tr>
<td>OR</td>
<td>0.288</td>
<td>0.060</td>
<td>4.813</td>
<td>0.000</td>
</tr>
<tr>
<td>SRP</td>
<td>-0.245</td>
<td>0.062</td>
<td>-3.941</td>
<td>0.000</td>
</tr>
<tr>
<td>B/N</td>
<td>-0.027</td>
<td>0.051</td>
<td>-0.534</td>
<td>0.000</td>
</tr>
<tr>
<td>GD</td>
<td>0.177</td>
<td>0.047</td>
<td>3.795</td>
<td>0.059</td>
</tr>
<tr>
<td>AI</td>
<td>-0.247</td>
<td>0.047</td>
<td>-5.213</td>
<td>0.000</td>
</tr>
<tr>
<td>CDD</td>
<td>-0.112</td>
<td>0.049</td>
<td>-2.292</td>
<td>0.000</td>
</tr>
<tr>
<td>CP</td>
<td>-0.013</td>
<td>0.045</td>
<td>-0.290</td>
<td>0.022</td>
</tr>
<tr>
<td>N/M</td>
<td>0.196</td>
<td>0.064</td>
<td>3.079</td>
<td>0.001</td>
</tr>
<tr>
<td>T/M</td>
<td>-0.200</td>
<td>0.061</td>
<td>-3.261</td>
<td>0.002</td>
</tr>
<tr>
<td>JC</td>
<td>0.196</td>
<td>0.092</td>
<td>2.123</td>
<td>0.001</td>
</tr>
<tr>
<td>Articles published in prof. local journals</td>
<td>0.200</td>
<td>0.059</td>
<td>3.398</td>
<td>0.034</td>
</tr>
<tr>
<td>Articles published in prof. inter. journals</td>
<td>0.109</td>
<td>0.055</td>
<td>1.983</td>
<td>0.001</td>
</tr>
<tr>
<td>Articles published locally outside your area</td>
<td>-0.003</td>
<td>0.073</td>
<td>-0.044</td>
<td>0.048</td>
</tr>
<tr>
<td>Articles published inter. outside your area</td>
<td>-0.090</td>
<td>0.068</td>
<td>-1.334</td>
<td>0.065</td>
</tr>
</tbody>
</table>

Table 4 shows a regression analysis on the influence of library resources on journal publications. The findings reveal that library resources utilization has significant influence on articles published by academic staff in professional local journals ($\beta = 0.183$, $P < 0.05$) and articles published in professional international journals ($\beta = 0.096$, $P < 0.05$). The table, however, shows that library resources utilization has no influence on articles published locally outside academic staff disciplines ($\beta = -0.002$, $P > 0.05$) and articles published internationally outside their area of specialization ($\beta = -0.065$, $P > 0.05$) (See appendix 4). The table reveals that online resources, students’ research
projects, government documents, abstracts and indexes, CD-ROM databases, newspapers/magazines, textbooks/monographs and journal collections are the library resources that influenced articles published by academic staff of Nigerian polytechnics in both local and international professional journals.

**Research Question Five**

What is the influence of library resources utilization on conference papers presentation by academic staff of polytechnics in South-East and South-South Nigeria?

**Table 5: Regression Analysis on the Influence of Library Resources on Conference Paper Presentations**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Consistent)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>0.301</td>
<td>0.053</td>
<td>5.664</td>
<td>0.000</td>
</tr>
<tr>
<td>SRP</td>
<td>-0.282</td>
<td>0.056</td>
<td>-5.073</td>
<td>0.000</td>
</tr>
<tr>
<td>B/N</td>
<td>0.004</td>
<td>0.049</td>
<td>0.085</td>
<td>0.932</td>
</tr>
<tr>
<td>GD</td>
<td>0.131</td>
<td>0.044</td>
<td>3.013</td>
<td>0.003</td>
</tr>
<tr>
<td>AI</td>
<td>-0.246</td>
<td>0.043</td>
<td>-5.762</td>
<td>0.000</td>
</tr>
<tr>
<td>CDD</td>
<td>-0.041</td>
<td>0.045</td>
<td>-0.909</td>
<td>0.364</td>
</tr>
<tr>
<td>CP</td>
<td>-0.030</td>
<td>0.043</td>
<td>-0.692</td>
<td>0.489</td>
</tr>
<tr>
<td>N/M</td>
<td>0.207</td>
<td>0.059</td>
<td>3.495</td>
<td>0.001</td>
</tr>
<tr>
<td>T/M</td>
<td>-0.188</td>
<td>0.058</td>
<td>-3.247</td>
<td>0.001</td>
</tr>
<tr>
<td>JC</td>
<td>0.091</td>
<td>0.089</td>
<td>1.020</td>
<td>0.308</td>
</tr>
<tr>
<td>Papers presented in local conf.</td>
<td>0.180</td>
<td>0.040</td>
<td>4.480</td>
<td>0.000</td>
</tr>
<tr>
<td>Papers presented in intern. conf.</td>
<td>0.414</td>
<td>0.079</td>
<td>5.268</td>
<td>0.000</td>
</tr>
<tr>
<td>Papers presented in local w/shops</td>
<td>0.021</td>
<td>0.056</td>
<td>0.380</td>
<td>0.704</td>
</tr>
<tr>
<td>Papers presented in intern. w/shops</td>
<td>-0.192</td>
<td>0.053</td>
<td>-3.599</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 5 shows regression analysis on the influence of library resources on conference paper presentations by academic staff of polytechnics. The results reveal that library resources utilization has high significant influence on academic staff paper presentations in local conferences, international
conferences and international workshops but not on paper presentations at local workshops. For instance, library resources utilization has high significant influence on paper presentations at local conferences ($\beta = 0.171$, $P < 0.05$); paper presentations in international conferences ($\beta = 0.198$, $P < 0.05$) and paper presentations at international workshops ($\beta = -0.015$, $P < 0.05$). However, the table also reveals that library resources utilization has no significant influence on paper presentations at local workshops ($\beta = 0.012$, $P > 0.05$) (See appendix 4). From the table it could be seen that the following library resources influenced these publications: online resources, students’ research projects, government documents, abstracts and indexes, newspapers/magazines and books/monographs. The findings also show that the following library resources have no significant influence on academic staff conference paper presentations: bulletins/newsletters, conference proceedings, CD-ROM databases and journal collections.

**Research Question Six**

What are the constraints to utilization of library resources for publication output by academic staff of polytechnics in South-East and South-South Nigeria?
Table 6: Constraints to Utilization of Library Resources for Publication Output by Academic Staff

<table>
<thead>
<tr>
<th>S/N</th>
<th>Statement</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>Decision**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Relevant resources are not always available</td>
<td>2.29</td>
<td>0.93</td>
<td>D</td>
</tr>
<tr>
<td>2.</td>
<td>Resources are most of the time out-dated making researchers to utilize obsolete information.</td>
<td>2.34</td>
<td>0.97</td>
<td>D</td>
</tr>
<tr>
<td>3.</td>
<td>Poor organization of resources makes search for information difficult.</td>
<td>3.38</td>
<td>0.64</td>
<td>A</td>
</tr>
<tr>
<td>4.</td>
<td>Unconductive reading environment leads to ineffective utilization.</td>
<td>3.59</td>
<td>0.58</td>
<td>SA</td>
</tr>
<tr>
<td>5.</td>
<td>Lack of modern ICT equipment lead to delay in information delivery.</td>
<td>3.83</td>
<td>0.37</td>
<td>SA</td>
</tr>
<tr>
<td>6.</td>
<td>Non availability of electronic resources makes academic staff to depend only on print resources.</td>
<td>3.73</td>
<td>0.47</td>
<td>SA</td>
</tr>
<tr>
<td>7.</td>
<td>Personal lack of skill in the use of library affects effective utilization of available resources.</td>
<td>3.88</td>
<td>1.00</td>
<td>SA</td>
</tr>
<tr>
<td>8.</td>
<td>Insufficient time for research results in under utilization of available resources.</td>
<td>2.88</td>
<td>0.92</td>
<td>A</td>
</tr>
<tr>
<td>9.</td>
<td>Poor electricity supply to the library leads to unconductive environment and general under utilization of resources.</td>
<td>3.73</td>
<td>0.51</td>
<td>SA</td>
</tr>
<tr>
<td>10.</td>
<td>Lukewarm personal attitude results in poor services And ineffective utilization.</td>
<td>3.34</td>
<td>0.72</td>
<td>A</td>
</tr>
<tr>
<td>11.</td>
<td>Irregular supply of resources and services lead to unavailability and hence ineffective utilization.</td>
<td>3.63</td>
<td>0.50</td>
<td>SA</td>
</tr>
<tr>
<td>12.</td>
<td>Delay in library operations through manual process increases the time spent in information search.</td>
<td>3.62</td>
<td>0.50</td>
<td>SA</td>
</tr>
<tr>
<td>13.</td>
<td>Absence/paucity of relevant databases lead to unavailability of relevant information especially from foreign countries.</td>
<td>3.58</td>
<td>0.49</td>
<td>SA</td>
</tr>
<tr>
<td>14.</td>
<td>Inadequate number of staff leads to waste of time and poor services delivery.</td>
<td>3.26</td>
<td>0.78</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>3.36</td>
<td>0.67</td>
<td>Agree</td>
</tr>
</tbody>
</table>

** SA = Strongly Agree; A = Agree; D = Disagree.

Table 6 shows the constraints to the utilization of library resources for publication output by academic staff of polytechnics in Nigeria. The findings show that the respondents strongly agree to the following as the most constraining factors: personal lack of skill in the use of library (\( \bar{x} = 3.88, SD = 1.00 \)); lack of modern ICT equipment leading to delay in information delivery.
(\bar{x} = 3.83, \text{SD} = 0.37); non availability of electronic resources (\bar{x} = 3.73, \text{SD} = 0.47) and poor electricity supply to the library leading to unconducive environment (\bar{x} = 3.73, \text{SD} = 0.51). Others are irregular supply of resources and services (\bar{x} = 3.63, \text{SD} = 0.50); delay in library operation through manual processes (\bar{x} = 3.62, \text{SD} = 0.50) and absence/paucity of relevant databases (\bar{x} = 3.58, \text{SD} = 0.49) The respondents however disagreed that relevant resources are not always available (\bar{x} = 2.29, \text{SD} = 0.93) and that resources are most of the time out-dated making researchers to utilize obsolete information (\bar{x} = 2.34, \text{SD} = 0.97) (See appendix 4). The overall mean of 3.36 shows that these academic staff are constrained by some problems while trying to utilize the information resources of their polytechnic libraries. This can be explained from the fact that the responses of the academic staff on the above items do not show wide variation as could be seen from their standard deviations.

**Research Question Seven**

What are the strategies for enhancing the utilization of library resources for enhanced publication output by academic staff of polytechnics in South-East and South-South Nigeria?
Table 7: Strategies for Enhancing Utilization of Library Resources for Publication Output

<table>
<thead>
<tr>
<th>S/N</th>
<th>Statement</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>Decision**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increased efforts by library management to provide the required resources.</td>
<td>3.38</td>
<td>0.60</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>Acquisition of current information resources increases information utilization.</td>
<td>3.57</td>
<td>0.51</td>
<td>SA</td>
</tr>
<tr>
<td>3</td>
<td>Proper organization of the information resources will reduce the time spent in search for relevant information by users</td>
<td>3.68</td>
<td>0.49</td>
<td>SA</td>
</tr>
<tr>
<td>4</td>
<td>Provision of conducive reading environment by library management will ensure effective utilization</td>
<td>3.66</td>
<td>0.51</td>
<td>SA</td>
</tr>
<tr>
<td>5</td>
<td>Equipping the library with modern ICT will enhance timely information delivery and utilization.</td>
<td>3.79</td>
<td>0.53</td>
<td>SA</td>
</tr>
<tr>
<td>6</td>
<td>Provision of electronic resources will ensure user access and utilization of electronic information.</td>
<td>3.76</td>
<td>0.53</td>
<td>SA</td>
</tr>
<tr>
<td>7</td>
<td>Organization of regular user education for academic staff to enhance their user skill.</td>
<td>3.36</td>
<td>0.63</td>
<td>A</td>
</tr>
<tr>
<td>8</td>
<td>Reducing workload of academic staff to create time for research.</td>
<td>2.72</td>
<td>0.89</td>
<td>A</td>
</tr>
<tr>
<td>9</td>
<td>Provision of alternative power supply for the library to ensure uninterrupted services and conducive reading environment.</td>
<td>3.65</td>
<td>0.58</td>
<td>SA</td>
</tr>
<tr>
<td>10</td>
<td>In-service training for library staff to improve their performances.</td>
<td>3.42</td>
<td>0.61</td>
<td>A</td>
</tr>
<tr>
<td>11</td>
<td>Ensuring regular supply of library resources will promote effective utilization.</td>
<td>3.67</td>
<td>0.49</td>
<td>SA</td>
</tr>
<tr>
<td>12</td>
<td>Computerization of library operations will ensure speedy services delivery for effective utilization.</td>
<td>3.71</td>
<td>0.47</td>
<td>SA</td>
</tr>
<tr>
<td>13</td>
<td>Provision of relevant databases to enhance availability and utilization of both local and foreign materials.</td>
<td>3.64</td>
<td>0.49</td>
<td>SA</td>
</tr>
<tr>
<td>14</td>
<td>Employment of more staff in the library will lead to efficient and timely serviced delivery and utilization.</td>
<td>3.38</td>
<td>0.77</td>
<td>A</td>
</tr>
</tbody>
</table>

**SA = Strongly Agree; A = Agree**

Table 13 shows the strategies to enhance effective utilization of library resources for publication output. The most important strategies for enhancing
utilization of library resources for publication output as could be seen from the table were: equipping the library with modern ICT facilities ($\bar{x} = 3.79$, $SD = 0.42$); provision of electronic resources ($\bar{x} = 3.76$, $SD = 0.53$) and computerization of library operations ($\bar{x} = 3.71$, $SD = 0.47$). Other strategies are acquisition of current information resources ($\bar{x} = 3.57$, $SD = 0.51$); proper organization of the information resources ($\bar{x} = 3.68$, $SD = 0.49$); provision of conducive reading environment by library management ($\bar{x} = 3.66$, $SD = 0.51$); provision of alternative power for the library ($\bar{x} = 3.65$, $SD = 0.58$) and the provision of relevant databases ($\bar{x} = 3.64$, $SD = 0.49$) (See appendix 4). The above table reveals that proper implementation of these strategies will apparently lead to effective utilization of library resources for enhanced publication output. This can be seen from the responses of the academic staff which do not show wide variations.

**Summary of Major Findings**

1. The findings of the study show that library resources utilization by academic staff of polytechnics in South-East and South-South Nigeria for publication output was average. Library resources that are moderately utilized by academic staff are online resources; conference proceedings; books/monographs; journal collections; CD-ROM databases; abstracts and indexes and newspapers/magazines.
2. The findings of the study also show that there was generally low level of publication output among the academic staff of polytechnics in Nigeria.

3. The findings of the study reveal that library resources utilization has very high significant influence on book/monographs published by academic staff ($\beta = 0.136, \ P < 0.05$); book chapters published ($\beta = 0.411, \ P < 0.05$) and books reviewed by academic staff ($\beta = 0.298, \ P < 0.05$). The following library resources are found to have influence on books publications by academic staff; journal collections, online resources, newspapers/magazines, students’ research projects, abstracts and indexes, books/monographs and government documents.

4. The findings of the study reveal that library resources utilization has significant influence on journal articles publication by academic staff in professional local journals ($\beta = 0.183, \ P < 0.05$) and professional international journals ($\beta = 0.096, \ P < 0.05$).

5. The study found that library resources utilization has no significant influence on articles published locally and internationally outside the academic staff area of specializations.

6. The findings of the study also reveal that library resources utilization has very high significant influence on paper presentations by academic staff at local conferences and international conferences as well as international workshops.
7. The findings of the study reveal that the followings were the most constraining factors to library resources utilization for publication output: personal lack of skill in the use of library ($\bar{x} = 3.88$, SD = 1.00); lack of modern ICT equipment leading to delay in information delivery ($\bar{x} = 3.83$, SD = 0.37) and non availability of electronic resources ($\bar{x} = 3.73$, SD = 0.47). Other constraints were poor electricity supply to the library leading to uncondusive environment ($\bar{x} = 3.73$, SD = 0.51); irregular supply of resources and services ($\bar{x} = 3.63$, SD = 0.50); delay in library operations through manual processes ($\bar{x} = 3.62$, SD = 0.50); uncondusive reading environment leading to ineffective utilization ($\bar{x} = 3.59$, SD = 0.58) and absence/paucity of relevant databases ($\bar{x} = 3.58$, SD = 0.49).

8. The following strategies are considered most effective for enhancing the utilization of library resources for enhanced publication output: equipping the library with modern ICT facilities ($\bar{x} = 3.79$, SD = 0.42); provision of electronic resources ($\bar{x} = 3.76$, SD = 0.53) and computerization of library operations ($\bar{x} = 3.71$, SD = 0.47). Other strategies were proper organization of information resources ($\bar{x} = 3.68$, SD = 0.49); ensuring regular supply of resources ($\bar{x} = 3.67$, SD = 0.49); provision of conducive reading environment by the library management ($\bar{x} = 3.66$, SD = 0.51); provision of alternative power for the library ($\bar{x} = 3.65$, SD = 0.58) and provision of relevant databases ($\bar{x} = 3.64$, SD = 0.49).
CHAPTER FIVE

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

This chapter presents the discussion of findings, implications of the study, recommendations, limitations of the study, suggestions for further research and conclusion.

Discussion of the Findings

Discussion of the findings is based on the research questions that guided this study. The discussions are done under the following sub-headings, levels of library resources utilization for publication output by academic staff of polytechnics in South-East and South-South Nigeria; levels of publication output of academic staff of polytechnics in South-East and South-South Nigeria; influence of library resources utilization on book publications by academic staff of polytechnics in South-East and South-South Nigeria; influence of library resources utilization on journal publications by academic staff of polytechnics in South-East and South-South Nigeria; influence of library resources utilization on conference paper presentations by academic staff of polytechnics in South-East and South-South Nigeria; constraints to library resources utilization for publication output by academic staff of polytechnics in South-East and South-South Nigeria and strategies for enhancing utilization of library resources for enhanced publication output by academic staff of polytechnics in South-East and South-South Nigeria.
Levels of library resources utilization for publication output by academic staff of Polytechnics in south-east and south-south Nigeria

The results of the finding as shown in table 1 reveal that there is an average level of library resources utilization among the academic staff of polytechnics in South-East and South-South Nigeria. Online resources, conference proceedings, books/monographs, journal collections and CD-ROM databases are some of the library resources which the academic staff moderately utilized. These findings support an earlier study by Afebende and Abaye (2006) which revealed that few academics utilize library resources for their publication output. They observed a low level of library resources utilization among academic staff they studied.

The above finding is worrisome in view of the importance of library resources utilization in the attainment of academic goals more especially the publication output of academic staff. An average utilization of library resources may be as a result of some constraints such as lack of skill in the use of library on the part of the academic staff, non availability of e-resources and some other problems which have been identified as affecting academic staff utilization of library resources.

Levels of publication output of academic staff of Polytechnics in south-east and south-south Nigeria

From the findings of the study as depicted in Table 2, it is very clear that there is a moderately low level of publication output among the academic staff of Nigerian Polytechnics. This result is quite unexpected because of the
importance of publication output in the lives of academic staff. Literature reviewed show that publication output is highly associated with academic staff appointment, tenure, promotion/career advancement, contribution to knowledge as well as personal/institutional visibility.

However, these findings corroborate the results posted by some other studies on publication output of academic staff. For instance, Tower, Desai, Carson and Cheng (2005) study revealed a low level publication output among academic staff in Accounting in Australian universities. Also interesting is the work of Ogbomo (2010) which reported a low level of publication output among academic librarians in Delta State University, Abraka, Nigeria. Ogbomo’s study is equally surprising because observations have shown that academic librarians in Nigeria engage in extensive research and have produced high level of publication output.

On the other hand, one may associate the low level of publication output among the academic staff of polytechnics in Nigeria to their average level of library resources utilization. By not utilizing library resources much, these staff obviously lacked the necessary information for high level publication output. This is because publication output is fundamentally a product of adequate utilization of library resources.
Influence of library resources utilization on book publications by academic staff of Polytechnics in south-east and south-south Nigeria

The findings reveal that library resources utilization has very high significant influence on book publications. These findings are clearly shown in Table 3. The influence of utilization of different types of library resources and their influence on publication output are well documented in the literature. For instance, Okiy (2000), Kemoni (2002) and Popoola and Haliso (2009) in their studies also found that academic staff rely on periodical literature and some other library resources which influence their publication output. The present study also conforms to those of Khan and Dominic (2009), Parameshwar and Patil (2009) and Agada (2010) which earlier reported high use of library resources by academic staff and significant influence of such use on their publication output. The findings did not shift from some earlier studies in the area of library resources utilization. For example, Zhang (1998) and Zainab (2000) in their separate studies reported various levels of library resources utilization by academic staff and the influence it has on job efficiency and improved publication output.

Although academic staff of polytechnics exhibited average level of library resources and moderately low publication output, they acknowledged the fact that library resources are very influential in their books publication efforts. This disposition is not surprising because observations have shown that most successful researchers are those that utilize library resources effectively.
Influence of library resources utilization on journal publications by academic staff of Polytechnics in south-east and south-south Nigeria

The findings of the study as depicted in Table 4 reveal that library resources utilization has significant influence on journal article publication in both local and international professional journals. The findings also revealed that online resources, students’ research projects, government documents, abstracts and indexes, CD-ROM databases, newspapers/magazines, books/monographs and journal collections are the resources that influence the academic journal articles publications.

The above findings are in line with earlier study by Parameshwar and Patil (2009) which showed that the utilization of online resources and other library resources influences academic staff publication output. The findings also corroborate that of Khan and Dominic (2009) who in a similar study reported that utilization has influence on publication output. This result is not surprising as it goes to show that many academic staff of polytechnic recognize the importance of library resources in their overall academic activities particularly in their publication output no matter the level of publication output.

Influence of library resources utilization on conference papers presentations by academic staff of Polytechnics in south-east and south-south Nigeria

The findings as shown in Table 5 reveal that library resources utilization has high significant influence on paper presentations both at local and international conferences as well as at international workshops. The findings
further showed that online resources, students’ research projects, abstracts and indexes, newspaper/magazines and books/monographs are the resources that significantly influence conference papers publication output by the staff. These findings corroborated an earlier studies by Zhang (1998) and Zainab (2000) who in their various studies reported that utilization of library resources influences academic staff publication output. Conferences and workshops are important platform for academic staff to acquire current information in their areas of specialization. They also afford them the opportunity to meet and interact with professional colleagues. It is not surprising therefore that academic staff of polytechnics’ utilization of library resources influences papers presented in such professional conferences.

**Constraints to utilization of library resources for publication output by academic staff of Polytechnics in south-east and south-south Nigeria**

The findings of the study as depicted in Table 8 reveal that there are constraints to library resources utilization for publication output. The most significant of these constraints are personal lack of skill by academic staff in the use of library resources, lack of modern ICT equipment leading to delays in information delivery and non availability of electronic resources. Other constraints are poor electricity supply to the library leading to unconducive environment, irregular supply of resources and services and delays in library operation through manual processes. These results show that academic staff are constrained by serious problems while trying to utilize library resources.
A closer look at these problems reveals that they are mostly institutional based and requires the attention of the various polytechnics Management to address. Having said that, the fact remains that these problems hinder effective utilization and invariably academic staff publication output. These findings are consistent with those of Agebende and Abaye (2006), Oyewusi and Oyeboade (2009), Parameshwar and Patil (2009), Agada (2010) and a host of others. For instance, the study by Afebende and Abaye (2006) study revealed that the most constraining factor to utilization is lack of relevant databases just as Oyewusi and Oyeboade (2009) as well as Agada (2010) found that inadequate resources, lack of user skill and lack of modern ICT equipment are the most constraining factors to utilization of library resources by academic staff.

**Strategies for enhancing utilization of library resources for enhanced publication output by academic staff of Polytechnics in south-east and south-south Nigeria**

The most important of these strategies are equipping the library with modern ICT facilities; provision of electronic resources; computerization of library operations and proper organization of the information resources. Other strategies which are also considered are ensuring regular supply of library resources; provision of conducive reading environment by library management; provision of alternative power supply for the library and provision of relevant databases.

These findings are in agreement with the suggestions reported by Agada (2010) who in his study saw the provision of ICT networks and adequate e-
resources very important in enhancing library resources utilization. The findings also support earlier work by Parameshwar and Patil (2009) who suggested a general improvement on the facilities in the library as a major strategy to ensure effective utilization of library resources. The findings also support a similar work by Okafor (2010) who also recommended equipping the library with relevant textbooks, journals, e-journals, internet facilities and necessary library resources to facilitate research output of academics in Nigeria.

**Conclusion**

Library resources utilization is imperative for attending high level publication output by academic staff of polytechnics. Conversely, poor utilization of library resources by academic staff of polytechnics is an indication of low level research among these academic staff, a situation which invariably affects their publication output. The implication of this is that the realization of the nation’s technological development based on sound academic staff research has been hampered. Consequently, government at all levels and polytechnics’ management should ensure that all necessary facilities that enhance high level utilization of library resources by academic staff are adequately provided in the nation’s polytechnics. This will make the academic staff of Nigerian polytechnics to rise up to the challenges of publication output and ensure the realization of the overall objectives of polytechnic education in Nigeria.
Implications of the Study

The findings of the study reveal that there was an average utilization of library resources among the academic staff of polytechnics in Nigeria. The findings further revealed that the following library resources have significant influence on academic staff publication output; online resources, students research projects, newspapers or magazines, CD-ROM databases books or monographs and journal collections. These findings have implications for both the library managements and the polytechnic managements in Nigeria. The library administrators need to re-order their acquisition policies in order to be able to meet the expected demand of these resources which have significant influence on academic staff publication output.

The low utilization of some resources such as bulletins/newsletters and government documents and others also has implication for the polytechnics library managements. They have to consider initiating user awareness programme targeted on the academic staff to enable the academic staff of their institutions to know about the availability of these resources and their research values.

These findings also have implication for the polytechnic managements. Library materials are capital intensive that must have to be budgeted for. It will require the managements of polytechnics to consider an upward review in their annual budgetary allocations to their libraries to accommodate the expected increase in the acquisition of more copies of books/monographs, databases,
subscription to journals and some other resources that have been selected by the librarians for acquisition in line with needs of the academic staff.

It is quite disturbing that the findings reveal that academic staff of polytechnics in South-East and South-South Nigerian have very low publication output. This finding is more worrisome when considered against the back-drop that academic staff depend on publication output for their promotions, tenure, recognition and career advancement. The findings have some implications both to the polytechnic managements and the academic staff. The polytechnic managements will have to initiate a programme for regular training and sponsorship of their academic staff to attend conferences and workshops in writing and paper publishing. On their part, the academic staff should embark on self development programmes to sharpen their knowledge and skills in research and paper publishing.

The findings of the study also reveal some of the constraints to library resources utilization. The most constraining factors are lack of skill in the use of the library; lack of modern ICT in these libraries; non availability of e-resources and poor electricity supply to the library. Other constraining factors are irregular supply of resources and services and delay in library operations due to manual processes in use.

Since most of these problems border on infrastructural facilities and equipment, they have implications to the polytechnic managements and both the federal and state Ministry of Education through the National Board for
Technical Education (NBTE). The polytechnic managements should take up the issue of equipping the libraries very seriously with the NBTE by demanding a substantial increase in their annual budgetary allocations. Issues such as regular supply of electricity, lack of ICT equipment and linking the polytechnic libraries to the internet are matters of urgent attention.

On the part of the government, the Federal Ministry of Education should take a holistic approach to the issue of library development in Nigeria tertiary institutions particularly the polytechnic in view of its central role in the technological advancement of the country.

The findings of the study have also theoretical implication. The results of the study established a link between library resources, their utilization and academic staff publication output. This result has not deviated from Shannon-Weaver model of Communication which is all about information generation, communication, utilization and feedback/output. The implication is that the ability of the academic staff to effectively utilize library resources will significantly enhance their publication output as well increase the resources available in their institutional libraries.

**Recommendations**

Based on the findings and the implications of the study, the following recommendations are made:
1. Increased Acquisition of Library Resources: The polytechnic managements should increase the acquisition of those library resources which have significant influence on academic staff publication output. This will enable them to provide for the expected increase in their demand and utilization by the academic staff.

2. Proper Orientation in the Use of the Library: Polytechnic library managements in 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. Infrastructural Facilities and Equipment Should be developed in Nigerian Polytechnic Libraries. Strategies to address the problems of infrastructural facilities and equipment in Nigerian polytechnic libraries should include the followings:

- Adequate funding of polytechnic libraries: Library resources are capital intensive that most times overwhelms the capacity of individual institution. Governments at the state and federal levels should increase their annual budgets to higher education and cause a reasonable percentage of such allocation to be spent on libraries development. This will enable these libraries to acquire relevant and current information resources for research development particularly the e-resources as well as meet up with other challenges.
• Provision of alternative power supply for the library: Irregular power supply does not make room for efficient utilization of library resources. It also contributes to unconducive environment which is harmful not only to the users but equally to the resources. Polytechnics’ management should provide their libraries with stand-by generating plants to ensure uninterrupted power supply.

• Computerization of polytechnic libraries: The computerization of polytechnic libraries in Nigeria was long overdue. Most library resources particularly the online ones run on a computerized system. Computerization of library operations will reduce the delays in information delivery which is a common feature in the nations’ polytechnic libraries.

• Nigeria Polytechnic libraries should engage in the development of Information and Communication Technology (ICT) infrastructure necessary to have them connected to the internet to ensure access to electronic resources which is of utmost important to research and publication output.

**Limitations of the Study**

The major limitation this study suffered was in the distribution and collection of the questionnaire. Polytechnics were closed down for several months after the distribution of the questionnaire as a result of the strike action
embarked upon by the Academic Staff Union of Polytechnics (ASUP). This not only affected the number of instrument collected from the respondents, as some of them lost the questionnaire given to them during the period of strike, but also the long time it took the research assistants to return the filled questionnaire to the researchers.

**Suggestions for Further Studies**

This study does not claim to have comprehensively examined all the issues involved in academic staff library resources utilization and publication output. As a result the following suggestions have been made for further studies.

1. Library use patterns of polytechnics academic staff.
2. There is a need to research on how the attitudes of library personnel affect library resources utilization.
3. Information literacy skills of academic staff of polytechnics.
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