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**EXTENT OF INFORMATION RESOURCES UTILIZATION IN THE
BIBLIOGRAPHY OF POSTGRADUATES' TERMINAL RESEARCH
OUTPUT OF THE DEPARTMENT OF LIBRARY AND INFORMATION
SCIENCES, AHMADU BELLO UNIVERSITY, ZARIA**

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EXTENT OF INFORMATION RESOURCES UTILIZATION IN THE BIBLIOGRAPHY OF POSTGRADUATES' TERMINAL RESEARCH OUTPUT OF THE DEPARTMENT OF LIBRARY AND INFORMATION SCIENCES, AHMADU BELLO UNIVERSITY, ZARIA

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Abstract

Postgraduate theses and dissertations include diversified sources of print and electronic information resources that contributed as building blocks of the research output. Students cite and list these resources for purposes of making deduction and/or induction of their felt positions; essentially, to shape the research discourses as well as to resolve societal problem(s). This study ascertains the extent of information resources utilisation among five approved postgraduate programmes (PGDIM, MIS, MLS, MARM & MIM) in the Department of Library and Information Sciences, Ahmadu Bello University, Zaria using their bibliographies. The study adopted the *ex post facto* design of the quantitative method to collate data from the approved theses and dissertations from 2014-2018 (five years period). A total of 40,930 information resources were cited that accounted for 82.69% for print and 17.31% for e-resources in 638 theses and dissertations combined. Even though, the reference style approved is American Psychological Association, 6th edition, traces of Harvard (29.90%) and Chicago (18.70%) were recorded. It is concluded that the net worth of e-resources utilisation in bibliography of postgraduate theses and dissertations were significantly low (17.31%) compared to 82.69% recorded for print resources utilized. It is recommended that the student's exposure to diverse information resources be deliberate to help them balance synthesised ideas and mindful of the audiences served from pool of resources that can enhance knowledge.

Keywords: Dissertation, electronic resources, Library and Information Science, postgraduate, theses

Introduction

The generation and redistribution of information resources is an affirmation of the word “re-search”. In research output of postgraduate students’ particularly theses and dissertations such generation and redistributions support retrospection of original idea, which is envisaged here as premise students have been able to contrast and contract ideas pooled from others to justify opinions critically. These efforts have helped to espouse and expose strength and weaknesses of research writings within and outside the academic circles. These citations show also the extent of perception of postgraduate students towards conception of terms, the deepen understanding of the dependent and independents variables, on one hand and on the other ways by which such variables relate or reflect the intended generalisation of such research output.

The research output includes quantity of information resources pooled from diverse permissible information formats as emphasized by research handbooks. The expected standardization focused on in-text and reference listing. This is contained as style for students to abide by in order to facilitate and support the creation of new researches, and to expand existing research with corresponding critique that can be traced by others who later may want to extract as they make consultations of the research outputs. It is therefore, instructive, purposeful, and adequate that every item used in the course of the research work be adequately cited and done properly as prescribed by the standards.

The preposition here goes beyond evaluation of the extent of information resources utilisation in-text or in reference list as depicts by the title, due to the necessity to emphasize the significance of standardization of citations which generally is to guarantee and support earlier works by acknowledging expended efforts. These no doubt are included to shape the outcome of postgraduate researches. Such acknowledgements follow prescribed standards in reference styles and provide such chances to access the resources used as well as sustain the continuum of research. In addition, references in research output provide forensic opportunities to authenticate and verify original standpoints of cited works. Aware that these research output guide against plagiarism and other forms of scholarship misconduct, duly cited works vindicate students and the entire supervisory committee, and avert litigations and seizure of certificates.

There are diverse referencing styles, among the popular styles used in the Ahmadu Bello University, Zaria include American Psychology Association (APA), Harvard, Modern Language Association (MLA), and Vancouver depending on the department or faculty. These styles are

distinguishable by descriptive elements and admissible guidelines. These styles, methodology are unique and over the years modified to substantiate, justify, mirror the thrust, and facilitate access and retrieval of cited sources in their original formats. Evaluation of the ways which electronic resources are cited have become necessary with the proliferation of aggregated search engines, databases and internet hubs used for scholarly purposes.

The electronic resources ecosystems can be presumed to be very active by most postgraduate students in the build-up to terminal postgraduate programmes because of the need to deposit a synopsis that shall be eventually developed in to submitted theses and dissertation. It has become difficult to concede that proliferation of these electronic and print resources does not negates the efforts of postgraduate students nevertheless, what stand some student out include adherence to the provisions of referencing styles so permitted by the postgraduate schools. Worthy of note is that referencing styles generally compel research output to include cited elements that follow chronological order and must contain complete information that are relevant to aid others access such resources irrespective of innate format.

One of the popular innate format gaining grounds are those categorised as electronic resources with their digital object identifiers, links and retrieved dates. The electronic resources are usually abbreviated as “e-” (e with a dash) and a source format is added to distinguish the format. Common examples are e-books, e-journals, e-newspapers, e-magazines and e-monographs. Others are web pages, links, blogs, social networks, and web-based sources such as institutional repositories (IGI -Global Disseminators of Knowledge, 2017). These resources and sources are used and found in most academics and professional research output.

The focus on postgraduate terminal research output which consists of mainly theses and dissertations in the case of department of library and information science in Ahmadu Bello University, Zaria include mandatory, among the academic and professional qualification write-up-that research into societal problems to proffer solutions. Theses and dissertations are also expected to contain information of all cited sources used. The accomplishment of such task show rigorousness, transparency and commitment towards justification of research. To some extent, it is anticipated that the information sources included in the terminal research output in the approve documents also reflect supervisors and students dispositions towards the consciousness of other scholars contributions towards the transit of such knowledge.

The School of Postgraduate Studies of Ahmadu Bello University, Zaria was established in 1980 by Statutes 21 of the University Laws of the Federal Republic of Nigeria (Anonymous, 2011). Articles b and d of the statute establishing the School in parts states that the School is “to recommend for the provision of appropriate facilities for postgraduate works ...” (Article b, Okojie, 2016, p. 15), whereas Article “d” of the statute states that the School is “to promote the publication of results of postgraduate students” (Okojie, 2016, p. 16). The statute empowered the Postgraduate School to select a befitting reference style that can fulfil the objectives enshrined in articles “b” and “d”, respectively. The American Psychological Association (APA) citation style was adopted. Its selection may not be unconnected with the provision of a uniform standard distinguishing each section of the thesis made in a clear and consistent manner as well as ensures that sources are cited by standard guidelines.

The School of Postgraduate Studies has periodically revised her manual for the writing of project reports, theses and dissertations. In specific terms, Chapter four and Appendix V stated that referencing is a standard method of acknowledging sources of information and ideas in ways that uniquely identifies their sources. The manual citation of e-resources is reproduced from the APA (revised APA 2010) referencing guide and required that e-resources with digital object identifier (DOI) (link incorporated), URL (available from), database (type of database in parenthesis), download device (version), web sites, slides, podcast, streams and blogs should include the author (year) and title format, in addition, retrieval dates where the source material is likely to change over time (School of Postgraduate Studies, 2016).

Worthy to note is that, audiences are created within each research output, audiences in every thesis or dissertation consist of different environment, social, economic and scholars that constitute divide that should converge directly or indirectly shape the structure of these research output discourses. The discussions and calibrating extant audiences could follow a pyramidal or funnel thrust to judiciously buttress the positions, resolutions, suggestions and recommendations expected as the research output terminate. The weighted research output also target audiences to be served, therefore, include such reasons that make the student’s research output first to be approved by the student, the supervisory team, the department, faculty and the university who make pronouncements such as the research output is found to meet the conditions of the award of a postgraduate degree. These gamut of audiences speaks about the delicate, diligence and seriousness that postgraduate students terminal research output has on all when completed.

The position of this paper is not far from maintaining standards as perceived by librarians globally in all literally works subscribed and acquired for posterity use, but also to ensure that peculiar characteristics of the resources are authentic, contain every authority of the source and follow a currency patterning. Stressing basic criteria for characterisation of research output is perhaps to ensure that all documents that reach the public domains are substantially evaluable, organise and transmitted for common good.

Among the widely transmitted information resources from universities globally of huge local contents are the postgraduate research output. The output are disseminated majorly electronically through each institutional repository and other advanced databases. The quantity of these disseminated research output can just be imaginable. Therefore, at this juncture, considering electronic resources contribution to knowledge maze are manifold, first, to reduce the ambiguity of format used, sensitise and educate postgraduate students to pay diligent attention to reference styles, dictate reporting pattern and contribute with suggestions to the process of research writing. Secondly, to draw the attention of postgraduate students to understand that submitted terminal research output are records of posterity that should be able to go beyond writing just “another additional project mentality” to that that address societal challenge. Thirdly, to be just enough in addressing the issues of plagiarism and scholarship cheating. Lastly, emphasises that cited information sources is characteristically inclusive, not negotiable, perhaps because the cited works help others in the future to expand the context and content of a discourse.

Brief on the study area

The Department of Library and Information Science of Ahmadu Bello University, Zaria started in 1968. It is the second library school to be established in Nigeria and the first to offer the bachelor of Library Studies as its basic professional programme. The evolution of information profession into realm of information technology necessitated a change in nomenclature. The department was restructured and approved by the Faculty Board of Education, the University Senate and Nigeria University Commission in 1989 for the renaming of the department from Department of Library Studies to Department of Library and Information Science. The postgraduate programmes of the department are aimed at training for leadership, areas and categories of specialisation within the information industry, technology of information and communication. These postgraduate programmes were mounted at different times to respond to

leadership needs, industry, technology and institutional needs. They comprised postgraduate diploma in information management (PGDIM) commences during the 2004/2005 session, Master of Information Science (MIS) commences during the 2008/2009 session, Master of Library Science (MLS) commences during the 1975/1976 session, Master of Archives and Record Management (MARM) commences during the 2008/2009 session, and Master of Information Management (MIM) commences during the 2007/2008 session (Anonymous, 2014). Terminal degree, Ph.D is also offered by the department for the highest calibre of leadership in the information industry and the information profession (Anonymous, 2012).

Statement of problem

The attraction of postgraduate terminal research output to electronic and print information resources have increased over the years with the support and facilitation of the internet. The internet has made access to junks of diverse formats possible globally. Aware of this, tertiary institutions spend huge amount of money to subscribe to electronic information resources that are core or prerequisite to accredited courses. Obviously, following etiquette of research generally is not negotiable. Properly and adequately citing resources have been made possible by following the prescribed reference styles approved by an institution. A thrust of the postgraduate students from library and information science has become necessary due to student ready to qualify and serve as educators and/or professionals who should guide others on research ethics, particularly the delicate parts – citations and referencing. But, with the notion that “you cannot give what you don’t have” the paper set out to determine the extent by which postgraduate in the Department of Library and Information Science, Ahmadu Bello University, Zaria follow the guides prescribed by the postgraduate school within the span of five years (2014 – 2018).

Objectives of the study

The general objective of the study is to ascertain the extent of e-resources utilisation in postgraduate research output (theses) of the Department of Library and Information Science. The specific objectives are:

1. To ascertain the number of endorsed postgraduate research output (theses) in the Department of Library and Information Science, Ahmadu Bello University, Zaria from 2014 - 2018

2. To determine the prevalent types of e-resources cited in postgraduate theses of the Department of Library and Information Science, Ahmadu Bello University, Zaria from 2014 – 2018
3. To find out the reference style in postgraduate research output (theses) of the Department of Library and Information Science, Ahmadu Bello University, Zaria from 2014 - 2018

Literature Review

Postgraduate programmes endorsed in Universities

Postgraduate programmes in universities are strategically positioned to deliver improved and efficient knowledge to students, and the quality of research they produce (Daramola, 2016). According to Okojie (2016) postgraduate programmes are tied to learning and “studying for academic or professional certificates, diplomas or other qualifications for which a first or Bachelor degree is required” (p. 12). Postgraduate programmes are expected to address specific issues and finding viable solutions particularly of national context and/or wider globalised society. In Nigeria the role of postgraduate programmes according to Revised National Policy on Education Document (2013):

“Particular attention shall be paid to research and promotion of indigenous knowledge in Nigeria. In this regard, universities shall be encouraged to collaborate with government, industries and the global community in the conduct of research and dissemination of the results” (Section 5 paragraph 88).

Postgraduate programmes commenced in Nigeria starting with the three first generation universities at different times, in University of Ibadan (1952), University of Nigeria, Nsukka (1964), and Ahmadu Bello University (1980), respectively. The number of approved postgraduate programmes also varies with 96 for University of Ibadan, 168 for University of Nigeria, Nsukka, and 74 for Ahmadu Bello University. These programmes lead to the award of PGD/Masters/PhD. There is multiplicity of postgraduate diploma and masters in Nigerian universities (Abba, 2016). Postgraduate programmes terminate with the *viva voce*, certification of corrections and clearance (Shehu, 2016).

The quality of postgraduate supervision has come under severe criticism (Olibie et al, 2015), failure in completing theses (Umar et al., 2014), and plagiarism (Uya, 2012). Theses submitted mirrors the extent of mind built during postgraduate programme training and the

resulting understanding of global research view of a student. This is to say that, theses and dissertations depict abilities and competencies of postgraduate student to translate research into practice. In addition, it is a responsive platform to inculcate the right research values and attitude that can sustain the survival of scholarship as it influence the individual and society whose problems the student suggest resolution through a standard developed methodologies. Therefore, theses and dissertations avails student and supervisory team the atmosphere of intellectual independence and creativity for purposeful research initiation and execution. Theses in other words, show the depth and command of intellectual synthesis, chronology and their basic principles and ability to apply such principles in a distinguishable area of specialisation (Abba, 2016).

There is no gain saying that theses of postgraduate programmes in the Department of Library and Information Science, Ahmadu Bello University, Zaria do not comply with standards. The department ensures that assessment of thesis is done by panel of examiners (internal and external) who are responsible for reading the thesis and subsequent grading in conjunction with the rules and regulations of the Postgraduate school on theses and dissertations. Undoubtedly, the quality of theses reflects the types of relationship between supervisor(s) and supervisee, it also show response and extent of inclusion of diverse sources of information used during the course and extent by which supervisory team direct to sources of information as they pay diligent attention to bridge research gaps, be the gap evidence, knowledge, methodology, empirical, theoretical, population, or practical-knowledge. These bridges are also contains in diverse literature reviews which aims include espousing what previously exist and opportunities that the new knowledge avails in conclusions reached. Therefore, supervisors' capacity to guide supervisees first lies with awareness they create towards diverse resources that libraries make accessible and available. Whenever, the students and supervisor(s) do not take advantage of libraries, undue wastages of time, funds and converging of ideas occur. The concern by Mohammed (2018) insist that supervisors and supervisees are major stakeholders that can commensurate the huge sum of funds expended yearly to either renew or subscribe licenses of electronic resources particularly for use of admitted postgraduate students in universities.

Types of e-resources and their contributions to research

The contributions of e-resources go beyond the delivery of new digital information resources because it has enlarged the coast of knowledge dispersion and remain one of the major support to globalisation. The extent of use of e-resources could guarantee possibilities and opportunities that no doubt bridge knowledge gaps. As sources of information, electronic resources exist in formats that are distinguishable for example electronic conference which are called by different names such as electronic conference which are also called by different names such as electronic forum, user group, listservs, and discussion groups. These are important resources for researchers and scholars in every discipline (Natarajan, 2011). Electronic journals are prepared and distributed using different file transfer protocols sites (Johnson et al., 2012). Preprint and e-print are research articles made accessible and distributed through network in electronic format before they go through the process of peer reviewing facilitated by technology (Sudhir & Seethalekshmi, 2011). Science and research news are important sources of electronic information for scientist and technologist that reveal recent development (Gohain, 2009). Technical reports are also in electronic format that are scientific paper or article that provides a detailed account of work done on a particular project by research workers and submitted to employer and/or funding agency. They are prepared for internal or wider distribution and contribute to knowledge (Srivastava, & Pani, 2012). Electronic theses and dissertation are sources of information and requirements for the award of postgraduate degrees because they constitute different and useful source of information for new and on-going research. Theses contain original contribution to knowledge and to a large extent are accessed electronically from university portals (Swain, 2010).

The transformation experienced today by the permeation of electronic platforms also avails use of specific citation databases which serve as reference tools for the identification of documents and ranking of sources (Rexha, Kröll, Zlak & Kern, 2018). Digital collections such as images, audio, video and text contribute sources for research and other literary purposes (The University of Adelaide, 2014). Therefore, in specific terms, the contributions of e-resources are broad because it includes large quantity of useable information sources. E-resources support remote access, dictated by bandwidth speed, has simple syntax that shows linkages, cost effective after installation and existing in numerous formats, and accessible via supporting electronic platforms. It is nevertheless expensive at the initial stage due to huge financial investment needs, it is also influenced by social differences and constrained by obsolescence and compatibility of evolving technologies (Adeleke & Nwalo, 2017).

Reference styles

Reference styles are standardise descriptors of identifiable elements in literary works, and when a bibliographic style is adhered with, it resolves problems of copyright and other ills to scholarship etiquettes. One of the consistent process and support derived for adopting a bibliographic style is for the purpose of citation. That is, to give credit to the creative and intellectual works done by others that were utilized to complete the academic work. There are numerous bibliographic styles that have been used for many decades; new ones are cropping up yearly to address the deficiencies observed in others. The five prominent styles ranked by their order of use globally are MLA (56.1%), APA (20.5%), and Chicago (11.8%) (Swaen, 2019). The frequencies were arrived at considering the number of universities which prescribed for the use of single style across all departments. According to Swaen (2019), there are two main aspects that make bibliographic styles to differ from each other, the first is the in-text citation, and the second reason is the ways the reference list is entered. The in-text citation of each of the styles specifically guides how cited sources in the text and made, and the reference list entries gives the order and format which publications for each source listed.

It is imperative to state here that the two differences do not in any ways compromise full publication information of the resources used, it ensures the facilitation, access and retrieval of the cited resource by others. For in-text citation, the common components enlisted include author, title, and date and publication information. Generally, in-text citations either follow any of the following three patterns; parenthetical citation, note citation and numeric citation. The parenthetical citation requires the inclusion of author(s) with publication date and/or the page number. The note citation requires that the source reference be in a footnote or endnote and the numeric citation requires that sources in the reference used be numbered correctly to a cite source. Examples, MLA requires that citation be parenthetical with author-page number. APA approves parenthetical citation with author-date. Turabian approves notes or authors date, however, Harvard citations are parenthetical with author-date. Vancouver, IEEE, and AMA are numeric, whereas ACS combines numeric, author page number or notes when making in-text citations. The in-text citation application also vary from discipline to discipline, for instance, MLA citation style is common in the field of humanities. APA citation style is common in psychology, education, social science. Turabian citation style is found in the field of humanity, social sciences, science. Harvard

style of citation are common in Economics, Vancouver is style found in the fields of medicine. IEEE style is used by engineering, IT fields, and ACS citation style is dominant in the field of chemistry (Swaen, 2019).

The second area that distinguished reference styles is the reference listing. The list has unique names as titles for its reference list. It is called reference page in APA (Seligman, & Mitchell, 2021), works cited in MLA, and Chicago are not left out. Also peculiar to the list name are the ways information entry are formatted to reflect the type of source. Most of these styles provided guidelines for the categorization themes, sections and coding. In scholarly works such as thesis this styles influence cover page, titles, fonts, headings, margins, spacing, numbering and abbreviations. Essentially, the familiarity with the bibliographic styles is to present reference lists that correspond with in-text citations in a clear, consistent, easily traceable and readable list. This means that reference list precedes in-text citation and gives the composition of necessary information, following an order of arrangement, punctuation and taking cognisance of source format.

Adequacies of e-resources in bibliography composition of postgraduate theses

Bala and Mittal (2013) itemised e-resources to comprise, e-thesis, e-book, e-papers, e-journals, bibliographic or full text databases. These diverse resources that are accessible via media supporting technologies have changed the composition of resources used in the course of theses by postgraduate students. Postgraduate schools encourage theses to include information from numerous environments, social, economic and political spheres with their diverse format consulted to buttress scholastic positions, resolutions, suggestions and recommendations. The capacity of including diverse e-resources in a postgraduate thesis is highly welcomed when is traceable to the source. Sampath Kumar and Kumar (2010) buttressing on the use of e-resources reported that one third of students utilised the resources for project work in the field of engineering, media, and management studies.

The use of electronic resources have curbed challenges such as catering for multiple users of a particular information resources at the same time and in the different locations. The attributes can be said to cause the transformation recorded and form part of what necessitate acquisition of print and non-print resources in academic libraries. The adequacies of e-resources instituted the emergence of electronic information resources and services (EIRS). The EIRS has helped to

address storage problems, and control of overflow of information within the boundaries of research, ministries, industrial and academic institutions. According to Bailey and LaCalle (2016) e-resources use in research has become the norm in the 21st Century. Publishers are also including e-resources in their diverse formats. Tariq and Zia (2014) reported the use of electronic information resources by students of faculty of science in university of Karachi and found that websites resources contributed most in terms of use (86.96%), e-books (34.78%) and e-prints (30.87%) followed, respectively. In private universities, the use of e-resources was found to contribute when necessary and it is compulsory for the purpose of research in Bangladesh (Mostafa, 2013). In Nigeria, Egberongbe (2011) recounted the use and impact at the University of Lagos to be frequently use. The study of Okiki and Ashiru (2011) on postgraduate students in Nigeria reported that these categories of students are motivated to use e-resources for research and thesis. The extent of use of e-resources was found to be low in India (Natarajan et al., 2008)

Methodology

The study adopted the ex-post facto method to collect data from the approved and attested postgraduate theses from the School of Postgraduate Studies of the University. The theses are those of the Department of Library and Information Science, Ahmadu Bello University, Zaria from 2014 – 2018. The Departmental database facilitated the study with a comprehensive list of postgraduate theses approved during the period, in addition, the physical theses were accessed and retrieved at the Professor Abdullahi Mohammed Public Library, Samaru, a satellite library of the Ahmadu Bello University Library Complex that is also responsible for the custody of these theses.

The research leveraged on quantitative method and *Ex post facto* as the research design to ensure that data collection were not manipulated and reported the ways they occur (Creswell, 2014), and to serve as mirror while relating directly with the theses reference list (Hammond & Wellington, 2013). Descriptive and inferential statistics were utilised for the analysis of data collected from the reference list of all the theses that met the criteria for their selection. Therefore, to avoid bias stratified random sampling was adopted as sampling technique to draw sample size that is justifiably representing the postgraduate programmes of the LIS department under the purview of the School of Postgraduate Studies.

The choice of stratified random sampling method is because it is superior to other sampling technique. Particularly in this case it can help reduce sampling error (Westfall, Patterson, &

Coulston, 2011; Ibrahim, 2013). In the course of collation of data, the postgraduate programmes maintained their sub-group, and from it the number of endorsed theses were drawn using proportional representations of 60% from each programme for each year for the period of the study to help the paper make generalisation. The check list that guide data collection is specifically drawn from the school of postgraduate studies guidelines for the preparation and writing of theses and dissertations. The source of data was all the reference list of endorsed theses. The checklist facilitated identification of sources such as journal names (titles), books, special reports and proceedings are italicised. Only e-resources with digital object identifier (DOI), and universal resource locator (URL) that leads to where to obtain the resources (the paper considered home or index page) are consider, without are considered as others.

Results and Discussion

Table 1: Postgraduate theses endorsed in the Department of Library and Information Science, Ahmadu Bello University, Zaria from 2014 – 2018

Postgraduate programmes	Spread of endorsed postgraduate theses					Total
	2014	2015	2016	2017	2018	
MARM	5 (3)*	5 (3)	5 (3)	6 (4)	6 (4)	27 (17)
MIM	101 (60)	110 (66)	150 (90)	160 (96)	175 (105)	696 (417)
MIS	4 (2)	4 (2)	5 (3)	6 (4)	6 (4)	25 (15)
MLS	18 (11)	25 (15)	25 (15)	30 (18)	30 (18)	128 (77)
PGIM	35 (21)	35 (21)	38 (23)	39 (23)	40 (24)	187 (112)
Total	163 (97)	179 (107)	223 (134)	241 (145)	257(155)	1063 (638)

Source: Field survey, 2019

*Figures in parenthesis are approximates of computed proportion of the 60% distribution of theses from each postgraduate programme in the Department of Library and Information Science from 2014 to 2018 that were used for generalisation.

Table 1 revealed that from 2014 to 2018 a total of 1063 theses were endorsed by the Department of Library and Information Science for the four programmes assessed. The table gave the distribution of year by year breakdown. The approximate proportion of 60% was recorded for each year and the sampled drawn for analysis totalled 638. For MARM a total of 17 theses were selected, 417 for MIM, 15 for MIS, 77 for MLS and 112 for PGIM. These sources contribute to the data collection on year-wise distribution. The data collected show that year 2018 had the highest number of theses endorsed with 257 whose 60% equals 155. In 2017 a total of 241 theses were endorsed and 145 of the endorsed theses used for data collection. For 2016, 223(134), 2015, 179(107), and 2014, 163(97) representing the endorsed theses and sources for data collection in

the parenthesis, respectively. The pattern of distribution was consistent with yearly intake of postgraduate students into professional and academic programmes. The pattern was justified by Okojie (2016) position that postgraduate programmes are tied to learning, and obtaining academic or professional certificates at the end of the postgraduate programme.

The programme with the largest number of postgraduate students admitted was MIM with 696 students represented by 417 endorsed source of the study data collection, however, the programme with the least number of students was MIS with 25 students, represented by 15 endorsed sources of data collection. These students can be inferred in the words of Daramola (2016) as persons found admissible and be delivered improved knowledge that can make them produced quality of research as by-product. The higher admission into the LIS programme could be argued to be response to information industries, technology of information and communication which these programmes offer in the case of MIM, other programmes particularly MARM, MLS and MIS serve the needs of career development in the field of LIS.

This corroborate the position of Anonymous (2012) who averred that the department thrust of introducing the programmes and tailored for training and industrial needs include justification for the programmes strength, opportunities and roles in the information spaces globally. For instance, MIM which had the highest number of endorsed theses commenced during the 2007/2008 session, its appeal is overwhelming as observed from the table for every succeeding year. The appeal comes from two front, the first because it is a part-time programme, and second because it serve industries needs particularly the private sectors whose require depth and command of intellectual synthesis.

Table 2: Prevalent types of e-resources cited and categorised cited resources in postgraduate theses of the Department of Library and Information Science, Ahmadu Bello University, Zaria from 2014 – 2018

Types of e-resources	Quantification of e-resources					Total	%
	2014	2015	2016	2017	2018		
Books	152	192	203	194	326	1067	15.06
Journals	265	452	486	452	1017	2672	37.72
Links	132	150	154	150	205	791	11.17
Social networks	156	325	211	203	344	1239	17.49
Web pages	170	234	246	235	430	1315	18.56
Total	875	1353	1300	1234	2322	7084	100
Categorised cited print and e-resources							
Print resources	5146	5676	7109	7692	8223	33,846	82.69
E-resources	1077	1188	1487	1611	1721	7,084	17.31

Total	6223	6864	8596	9303	9944	40,930	100
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Source: Field survey, 2019

Table 2 gives the breakdown of the e-electronic resources cited in the endorsed postgraduate theses according to types of e-resources and distributions yearly. In 2014, a total of 875 were cited, these numbers was least when compared to 2018 with 2322, 2015 with 1353, 2016 with 1300, and 2017 with 1234 e-resources citations, respectively. The results revealed that e-journals were the most cited (2672, 37.72%), followed by web pages (1315, 18.56%), the least cited sources of electronic resources was links (791, 11.17%).

For the categorised cited resources, cumulated e-electronic and print resources of 40,930 cited in a total of 638 postgraduate theses endorsed in the DLIS of Ahmadu Bello University, Zaria from 2014 to 2018 comprised of 33,846 print resources and 7,084 e-resources. By simple percentage, the print resources constituted 82.69% of the total resources cited, whereas the e-resources constituted 17.31% cited resources, respectively. These data indicated that students at the postgraduate levels cite more of the print-based resources than the e-resources. This was surprising because despite availability and access to e-resources via the university library web-page and spaces provided by the library to facilitate postgraduate studies, citations of e-resources were remarkably not reflected before the creations of such spaces as observed in dated works. It is therefore perturbing that 17.31% represented cited e-resources, which is very low and can be scored very poor for the huge investments the department, library and university expended over the same period on e-resources subscription and acquisition.

This result question the balancing of information resources cited in postgraduate research output generally. According to Abba (2016) this could be blamed on both the student (front line operators) and supervisor(s) (back strategic guides) who both needs to synthesise the implications of such poor outing, chronology and ability to apply extant researches in distinguishable manner when bridging scholarship gaps as well as audiences. Worthy also to note is that poor inclusion of diverse information resources in research output does not condemns a research, but may question the quality of supervision. This position was also shared by Olibie and colleagues in 2015. On cost benefit ratio, Mohammed (2018) recounts losses to huge sum of funds expended yearly to either renew or subscribe licenses of electronic resources when not commensurate with citation by stakeholders of the university expending such huge funds.

Table 3: Reference styles in postgraduate theses of the Department of Library and Information Science, Ahmadu Bello University, Zaria from 2014 - 2018

Reference styles	Reference style prominence					Total	%
	2014	2015	2016	2017	2018		
APA	2788	3075	3851	4168	4455	18337	44.80
Chicago	1164	1284	1607	1740	1860	7655	18.70
Harvard	1861	2052	2570	2782	2973	12238	29.90
MLA	59	65	81	87	94	386	0.94%
Vancouver	348	384	481	521	557	2291	5.60
Others	3	4	6	5	5	23	0.06
Total	6223	6864	8596	9303	9944	40930	100

Source: Field survey, 2019

Table 3 shows inconsistencies observed with the compliance of postgraduate theses to the guidelines for the preparation and writing of project reports, theses and dissertation of the school of postgraduate studies. APA format is the approved style that should be complied with fully this can inform why it had the highest scores of 44.80% (18,337), others scores for Harvard (12238, 29.90%), Chicago (7655, 18.70%), Vancouver (2291, 5.60%), and MLA (386, 0.94%). Others (23, 0.06%) follow within incomplete description. Reasons advanced for theses to possess reference style include consistency with the style provided by the university. The results revealed, yet less than 50% ascribed to APA question the consistency of the style amongst the postgraduate theses analysed. It could point to dearth information and awareness levels of the entire format. For instance, the MLA global popularity with 56.1% score in Swaen (2019) study clearly justify some level of ignorance among the postgraduate students on the matter of the approved reference style. It could be presumed that it is most likely to replicate in other publications disseminated by the students.

The author date patterning that characterised most of citations and in the case of APA and Harvard distinguished by the parenthesis ascribing the date in APA and left bared for Harvard also have “pp” just after the periodic number after periodic volume further distinguish APA (which do not have the “pp”) compared with Harvard that has. It is obvious that postgraduate students could be quite careless of provisions which could be responsible for misconceiving Harvard reference style for APA. Chicago with the distance third in terms of frequency of use is far off, perhaps because the date pattern comes at almost the end in parenthesis followed by a column and the page(s) covered. It could be summarised that if progress and maintenance of APA reference style in the in-text citations and reference list is to be achieved, then postgraduate students during

courses should be taught why it is necessary to address misappropriate use of punctuations particularly full stops, comma and use of colons as well as use of ampersands in multiple authored publications.

Conclusion

The Department of Library and Information Science, Ahmadu Bello University, Zaria has expanded in terms of postgraduate programmes and over the years has been able to prescribed the inclusion of diverse information resources in the terminal reports of postgraduate students' research output. The conduct of these students is guided, so that the number of students admitted, in-text and reference list, and there is balance among the diverse information resources used in the terminal reports. The prescription by the postgraduate school for students of the LIS department to use the American Psychological Association referencing style supports them in the selection from print and electronic information resources while conducting research writing. It is evident that there are large volumes of endorsed postgraduate research outputs, prevalent types of electronic resources cited in these research output and reference styles used by postgraduate students in the respective years scoped by the paper.

Recommendations

Based on the findings, the following recommendations are proffered:

1. Master of Archives and Record Management (MARM), and Master of Information Science (MIS), the two postgraduate programmes with the least number of specialists. It is recommended that these programmes are repackaged to respond to the needs of the information industries beyond the initial career development in the fields of LIS to that of new opportunities and roles of such graduates globally.
2. With huge funds expended on the subscription of electronic databases, the characterisation of such information resources as well as digital spaces provided by the university, the expectation was that there should be appreciable use of electronic resources in the terminal research output. This was not the case, it is therefore recommended that exposing these students through teaching and learning of these diverse, rich, viable and accessible resources is greatly inevitable to be able to balance the synthesised ideas from diverse resources formats that may have targeted audiences and sources promotions.

3. With less than 50% conformity of postgraduate students in LIS to the prescribed referencing style in their respective terminal reports calls for concern. It is recommended that supervisory committee members pay diligent attention to the use of APA for both the in-text citations and reference list for complete, consistent, vindication and verification of utilised information resources during the building of terminal research output. This is necessary to promote and institute ethical standards beyond the postgraduate terminal reports.

References

- Abba, A. (2016). Requirements for postgraduate training in Nigerian universities. Shehu U. R. Aliyu (ed.). In: *Imperatives of Advancing Postgraduate Education in Nigeria*. Held at Muhammad Sanusi II ICT centre, Al-Qalam University, Katsina. Zaria: Ahmadu Bello University Press Ltd., pp. 59 – 80.
- Adeleke, D. S. & Nwalo, K. I. N. (2017). Availability, use and constraints to use of electronic information resources by postgraduate students at the University of Ibadan, *International Journal of Knowledge Content Development & Technology*, 7(4), 51 – 69.
- Anomynous (2012). Department of Library and Information Science. In: *2011 – 2014 Calendar*, Ahmadu Bello University Zaria, Nigeria @ 50. Zaria: ABUP, pp.418 – 433.
- Anonymous (2011). Postgraduate student's handbook (2011 – 2013). School of Postgraduate studies, Ahmadu Bello University, Zaria. Zaria::ABUP, pp. 80 – 82.
- Anonymous (2014). Undergraduate students handbook: 2014-2017. Department of Library and Information Science, Ahmadu Bello University, Zaria, p. 8 – 9.
- Bailey, J. & LaCalle, M. (2016). State of the WARC: Our digital preservation survey results. "Archive-It", 5th January. Available at: <https://archive-it.org/blog/post/state-of-the-warc-our-digitalpreservation-survey-results/> [Accessed 7th October, 2019].
- Bala, M., & Mittal, D. P. (2013). A study of various types of e-resources used by research scholars. *IJRCCT*, 2(2), 146-150.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE, Thousand Oaks, 4th edition.
- Dadzie, P. S. (2005). Electronic resources: access and usage at Ashesi University College. *Campus-Wide Information Systems*, 22(5), 290-297.
- Daramola, A. G. (2016). Imperatives of advancing postgraduate education in Nigeria. Opening speech by the chairman, Association of Vice-Chancellors of Nigerian Universities. Shehu U. R. Aliyu (ed.). In: *Imperatives of Advancing Postgraduate Education in Nigeria*. Held at Muhammad Sanusi II ICT centre, Al-Qalam University, Katsina. Zaria: Ahmadu Bello University Press Ltd., pp. 8 – 10.
- Egberongbe, H. S. (2011). The use and impact of electronic resources at the university of Lagos. *Library Philosophy and Practice* (e-journal). Retrieved on 27th February 2014 from <http://digitalcommons.unl.edu/libphilprac/472>.
- Global Disseminators of Knowledge (IGI) (2017). [www.igi-global.com/digital Resources/7695](http://www.igi-global.com/digital-Resources/7695). [Accessed 7th October, 2019]
- Gohain, R. R. (2009). Use, evaluation and management of electronic resources at Central Library, Tezpur University: a study. Unpublished M Philn Dissertation, Mizoram University, Aizawl.

- Hammond, M. & Wellington, J. (2013). *Research methods: The key concepts*. Routledge, Abingdon.
- Johnson, S., Evensen, O., Gelfand, J., Lammers, G., Sipe, L., & Zilper, N. (2012). Key Issues for e-Resource Collection Development: A Guide for Libraries (p. 3). Hague, Netherlands: International Federation of Library Associations and Institutions Acquisition and Collection Development Section. Retrieved from <http://www.ifla.org/files/assets/acquisition-collectiondevelopment/publications/electronic-resource-guide-2012.pdf>
- Mostafa, S. M. (2013). Use and impact of e-resources at some selected private universities in Bangladesh. *Research Journal of Library Sciences*, 1 (1), 10-13.
- Natarajan, M. (2011). Exploring the e-resources for educational use. *International Journal of Information Dissemination and technology*, 1(4), 193 – 196.
- Okello-Obura, C., & Magara, E. (2008). Electronic information access and utilization by Makerere University students in Uganda. *Evidence Based Library and Information Practice*, 3(3), 39-56.
- Okiki, O. C. & Asiru, S. M. (2011). Use of electronic information sources by postgraduate students in Nigeria: influencing factors. *Library philosophy and practice* (e-journal). Retrieved on 27th September 2019 from <http://digitalcommons.unl.edu/libphilprac/500>.
- Okojie, J. A. (2016). Postgraduate education in Nigeria: Past, present and future. Keynote address presented at a 3-day workshop. Shehu U. R. Aliyu (ed.). In: *Imperatives of Advancing Postgraduate Education in Nigeria*. Held at Muhammad Sanusi II ICT centre, Al-Qalam University, Katsina. Zaria: Ahmadu Bello University Press Ltd., pp. 11-35.
- Olibie, E. I., Agu, N. N., & Uzoechina, G. O. (2015). Characteristics of postgraduate education research mentoring in universities in Nigeria: Curricular enhancement strategies. *Journal of Curriculum and Teaching* 4(1), 156 – 166.
- Olorunsola, R. & Adeleke, A. (2011). Electronic journals in Nigerian university libraries: The present situation and future possibilities. *Library Review*, 60(7), 588-598. DOI:<http://dx.doi.org/10.1108/00242531111153605>
- Sampath Kumar, B. T. & Kumar, G. (2010). Perception and usage of e-resources and the internet by Indian academics. *The Electronic Library*, 28, 137 – 156. DOI: 10.1108/02640471011023432.
- Seligman, R. A., & Mitchell, L. A. (2021). Writing an Introduction/Literature Review and Reference Page. *The Student Survival Guide for Research Methods in Psychology*, 69-75.
- School of Postgraduate Studies (2016). Revised guidelines for the preparation and writing of project reports, theses and dissertations. Ahmadu Bello University, Zaria: ABUP, pp. 18-20, 30 – 60.
- Srivastava, M. & Pani, S. R. D. (2012). Quality education through open educational resources: A new direction for Open Universities. *University News*, 50 (16), 8-13.
- Sudhir, K. G. & Seethalekshmi, K. P. (2011). Use of e-resources by the students and researchers of Faculty of Arts, University of Kerala. *International Journal of Information Dissemination and Technology*, 1(3), 120-127
- Swain, D. (2010). Global adoption of electronic theses and dissertations. *Library Philosophy and Practice*, 1-5. Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1426&context=libphilprac>
- Tariq, H., & Zia, M. W. (2014). Use of electronic information resources by the students of Faculty of Science, University of Kirachi. *International Journal of Digital Library Services*, 4(3), 80 – 91.

- Umar, A., Nfon, N. A. M., & Abdullahi, M. (2014). Challenges confronting African students in Malaysia: A case of postgraduate Nigerian students at International Islamic University Malaysia (IIUM), Kuala Lumpur. *Journal of African Studies and Development*, 6(a), 161 – 168.
- Uya, O. E. (2012). Research and university culture. Imbua, D., Akpan, O., Amadi, I. and Ochefu, Y. (eds.). In: *History, culture, diasporas and nation building: The collected works of Okon Edet Uya*. Arbi press, pp. 635 – 647.
- Westfall, J. A., Patterson, P. L., & Coulston, J. W. (2011). Post-stratified estimation: Within-strata and total sample size recommendation. *Canadian Journal of Forestry Research*, 41, 1130 – 1139. DOI:10.1139/X11-031.