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Title: A Bibliometric Study of MPhil Theses at The Department of Information Studies, University of Ghana (2000 – 2018)

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Abstract

It is evident from literature that bibliometric analysis and application of citation indexes have been established as far back as the 18th century. It is a major tool employed to evaluate the performance and also measure the impact of scientific publications. This study presents a bibliometric analysis of the MPhil theses accepted at the Department of Information Studies (DIS) of the University of Ghana for the period between 2000 to 2018. Through the use of the DIS library catalogue, the study retrieved 101 accepted theses and these theses served as the source documents for the study. Bibliometric analysis method was employed to study in detail the bibliographic features of the MPhil thesis. The study revealed that students heavily relied on scientific journal articles for their research. Again, the findings of the study established disparity in students' research outputs in the two subject fields of the DIS – library and archival studies. The study recommends the need for the DIS to put measures in place to increase students' interest in conducting research in the field of archival studies.

Keywords: Analysis, Bibliometric, Bibliography, Citation, Supervisors, Thesis.

Introduction

Bibliometric methods have been used in different forms for over a century (Pritchard & Wittig, 1981). Bibliometrics as a discipline looks into the use of statistical and mathematical methods to academic materials (Pritchard, 1996). This subject involves the statistical analysis of a group of documents characterised by bibliographic variables like authors, places of publication, subject keywords, citations, among others (Thanuskodi, 2011). A widely used technique in bibliometrics is the citation analysis that employs citation patterns in documents to draw the relationships that exist between the documents and the original sources. As opined by Folkers (2013)

Citation analysis, which involves examining an item's referring documents, is used in searching for materials and analyzing their merit. Citation indices, such as Institute for Scientific Information's Web of Science, allow users to search forward in time from a known article to more recent publications which cite the known item...Other bibliometrics applications include: creating thesauri; measuring term frequencies; as metrics in scientometric analysis, exploring grammatical and syntactical structures of texts; measuring usage by readers (p.1).

Historically, bibliometric methods were used primarily to trace relationships between academic journal citations, but they are now further employed in exercises on quantitative research assessment (Henderson, Shurville and Fernstrom, 2009). The methods of bibliometrics informetrics, and scientometrics are seen as closely related fields (Hood and Wilson 2001). To Brookes (1990), informetrics is a general term and while scientometrics leans to policy studies, bibliometrics concedes more to library studies.

The importance of bibliometrics cannot be overemphasized since publication and citation measurements are increasingly being regarded as performance indicators in relation to the quality of the research of an individual or institution. For example, citation links have been found to provide a quantitative picture of journal usefulness and relationships that guide their subscriptions or usage (Garfield, 1979). Particularly, bibliometrics presents the real reflection of the impact of published works and are now commonly employed by information professionals and information users to determine what titles to acquire (Smith, 1981).

Need for the study

The use of bibliometric analysis brings to light the citation patterns as well as the various types of information resources employed by scholars in a field of study. Obviously, knowing the productivity and usability of information resources of a particular field help in the planning and provision of resources to meet the needs of the users. Bibliometric studies through the use of postgraduate theses have been carried out in various countries in different subjects. In Ghana, there seems to be paucity of literature on bibliometric analysis and it is needful to look into the gap this situation presents.

Several research studies have been carried out at the Information Studies Department of the University of Ghana since its establishment in the year 1961 and the benefits of conducting bibliometric analysis on them cannot be over-emphasised. Fosu and Alemna (2006) did an analytical study but their focus was not on bibliometrics on the entire works from the department within their specified years but “dissertations relating to the Balme Library, University of Ghana, from 1998-2005, were selected from the Department of Information Studies and the Balme Library” (p. 73). Sam and Tackie also conducted similar studies on Master of Arts (M.A.) dissertations from 1998-2004. None of the mentioned studies looked into the Master of Philosophy (MPhil) and it is therefore important to conduct bibliometric analysis of these theses so as to determine the bibliometric features, citation trends and research areas that are of interest to students. This would help the department to plan and prepare both material and human resources needed to meet MPhil students’ research needs.

Aim and objectives of the study

The aim of the study was to conduct a bibliometric analysis of all Master of Philosophy thesis submitted by the students of the Department of Information Studies (DIS), University of Ghana (UG) to the department from the year 2000 to 2018. The following objectives enabled the study to achieve its aim:

RO1: Analysing the authorship patterns of MPhil thesis accepted by the DIS from 2000 to 2018.

RO2: Studying the supervision patterns of MPhil thesis accepted during the period of study.

RO3: Examining study settings and length of MPhil thesis accepted during the period of study.

RO4: Identifying the frequency of forms and year-wise distribution of cited documents.

Methodology

The methodology employed in this study was bibliometric analysis. This method was used to study in detail the bibliographic features of the MPhil thesis accepted at the Department of Information Studies of the University of Ghana from 2000 to 2018. The Department of Information Studies Library keeps copies of all dissertations and thesis submitted to the department. For this study, MPhil theses submitted to the library within the study period were considered as source documents.

Since all the theses had been accessioned, classified and catalogued by the DIS library staff, the study used the library's catalogue to retrieve the documents. Bibliometric data were extracted from the source documents and the resulting data were then analysed through the use of the Statistical Package for the Social Sciences (SPSS).

Literature review

Historical overview of bibliometrics

Bibliometric analysis and application of citation indexes have been established as far back as the 18th century due to publication analysis that have been found in legal works since at least 1817. This notwithstanding, Weinberg (1997) analysed and ascertained that the Hebrew scholars developed and used citation indexes in their courts and publications even earlier, dating from about the 12th century. These obviously depicts earlier legal precedents of bibliometrics which seems to have been overlooked by information science historians (Shapiro, 1992).

The term 'bibliometrics' was proposed by Alan Pritchard and thus, the devising of the term 'bibliometrics' is mostly credited to him. He coined the term 'bibliometrics' to substitute the somewhat ambiguous and rarely used term of 'statistical bibliography' (Pritchard, 1969), Wilson (1995) however, maintains that the term 'bibliometrics' has a French precedent stemming from the term 'bibliometrie'. To corroborate Wilson's assertion, it has been found that a French scholar, Otlet (1934) had previously used the term 'bibliometrie' for similar analysis.

The historical foundation and development of bibliometrics is rooted in statistics and bibliography and statistical analysis of bibliography is noted to pay particular care to the development of the laws and procedures in bibliometrics (Hertz, 1987). Notwithstanding the historical developments of bibliometrics, Sengupta (1992) asserts that Campbell (1896) is the first to produce bibliometric study through the application of statistical methods towards the study of subject dispersion in publications.

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Conceptualisation of bibliometrics

Brookes (1990, p. 42) maintains that bibliometrics must be conceded to Library and Information Studies only since its work is yet to end as libraries continue to acclimatise to the “changing world around them...bibliometrics itself needs the continued interest of outside experts, statisticians and others, in developing and refining its techniques”. Bibliometrics, which is sometimes interchanged with the term ‘scientometrics’ is a “research technique in library and information science that applies quantitative analysis and statistics to describe publication patterns in any field of knowledge” (Agyeman and Bilson, 2015 p. 2),

It is important to note that bibliometrics and scientometrics differ especially in scope, although, both terms are sometimes employed by some scholars interchangeably. While ‘bibliometrics’ employ quantitative or statistical analysis on literature irrespective of field of study, ‘scientometrics’ is the quantitative study of science and technology (Wilson, 1995). As opined by White and McCain (1989, p. 119), bibliometrics is the “quantitative study of literatures as they are reflected in bibliographies. Its task, immodestly enough, is to provide evolutionary models of science, technology, and scholarship”.

This attests to the fact that bibliometrics is about “the quantitative study of physical published units, or of bibliographic units, or of surrogates of either” (Broadus, 1987 p. 376). Pritchard (1969), in his quest to conceptualise ‘bibliometrics’ asserted that:

“to shed light on the processes of written communication and of the nature and course of development of a discipline (in so far as this is displayed through written communication), by means of counting and analysing the various facets of written

communication ... the application of mathematics and statistical methods to books and other media of communication ...” (p. 348-349)

Benefits of bibliometric analysis

One of the best ways librarians can positively react to the academic and research demands of their patrons is by analysing bibliographic citations in their collection especially the published works of their patrons such as students’ theses (Dilani, 2015). Bibliometric analysis “is used in research performance evaluation especially in university and government laboratories and also by policymakers, research directors and administrators, information specialists and librarians, and researchers themselves” (Thomson Reuters, 2008 p. 2).

Bibliometric analysis help in the identification of publication patterns, authorship citations as well as coverage of works in relation to geographical patterns (Hazarika, Goswami, and Das, 2003). Obviously, bibliometrics is suitable for librarians and information professionals to build and provide innovative services for their information users (Gumpenberger, Wieland and Gorraiz, 2012).

Previous studies on bibliometrics

Buchanan and Herubel (1994) conducted a bibliometric study on Political Science dissertations and they found that scientific journals were the most cited documents by students. Zipp’s (1996) bibliometric study on academic faculty also found that scientific journal articles were heavily relied on by academics for their research. Patra, Bhattacharya and Verma (2006) employed bibliometrics to analyse data from the Library and Information Science Abstract (LISA) in order to establish growth pattern, core journals and authors' distribution. Their study established no definite pattern in literature growth.

In order to discuss the research performance output of social scientists on social science subjects, Thanuskodi (2010) employed bibliometric analysis to look into the frequency of publications, authorship pattern, citation analysis, among others. At the Ohio State University, Gooden (2001) employed bibliometrics for citation analysis of dissertations submitted to the Department of

Chemistry from the year 1996 to 2000 and found that Journal articles were more frequently cited by students.

In Ghana, Sam and Tackie (2007) analysed Master of Arts dissertations and found that the most cited documents by students were books and monographs. Imoro's (2017) bibliometric study on Ph.D. theses submitted to the University of Cape Coast from 2005 to 2016 revealed that Agriculture was the most researched subject area. Bilson, Alemna and Badu (2019) carried out a bibliometric analysis of theses at the School of Nuclear and Allied Sciences, University of Ghana and found that theses with citations ranging between 51 and 100 were common.

Results

RO1: Analysing the authorship patterns of MPhil thesis accepted by DIS from 2000 to 2018.

Gender of Authors

A total of 101 students submitted MPhil thesis to the DIS within the period of study and the analyses show that 53 (52%) of the students whose thesis were accepted by the department within the study period were males and the remaining 48 (48%) were females.

Subject specialization

The DIS of UG run two subject specialisations: Library and Archival Studies. The study analysed data on the subject area of the thesis accepted by the department during the period of study. As shown on Figure 1, 92 (91%) of the thesis accepted by the department were produced by students who specialised in Library studies and the remaining 9 (9%) thesis were from students who specialised in Archival studies.

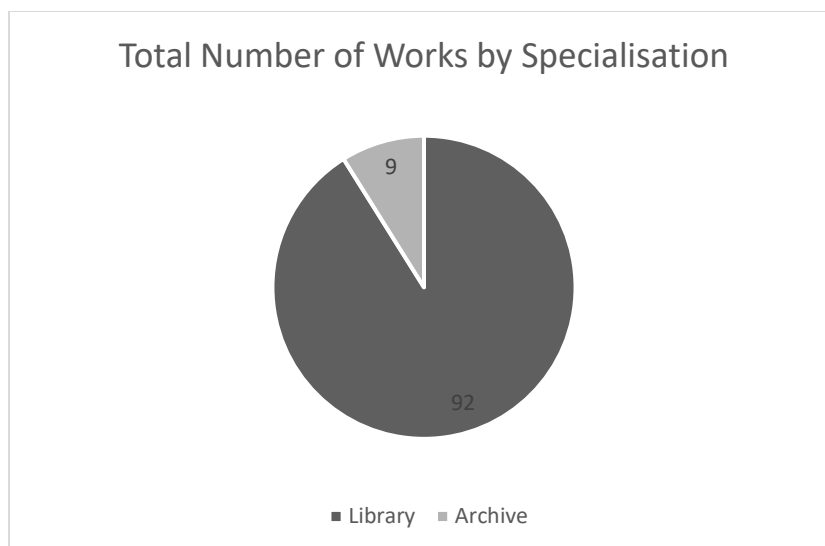


Figure 1: Subject specialisation

Year-wise distribution of thesis

The year-wise distribution of MPhil thesis accepted at the DIS of UG from 2000 to 2018 are presented on Figure 2. Out of the 101 theses under examination, none was received in the year 2000, 2005 and 2006. However, a thesis each was accepted during the years 2002, 2004, 2007, 2010 as well as 2014 respectively and in the years 2001 and 2012, two theses each were accepted at the DIS. A total of five theses were accepted in 2011 and six thesis each were accepted during the years 2008 and 2009 respectively. The year 2003 recorded an appreciable increase in thesis accepted since eight theses were accepted during that year at the DIS. Moreover, 12, 10 and 14 MPhil theses were accepted at the DIS of UG during the years 2015, 2016 and 2017 respectively. The year 2018 recorded the highest number of theses accepted at DIS during the period of study with 22(22%) thesis submitted to the department.

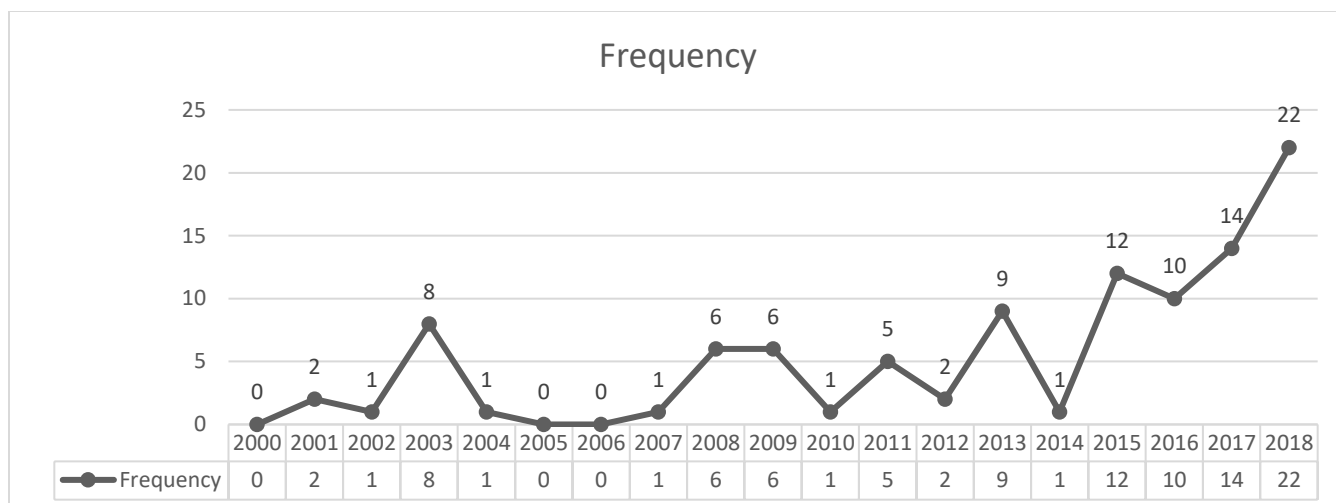


Figure 2: Year-wise distribution of thesis

Research areas

The study looked into the research areas covered by the thesis and out of the 101 theses under consideration, 42 (41.6%) of them, constituting the highest number were carried out in the area of Library Services, followed by 26 (25.7%) thesis on ICT. The study area of Information Behaviour followed in the next order with 19 (18.8%) thesis, then 8 (7.9%) theses in the area of Records Management. Other areas aside the above-mentioned areas had the least with 6 (5.9%) thesis. The results of research areas are presented in Table 1.

Table 1: Research area

Research Area	Frequency	Percent
Information Behaviour	19	18.8
Records Management	8	7.9
Library Services	42	41.6
ICT	26	25.7
Others	6	5.9
Total	101	100

RO2: Studying the supervision patterns of MPhil thesis accepted during the period of study

Ranking of supervisors by works completed under their supervision

Students who undertake MPhil studies at the DIS of UG are assigned supervisors who guide them through their research. The study examined the supervisors assigned to the accepted thesis during the year of study and it was revealed that 9 (8.9%) of the thesis were supervised by a person each and the remaining 92 (91.1%) thesis were supervised by two persons each. For the purposes of this study, the first-named supervisor was coded as 'Main' and the second-named supervisor as 'Co'

Table 2: Ranking of Supervisors (Main)

Supervisor	Frequency	Percent
Prof. Anaba Alemna	22	21.8
Prof. Ellis Badu	20	19.8
Prof. Perpetua Dadzie	8	7.9
Prof. Harry Akussah	13	12.9
Prof. C.O. Kissiedu	5	5
Dr. Emmanuel Adjei	6	5.9
Dr. Musah Adams	10	9.9
Dr. Ebenezer Ankrah	5	5
Dr. Pino Akotia	2	2
Dr. Evelyn Markwei	4	4
Mary I. S. Boye	4	4
Mr. S.N.B. Tackie	2	2
Total	101	100

Table 2 shows the ranking of Main Supervisors of the 101 MPhil thesis under examination. The analysis of the data from the study reveals that Prof Anaba Alemna supervised the highest number of theses with 22 (21.8%) supervised thesis, Prof. Ellis Badu followed next by supervising 20 (19.8%) theses. Prof. Harry Akussah was the third highest ranked supervisor with 13 (12.9%) theses under his supervision, Dr. Musah Adams followed with 10 (9.9%) supervised theses and he was followed by Prof. Perpetua Dadzie with 8 (7.9%) theses under her supervision.

The sixth ranked supervisor was Dr. Emmanuel Adjei who had supervised 6 (5.9%) theses, this was followed by Prof. C.O. Kissiedu and Dr. Ebenezer Ankrah who had both supervised 5 (5%) theses each. Both Dr. Evelyn Markwei and Mrs. Mary Boye were ranked 10th having supervised 4 (4%) theses each and they were followed lastly by Dr. Pino Akotia and Mr. S.N.B. Tackie who had supervised 2 (2%) theses each.

Table 3: Ranking of Co-supervisors

Co-supervisor	Frequency	Percent
Prof. Anaba Alemna	18	19.6
Prof. Ellis Badu	12	13.0
Prof. Perpetua Dadzie	8	8.7
Prof. Harry Akussah	9	9.8
Prof. C.O. Kissiedu	4	4.3
Dr. Emmanuel Adjei	16	17.4
Dr. Musah Adams	10	10.8
Dr. Ebenezer Ankrah	5	5.4
Dr. Pino Akotia	2	2.2
Dr. Evelyn Markwei	4	4.3
Mary I. S. Boye	1	1.1
Mr. S.N.B. Tackie	2	2.2
Mr. Dzandu	1	1.1
Total	92	100

The study further established the ranking of the 92 Co-supervisors and the results are presented in Table 3. Reading from the Table, Prof. Anaba Alemna was the highest ranked co-supervisor with 18 (19.6%) thesis, followed by Dr. Emmanuel Adjei with 16 (17.4%) thesis, then Prof. Ellis Badu with 12 (13.0%) thesis, followed by Dr. Musah Adams with 10 (10.8%) thesis. Prof. Harry Akussah was the fifth ranked co-supervisor with 9 (9.8%) thesis, followed by Prof Perpetua Dadzie with 8 (8.7%) thesis, then Dr. Ebenezer Ankrah with 5 (5.4%) thesis, followed by both Prof. C.O. Kissiedu and Dr. Evelyn Markwei with 4 (4.3%) thesis each. Dr. Pino Akotia and Mr.

S.N.B. Tackie were both ranked 9th co-supervisors with 2 (2.2%) thesis each and they were followed lastly by Mrs. Mary Boye and Mr. Dzandu with 1 (1.1%) co-supervised thesis each.

Supervisors' subject area of specialization

The faculty at the DIS of UG have their subject areas of specialization. The DIS houses faculty in three major subject areas – library, archive and Information Technology (IT). This section looks into the subject area specialization of the 'Main' and 'Co' supervisors of the 101 theses under examination. The study further analysed the 92 thesis that had two supervisors each by establishing the combination of the subject specialization background of the supervisors.

Table 4: Supervisors' Specialisation (Main)

Supervisors' specialisation	Frequency	Percent
Library	45	44.6
Archive	31	30.7
IT	25	24.8
Total	101	100

Reading from Table 4, the results of the analysed data show that 46 (44.6%) of the students' thesis accepted by DIS during the period of study had faculty with Library specialization as their main supervisors, 31 (30.7%) of them had faculty with archive specialisation as their main supervisors and the remaining 25 (24.8%) of the thesis had faculty with IT specialization as their main supervisors.

Table 5: Co-supervisors' Specialisation

Co-supervisors' specialisation	Frequency	Percent
Library	35	38.1
Archive	37	40.2
IT	20	21.7
Total	92	100

Table 5 presents the specialisation of the 92 co-supervisors and as reflected on the Table, 37(40.2%) of the co-supervisors had archive background and 35 (38.1%) of them had Library background with the remaining 20 (21.7%) of the co-supervisors having IT background.

Table 6: Specialisation pairing of supervisors

Specialisation pairing	Frequency	Percent
Library and Library	15	16.3
Library and Archive	20	21.7
Archive and IT	10	10.9
IT and Library	23	25.0
IT and IT	5	5.4
Archive and Archive	19	20.7
Total	92	100

The pairing of supervisors' specialization was analysed on the 92 theses that were co-supervised and the results are presented in Table 6. The results of the analysed data as depicted in the Table reveals that IT and Library specialisations' pairing had the highest frequency with 23 theses representing 25.0%, followed by Library and Archive specialisations' pairing of supervisors with 20 theses representing 21.7%, then Archive and Archive supervision pairing with 19 theses representing 20.7%. Library and Library specialisations' supervision pairing had 15 representing 16.3%, followed by Archive and IT with 10 theses representing 10.9%, and lastly IT and IT pairing with 5 theses representing 5.4%.

RO3: Examining study settings and length of MPhil thesis accepted during the period of study.

Research settings

This section presents results on the geographical distribution and study settings of the MPhil thesis accepted at the DIS of UG during the period of study. The results of the study reveal that out of the 101 theses examined, 100 (99%) of them were geographically distributed within Ghana and the remaining 1(1%) thesis was outside Ghana but geographically conducted in Africa

Table 7: Research settings

Setting	Frequency	Percent
Educational institutions	80	79.2
Organisational institutions	16	15.8
Professionals	3	3.0
General Public	2	2.0
Total	101	100

Table 7 shows the settings of the theses under examination and the analysis from the Table reflects that 80 (79.2%) of the theses were carried out within educational settings and 16 (15.9%) of them were carried out within organisational settings. Also 3 (3%) of the theses concern studies that were carried out on professional bodies and the remaining 2 (2%) theses were carried out on the general public.

The study further analysed the educational and organisational institutions. The results from this analysis revealed that 77 (96.3%) of the 80 theses conducted within educational settings were concentrated in tertiary institutions and the remaining 3 (3.7%) were within pre-tertiary institutions. On the theses conducted in organisational settings, it was further revealed that 14 (87.5%) out of the 16 studies were carried out within public organisations and the remaining 2 (12.5%) within private organisations.

Length of theses

The study examined the number of pages each of the 101 theses under consideration covered. The results from the analysis are presented on Figure 2. It was revealed that 74 (73.3%) of the theses covered the length of more than 150 pages, 15 (14.9%) of the theses covered between the range of 121-140 pages, 8 (7.9%) of the theses' length ranged between 141-150 pages and the remaining 4 (4%) theses covered the length of 100 to 120 pages.

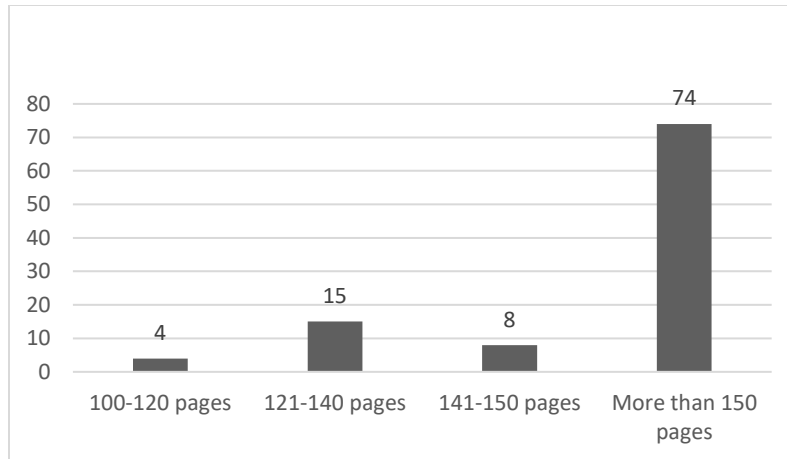


Figure 2: length of thesis

RO4: Identifying the frequency of forms and year-wise distribution of cited documents.

The study conducted a citation analysis on the forms and frequency of cited documents. The analysis of the data revealed that the 101 MPhil theses examined cited 11602 document sources. The study further examined these 11602 document sources in relation to frequency of citations per year and forms of cited documents.

Year of citations

The publication year of each cited document was examined and the results are presented in Table 8. Reading from the table shows that, out of the 11602 cited documents, 3339 (28.8%) of the documents were published between the years 2000 and 2005, 3226 (27.8%) of the cited documents were published from the year 2006 to 2010 and 2497 (21.5%) of the cited documents were published between the years 2011 to 2014. Moreover, 1847 (15.9%) of the cited document sources as contained in the 101 MPhil theses examined were published before the year 2000, and the remaining 693 (6.0%) of the cited document sources were published from the year 2015 to 2018.

Table 8: Year of citations

Year	Frequency	Percent
Before 2000	1847	15.9

2000-2005	3339	28.8
2006-2010	3226	27.8
2011-2014	2497	21.5
2015-2018	693	6.0
Total	11602	100

Forms of cited documents

In relation to the forms of citations, the analysis of the 11602 cited documents as presented in Table 9 shows that 5402 (46.6%) of the cited document sources were articles from scientific journals, 2472 (21.3%) of the cited documents were sourced from books and 1992 (17.1%) of them were from websites. The analysis from Table 9 further depicts that 868 (7.5%) cited documents were sourced from students' dissertations and 300 (2.6%) of the cited documents were from conference proceedings. The remaining 568 (4.9%) cited documents were from other sources such as newspapers, magazines, letters, blog posts, among others.

Table 9: Form of citations

Form	Frequency	Percent
Journal Articles	5402	46.6
Conference Proceedings	300	2.6
Books	2472	21.3
Dissertations	868	7.5
Websites	1992	17.1
Others	568	4.9
Total	11602	100

Discussion

The role of research in the life of educational institutions are one of the key determinants of their success. Globally, scholars place emphasis on research due not only to its presumed ability to enrich teaching, learning and its contribution “to the body of knowledge, but also because it is a major determinant of institutional prestige” (Alemna, 2016 p. 4), Previous bibliometric analyses conducted on students’ theses reveal that majority of research theses are authored by males as compared to females (Ramachandran, 2012; Mishra, Gawde and Solanki, 2014; Bilson, Alemna, and Badu, 2019). This study is in support of these findings since the results of the study reveals that theses accepted at DIS of UG during the period of study had more male authors than females.

Studies have shown uneven pattern in the distribution trend of thesis accepted at academic institutions per year (Aliyu and Abba, 2009; Kumar, Sah and Singh, 2013). Interestingly, this study reveals similar uneven trend in the theses accepted at DIS of UG. The study further reveals that Professors lead in the ranking of supervisors, followed by faculty with PhD. It could be deduced from these findings that, the DIS pays particular attention to research experience and expertise when assigning supervisors to students for their theses.

The DIS offer two subject specialisations to students: library and archival studies. The results of this study show an interesting trend of more theses in the field of library studies accepted during the period of study as compared to thesis in the field of archival studies. Also, it is evident from the study that almost all the research carried out in the theses under examination are on phenomena pertaining to Ghana. A possible reason could be that the DIS was not attracting foreign students during the period of study. The over-concentration of research on academic phenomena was also evident in the results of the study since majority of the studies were carried out within academic settings. Interestingly, the results of the study reveal uneven distribution of research within the academic setting since there seems to be over-concentration of works within the tertiary educational setting.

Similar studies in Ghana have found that MPhil theses go beyond the 100-page length (Fosu and Alemna, 2006; Agyeman, and Bilson, 2015; Bilson, Alemna, and Badu, 2019) and this study

supports these findings since none of the theses under examination had less than 100 pages. It was revealed from the analysis that most theses covered over 150 pages. The study further reveals that the most preferred information source for the theses examined was scientific journal articles. This is in support of Gooden's (2001) study that maintained that students rely heavily on journal articles for their research. Interestingly, this finding is in parallel with earlier study conducted by Sam and Tackie (2007) on 67 Master of Arts dissertations from the same DIS. They found that students were heavily relying on books and monographs for their research dissertations. Again, Angamma and Jayatissa's (2015) bibliometric study among postgraduate Information Studies students in Sri Lanka revealed that students' preferred source of information for their research was books.

Conclusion and recommendations

Bibliometric analysis is observed as a major instrument employed to evaluate the performance and also measure the impact of scientific publications (Matutinovic, 2007). This attests to the fact that bibliometric analysis promotes policy evaluation through the review of research outputs. The acceptance and adaptation of bibliometric analysis within various academic disciplines is stimulating astonishing growth of literature on bibliometrics (Thanuskodi, 2011).

Bibliometric analyses are employed for a number of purposes such as determination of various scientific indicators, scientific output evaluation, citation analysis of published works, among others. For the purposes of this study, bibliometric analysis was employed on MPhil theses accepted at the DIS of UG between the years 2000 and 2018. The DIS had accepted 101 theses during the period of study and all of them were used as document sources for the study. The findings of the study show that more theses were authored by male students, however, the gender ratio between male and female students in relation to the theses accepted at DIS during the period of study did not present much gap.

Nevertheless, the study reveals a major disparity in the two subject fields of study at the DIS in relation to research outputs of students. A whopping 91% of the research thesis accepted at the department were in the field of library studies. The study recommends the need for the DIS to encourage more students to conduct research in the field of archival studies in order to bridge

this gap. Also, as the attentions of scholars in the field of Library and Information Science and in particular bibliometrics are turning to the analysis or application of measurement techniques to the internet via 'webometrics' (Hood and Wilson, 2001), there is the need for the DIS to maintain a digital repository for their research outputs to aid in these analysis.

References

- Agyeman, E. A., & Bilson, A. (2015). Research focus and trends in nuclear science and technology in Ghana. A bibliometric study based on the INIS database. *Library philosophy and practice (e-journal)*. Retrieved from: <http://digitalcommons.unl.edu/libphilprac/1212>
- Aliyu, Y., & Abba, T. (2009). Aliyu, Y., & Abba, T. (2009). Analytical study of master of library science dissertations at the University of Maiduguri, Nigeria. *Library Philosophy and Practice*, Retrieved from: <http://digitalcommons.unl.edu/libphilprac/265>
- Angamma, A. M. S., & Jayatissa, L. A. (2015). A bibliometric study of postgraduate theses in library and information science: with special reference to University of Kelaniya and University of Colombo, Sri Lanka. *Journal of the University Librarians' Association of Sri Lanka, 19(1)*, 32-53.
- Bilson, A. P. K. E., Alemna, A. A. and Badu, E. E. (2019). A Bibliometric Analysis of Theses at the School of Nuclear and Allied Sciences, University of Ghana, Legon. *Library Philosophy and Practice (e-journal)*. Retrieved from <https://digitalcommons.unl.edu/libphilprac/2567>
- Broadus, R. N. (1987), Toward a definition of 'bibliometrics', *Scientometrics*, 12, 373–379.
- Brookes, B. C. (1990), Biblio-, Sciento-, Infor-metrics??? What are we talking about? In: L. Egghe, R. Rousseau (Eds), *Informetrics 89/90. Selection of Papers Submitted for the Second International Conference on Bibliometrics, Scientometrics and Informetrics*,: Amsterdam, Netherlands, Elsevier, pp. 31–43
- Brookes, B. C. (1990), Biblio-, Sciento-, Infor-metrics??? What are we talking about? In: L. Egghe, R. Rousseau (Eds), *Informetrics 89/90. Selection of Papers Submitted for the Second International Conference on Bibliometrics, Scientometrics and Informetrics*, Amsterdam, Netherlands, Elsevier, pp. 31–43.
- Buchanan, A.L. and Herubel, J.P.V.M. (1994). Ph.D. Dissertation Bibliographies: Serials and Collection Development in Political-Science. *Behavioral & Social Sciences Librarian*, 13(1), 1-10.

Dilani K. A. (2015). Citation analysis of dissertations for collection development. *Collection Building*, 34 (2), 30-40

Folkers T. (2013). Bibliometrics. Retrieved from:
https://www.researchgate.net/publication/258023097_Bibliometrics

Fosu, V. K., & Alemna, A. A. (2006). An analytical study of masters dissertations on the Balme Library, University of Ghana, Legon. *African Journal of library, Archives and information science*. 16(2),71-78.

Garfield, E. (1979), *Citation indexing: its theory and in science, technology, and humanities*. New York: Wiley.

Gooden, M. A. (2001). Citation analysis of chemistry doctoral dissertations: an Ohio state university case study. *Science and technology Librarianship*, 21(3), 26-35.

Gumpenberger, C., Wieland, M., & Gorraiz, J. (2012). Bibliometric practices and activities at the University of Vienna. *Library Management*, 33(3), 174-183

Hazarika, T. Goswami, K and Das, P. 2003. Bibliometrics analysis of Indian forester: 1991-2000. *IASLIC Bulletin* 48(4), 213-223

Henderson, M., Shurville, S. and Fernstrom, K. (2009). The quantitative crunch: the impact of bibliometric research quality assessment exercises on academic development at small conferences. *Campus-Wide Information Systems*, 26(3), 149–167

Hertzal, D. H. (1987), History of the development of ideas in bibliometrics. In: A. Kent, (Ed.), *Encyclopedia of library and information sciences*, Vol. 42 (Supplement 7), Marcel Dekker, New York, pp. 144–219.

Imoro, O. (2017). A bibliometric analysis of citation patterns of doctoral theses: A case study of the University of Cape Coast, Ghana. M.Phil. thesis. Legon: University of Ghana.

Kumar, S., Sah, K., & Singh, K. (2013). Social science Doctoral theses of Kumaun University and Delhi University: a comparative bibliometric study. *International Journal of Emerging Trends in Library and Information Society*, 1(3), 263-271.

- Matutinovic, S. F. (2007). Citation analysis for five serbian authors in web of science, scopus and google scholar. *INFOTHECA-Journal of Informatics and Librarianship*, 8(1), 25-35.
- Otlet, P. (1934), *Traite de Documentation. Le Livre sur le Livre. Theorie et Pratique. [Treatise on documentation. The book on the book. Theory and practice]*, Brussels: Van Keerberghen.
- Patra, S.K., Bhattacharya, P., & Verma, N. (2006). Bibliometric study of literature on bibliometrics. *Desidoc Bulletin of Information Technology*, 26(1), 27-32.
- Pritchard, A. (1969), Statistical bibliography or bibliometrics? *Journal of Documentation*, 25, 348–349
- Ramachandran, A. (2012). Scientometric analysis of doctoral dissertations in physical education in Kerala and Tamilnadu. *International Journal of Behavioral Social and Movement Sciences*, 1(4), 174-184.
- Sam, J., & Tackie, S. N. B. (2007). Citations analysis of dissertations accepted by the Department of Information Studies, University of Ghana. *African Journal of Library Archives and Information Science*, 17(2), 117-124.
- Sengupta, I. N. (1992), Bibliometrics, informetrics, scientometrics and librametrics: an overview, *Libri*, 42, 75–98.
- Shapiro, F. R. (1992), Origins of bibliometrics, citation indexing, and citation analysis: the neglected legal literature, *Journal of the American Society for Information Science*, 43, 337–339.
- Smith, L. (1981), Citation analysis, *Library Trends*, 30, 83-106
- Thanuskodi, S. 2010. *Journal of social sciences: A bibliometric study*. *Journal of Social Science*, 24(2), 77-80
- Thomson Reuters (2008). *Whitepaper using bibliometrics: A guide to evaluating research performance with citation data*. New York City, NY: Thomson Reuters
- Weinberg, B. H. (1997), The earliest Hebrew citation indexes, *Journal of the American Society for Information Science*, 48, 318–330.

White, H. D., K. W. Mccain (1989), Bibliometrics. In: M. E. Williams, (Ed.), Annual Review of Information Science and Technology, Vol. 24, Elsevier Science Publishers B.V. for the American Society for Information Science, Amsterdam, The Netherlands, pp. 119-186.

Wilson, C. S. (1995), The formation of subject literature collections for bibliometric analysis: the case of the topic of Bradford's Law of Scattering, Ph.D. dissertation, The University of New South Wales, Sydney, Australia. Retrieved from: <http://www.library.unsw.edu.au/~thesis/adtNUN/public/adt-NUN1999.0056>

Zipp, L.S. (1996). Thesis and Dissertation citations as indicators of faculty research use of university library journal collections. *Library Resources and Technical Services*, 40 (4), 335-342.