

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

2018

Citation Analysis Of Doctoral Students Dissertations Of Philippine Women's University School Of Education: Tool For Collection Development

Carmina G. Joson

Philippine Women's University, cjoson@pwu.edu.ph

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Education Commons](#), and the [Library and Information Science Commons](#)

Joson, Carmina G., "Citation Analysis Of Doctoral Students Dissertations Of Philippine Women's University School Of Education: Tool For Collection Development" (2018). *Library Philosophy and Practice (e-journal)*. 4700.

<https://digitalcommons.unl.edu/libphilprac/4700>

Citation Analysis Of Doctoral Students Dissertations Of Philippine Women's University School Of Education: Tool For Collection Development

Carmina G. Joson, RL, MLIS, PhD
Philippine Women's University
cjoson@pwu.edu.ph

Abstract

The study analyzed the citations used by doctoral students of PWU School of Education in their dissertations that were completed from Academic Year 2007 to 2017. The study utilized bibliometrics research design for the 86 doctoral dissertations that generated 6,230 citations. Said citations were used to determine the referencing behavior of PWU School of Education doctoral students in terms of publication age, format, type, authorship, origin and the availability of cited materials. The findings showed that majority of PWU doctoral students preferred to utilize foreign electronic information sources that are currently published. Periodicals are the most cited type of materials and single or personal author of information sources garnered highest percentage. Most of the information cited were not available in the library. The study serves as a basis to improve the collection development of PWU library for the School of Education doctoral students.

Keywords: Bibliometrics, Citation Analysis, Dissertation, Education

Introduction

Education is a discipline that produces teachers who eventually become principals or school administrators. Doctoral program in Education is designed to prepare future school leaders to reach their career goals. This degree is considered as the highest academic degree in the Philippines that provides an in-depth knowledge in decision making. A doctoral program requires dissertation in completing the degree. Dissertation is a written document that discovers new knowledge, theories or practices to the development of a particular field.

In 1925 Philippine Women's University opened the School of Education and eventually offered Doctor of Education major in Educational Management through a combination of online and in-campus classes (School of Education, 2014). The university has evolved from the traditional ways of teachings into a more transformative style that fits perfectly the needs of the students making use of technology and other modern resources. The Philippine Women's University has proven itself to be an enduring institution committed to serving men and women. The university laid the foundation for its vision that develops individuals through excellence in teaching, dynamic and relevant research, and responsive service supported by evolving technology for global competence (Vision/Mission, 2014).

The Philippine Women's University library has always been an integral part of the Philippine Women's University since its foundation in 1919. The mission of the library is to provide balanced and updated library resources, conducive learning atmosphere, and efficient services that will support the academic programs and curricular offerings of the university as well as the faculty research program.

The Bachelor of Elementary Education and the Bachelor of Secondary Education programs of the School of Education were granted Level III first reaccredited status from 2012–2017 by Philippine Association of Colleges and Universities Commission on Accreditation, Inc. (PAASCU). Based on the result of the accreditation, the library provided Wi-Fi access for students' use enabling them to access updated information from worldwide sources. E-books were acquired, while databases were subscribed which were very useful and relevant to the different subject areas. However, PAASCU commented that there was a need to market the resources and services of the library to fully maximize their use. Furthermore, there was a need to update general references such as almanacs, atlases, dictionaries, etc.

In August 2018, PWU Graduate School Programs including the School of Education Graduate Studies had preliminary accreditation. During the visit, the accreditor mentioned that there should be a continuous acquisition of library information sources.

The ever growing needs of the library users compelled librarians to think more of obtaining library materials that meet the literature requirements of the graduate school students. It is best on part of the librarians to assess and analyze the present library resources to fully understand which program needed to develop the collection. A citation analysis technique would help librarians to make decisions about collection development policy. This is the first time that PWU Library undergone a collection analysis technique to determine the relevance of its collection and result of the study would serve as a tool in collection development decision.

Citation analysis is a method of assessing library collections that examines the materials cited by the researchers. It has been used for decades to evaluate and interpret the library collections and served as a tool in acquisition decisions. This method requires recording the details of the references cited in each document to determine what materials are being consulted by the researchers in terms of publication age, format, type, authorship, origin, etc. Librarians have used citations to study the adequacy of the collection that are available in the library. By conducting a citation analysis, the researcher can determine how much the library meets its students' needs as far as collection is concerned, which later serves as a guide and to support the development of the collection of the library in the field of education.

Theses and dissertations are one of the various types of library collections being carried out by researchers in different disciplines to help establish students' citation characteristics (Becker and Chiware, 2015). The adoption of citation analysis of theses and dissertations is an effective approach in bibliometric research. It is a way of understanding the library users by studying the references cited by the students to reveal the types of sources frequently used (Chikate and Patil, 2008).

The present study sought to analyze the references cited of doctoral students of the Philippine Women's University to assess the collection of the School of Education.

Statement of the Problem

1. What are the information needs of PWU School of Education students?
2. Can PWU Library fully support their School of Education doctoral students in providing sufficient information sources?

3. How can the library develop its collection to further support its School of Education doctoral students?

Objectives

1. To determine the referencing behavior of PWU School of Education doctoral students in terms of:
 - a. Publication age
 - b. Format (this refers to print, electronic, or online)
 - c. Type (this refers to periodicals, theses and dissertations, books, web document, etc.)
 - d. Authorship
 - e. Origin (this refers to local or foreign)
2. To assess the capability of the PWU Library to support the information needs of its School of Education doctoral students.
3. To provide a basis in formulating acquisitions development plan.

Scope and limitation

This study focused on the references cited in 86 dissertations completed by the doctoral students of the School of Education at Philippine Women's University from Academic Year 2007-2008 to 2016-2017. This ten (10) year data was predetermined according to the Commencement Exercises Programs published on the said academic years.

Review of Related Literature

Academic libraries focus their collection development activities on literature that support the curricular offerings of the university. Print and online resources are the primary sources of information to boost research among students and faculty. With this, librarians should adequately respond to the research needs of the users. However, due to the implementation of K-12 program for the last two years, academic libraries continually face challenges with regards to their budget. Librarians made sure that acquiring library materials should be fully maximized by the users.

Collection assessment is an essential aspect of library collection development to ensure that libraries are responding to the needs of their library users. There are many ways of collection assessment that can be conducted in an academic library. It can be collection centered approach and client centered approach. The success of collection assessment depends on the specific objectives of a particular collection that supports the purpose and mission of the library.

Citation analysis is a collection assessment method that measures the use and productivity of the collection of the library and in making decisions when it comes to acquisition. Hoffmann and Doucette (2012) mentioned that citation analysis is a branch of bibliometrics that examines the citations found in publications such as journal articles and books to look for patterns of use. Citation analysis has been used to assess and analyze the collection of the library. It is a measureable method that surpasses specific discipline for use.

In the study of Kayongo and Helm (2012) they determined the relevance of library collections for graduate student research in a citation analysis study of doctoral

dissertations. The result of the study revealed that there is a need for funding for further development of the Social Science collections. In the field of education, Haycock (2004) analyzed education dissertations on curriculum and instruction to inform collection development. The study yielded data to guide journal selection, retention, and cancellation decisions. It aimed to ensure that the most frequently cited journals were retained on subscription. Similarly, Griffin (2016) used citation analysis for core journals in educational leadership. Dissertations were also analyzed to establish a core serial lists for Doctor of Education Program. Data identified a uniform core of journals for doctoral studies.

Banatepanvar (2013) determined the materials cited in doctoral theses of botany with the purpose of improving the existing collection development of the library. Results showed that researchers depend on journal sources for their library use. Fasae (2012) analyzed the information materials used in dissertations and theses of post graduate students. The study identified the information materials mostly consulted by master's and doctoral students. It was discovered that journals were the most consulted information materials, closely followed by books and then resources from the web/Internet.

Moreover, Visitacion (2017) determined the relevance of DLS-CBS library collection by examining the citation patterns of undergraduate theses of Human Resource Management. The result of the study helped in maintaining and improving its collection and served as a tool to evaluate the relevance of their existing collections. Likewise, Castro (2013) analyzed the relevance of the UP College of Dentistry Library collections by examining the citation patterns of graduate and undergraduate theses

from 2000-2012. The result of the study provided a new concrete data on how to further improve the collection development efforts of the Library.

All the above mentioned studies related may provide insights for the present study.

Methodology

Instrumentation

This study used bibliometrics research design. Bibliometrics is a scientific and quantitative method that measures and analyses various aspects of written publications. Bibliometrics identifies patterns of authorship, publication age, format, type and origin of the academic research. All graduate students of PWU School of Education are required to submit their theses and dissertations at the PWU Library thru the Registrar's Office before accomplishing their final clearance for graduation. Recently, all graduate students were required to submit their documents with accompanying compact disc (CD). Doctoral dissertations from School of Education are the source of data. From the references cited by the researchers include publication age, format, type, authorship, origin and availability of the cited materials from the library.

Analytical tools

The researcher used citation analysis as an analytical tool for examining the references cited by the doctorate students of the School of Education. Dissertation references were examined and the citations were tabulated accordingly.

The tabulated data were analyzed utilizing frequency counts and percentages. The formula used in this study is as follows:

$$\text{Percentage} = \frac{\text{Frequency of Citations}}{\text{Total number of Citations}} \times 100$$

Data Collection Strategy

The researcher prepared a list of the dissertations completed and checked from the PWU Main Library. The references cited were examined and organized by means of tabulation. To facilitate easier tabulation and faster computation of the data, Microsoft Excel was utilized. Each column was assigned with a specific field such as publication age, format, type of cited materials, authorship, origin, and the availability of cited materials to the library. The data gathered were counter checked against the Online Public Access Catalog (OPAC) of the library including print and online. Frequencies and percentages were utilized to analyze the data.

A total of 6,230 bibliographic entries were generated from eighty six (86) doctoral dissertations from Academic 2007-2008 to 2016-2017.

Results and Discussion

1. The Referencing Behavior

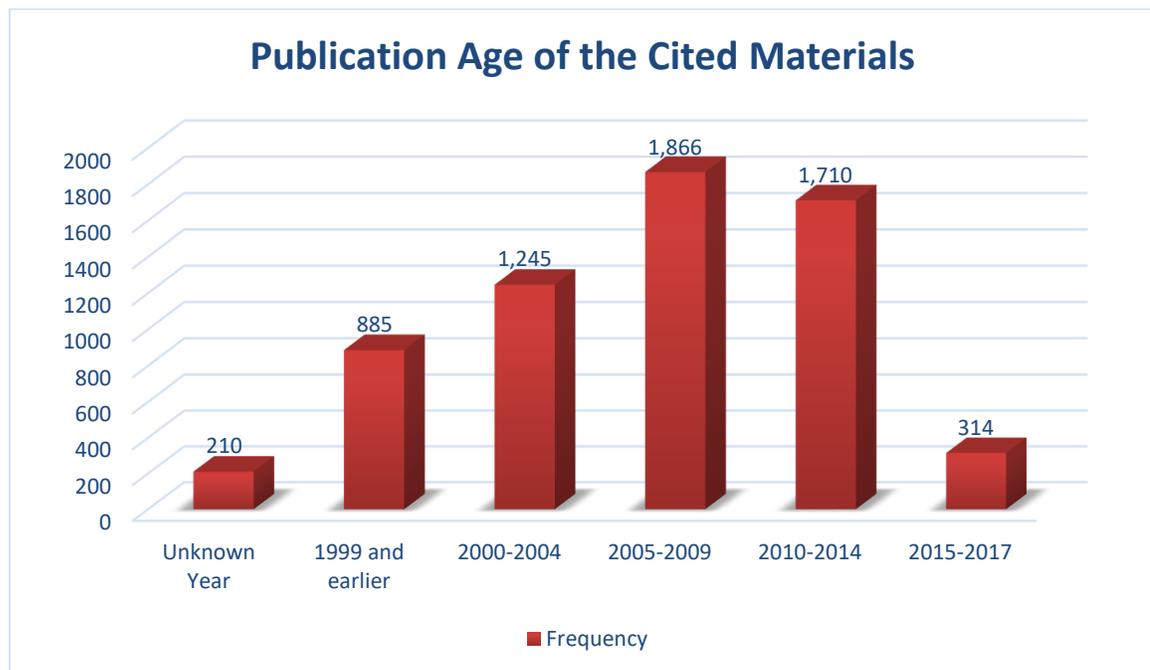
Referencing behavior is a pattern of citing the source of information needed by the doctorate students of PWU School of Education in terms of publication age, format, type, authorship, and origin.

1.1 Publication Age

There are 86 doctorate dissertations completed from 2007- 2017 that generated 6,230 citations. Distribution of citations according to year of publication was presented in Figure 1. The graph indicates that the preferred age of publication of the PWU Education graduate students were from 2005-2009 with 1,866 or 29.95% followed by 1,710 or 27.45% from 2010-2014. The two ranges constitute more than half of the whole citations included in this study. This result is in consonance with the study of Adanza, Bermudo and Rasonabe (2009) which stated that in doing research, the researchers must prioritize the inclusion of the most recent publications or only the “state of the art” unless it is historical literature. Current knowledge should be included in doing the review of related literature and studies that are relevant to the intended research of the doctorate students.

On the other hand, 3.37% of the citations are with unknown year. These are cited information from websites. There are also websites that displays “file or directory not found”. This could be assumed that a number of Education doctorate students used websites that are unstable and non- academic source of information.

Fig. 1.Citation According to Year of Publication

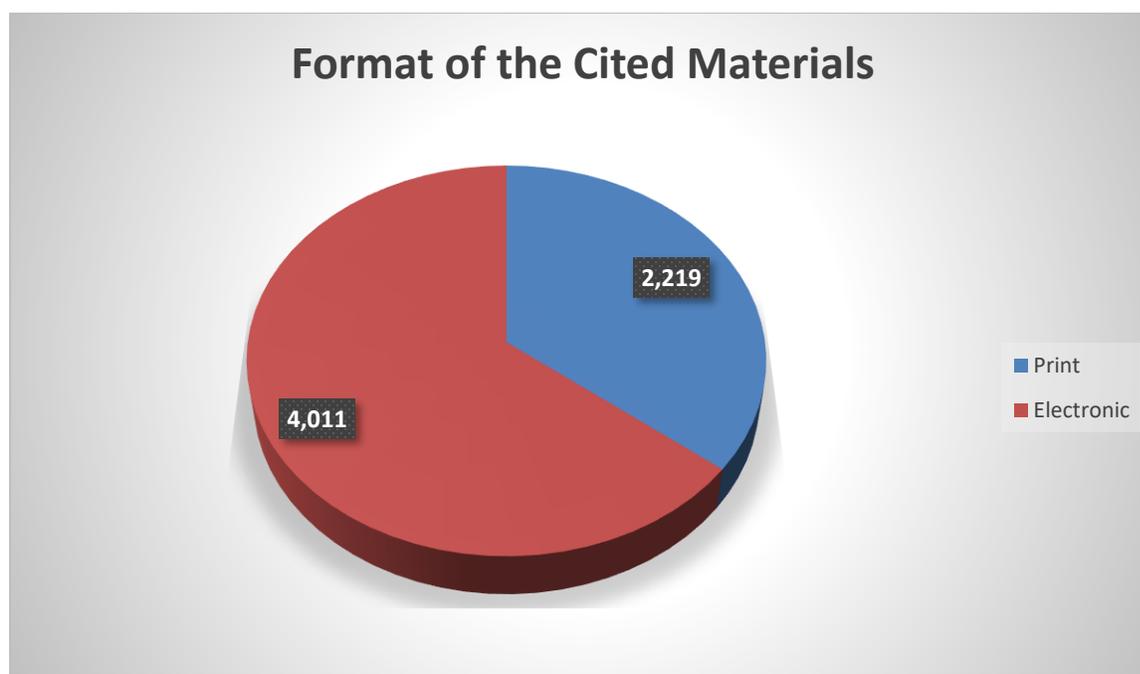


1.2 Format of the Information Sources

With the advent of new technology, not only the undergraduate students are embracing technology but also the graduate students. Figure 2 presents that 4,011 or 64.38% of the total citations came from electronic resources, while citations from print resources had 2,219 equivalent to 35.62% of the total citations. This result significantly shows that doctoral students in PWU prefer electronic resources than print materials. The available open source periodicals and online databases from the internet also contributed to the completion of doctoral dissertations of School of Education graduate students. Said resources became very useful for the students in writing research anytime and anywhere, since most of the doctoral students are working and they come from different parts of Metro Manila and nearby provinces.

Moreover, the School of Education Graduate Studies is implementing blended learning program, a mixture of traditional teaching and technology formula, especially prepared to meet the preferred learning style of the graduate students. Said system of instruction was done by subscribing to a new Learning Management System (LMS) that provides e-learning support to its students. According to one of the professors of School of Education, graduate students used online resources in completing their course requirements, which highly contributed to graduate students' preference to electronic resources.

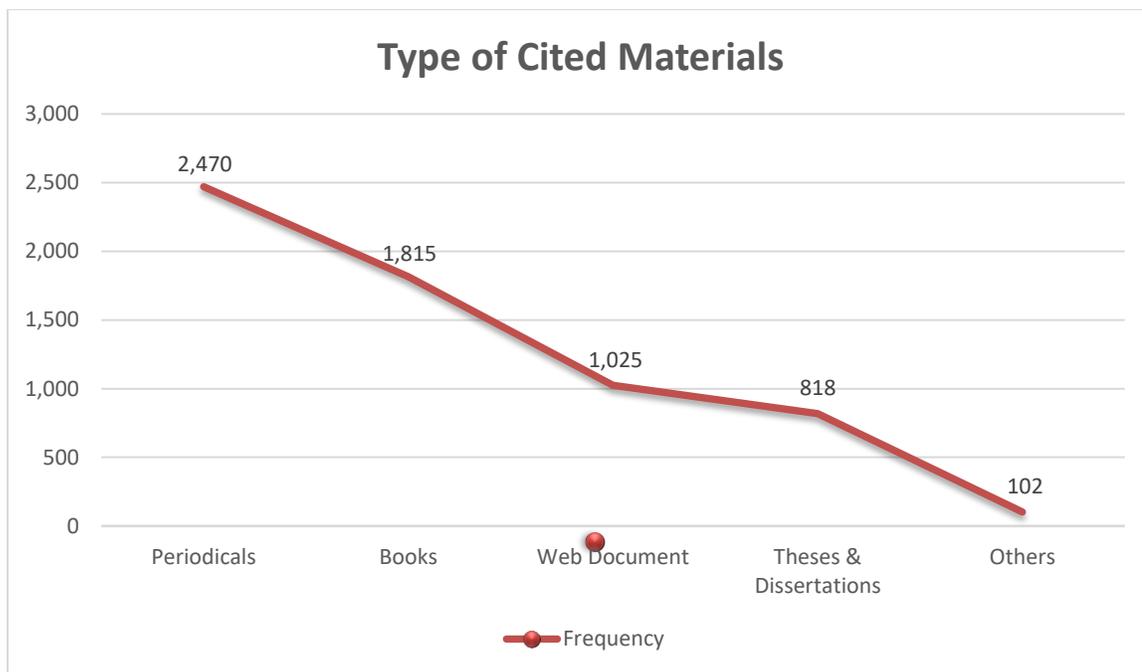
Fig. 2. Citation According to Format of the Cited Materials



1.3 Types of Information Sources

Researchers used different types of information sources in carrying out research. In this study, graduate students have higher inclination to use periodical materials which obtained 2,470 citations equivalent to 39.65%. Book resources followed periodicals with 1,815 citations, equivalent to 29.13%, followed by web references with 1,025 citations, equivalent to 16.45% and 818 citations, equivalent to 13.13% from theses and dissertations. The least came from conference proceedings, laws, memoranda, policy papers, speeches, lectures, opinions, manuals, essays, biographies, pamphlets, and letters, which all together posted a total of 102 citations, equivalent to 1.64% of the total number of citations. Periodicals were more consulted by the doctoral students as compared to other information sources. Periodicals are journals, magazines and newspapers that are published regularly and thus possess the most current information any researcher is seeking for. This result indicates that periodicals are very important materials for graduate students. It is therefore recommended to acquire this type of materials.

This result is supported by a foreign study of Gohain and Saikia (2014) which revealed that journals were the most preferred sources of information used by the PHD researchers in the field of chemical sciences. Said study further revealed that periodical materials are not only used because of its importance in communicating scholarly literature but also because researchers tremendously depend on journals for their research work.

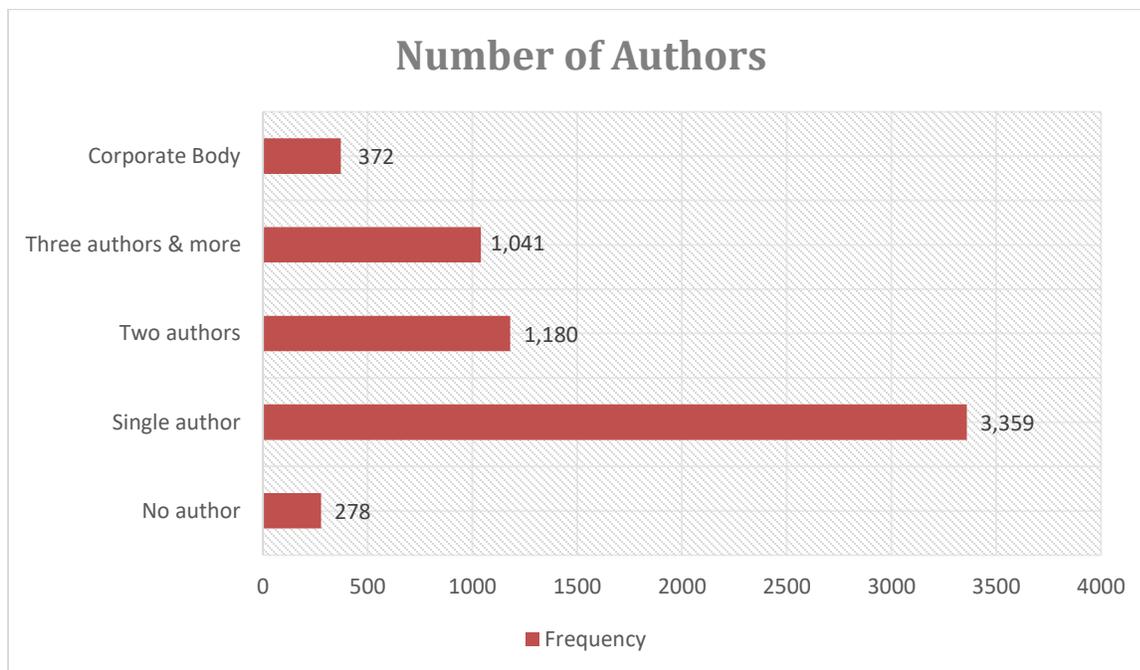
Fig.3. Citation According to Type of Cited Materials

1.4 Authorship

Every publication has a corresponding author. It could be single or personal author, two authors, collaboration of three or more authors, and corporate author. Result of this study revealed that more than half of the total citations were from one author with 3,359 citations, equivalent to 53.92% followed by two authors with 1,180 or 18.94%, three and more authors had 1,041 or 16.71% while corporate author got 372 or 5.97%. As for citations with no author, there were 278 or 4.46% of the total citations. Citations with no author came from web documents and websites. The results mean that School of Education graduate students prefer literature with fewer author, and that their interest in a certain literature increases as the number of author/s per work increases.

The findings is supported by Fasea (2012) on citation analysis of dissertations and theses on agricultural economics, where he discovered that slightly more than half of the total citations were from single authorship. This could be for academic reason where articles published by single authors attract more points during the assessment (promotion) of academic staff.

Fig.4. Citation According to Number of Authors of Cited Materials



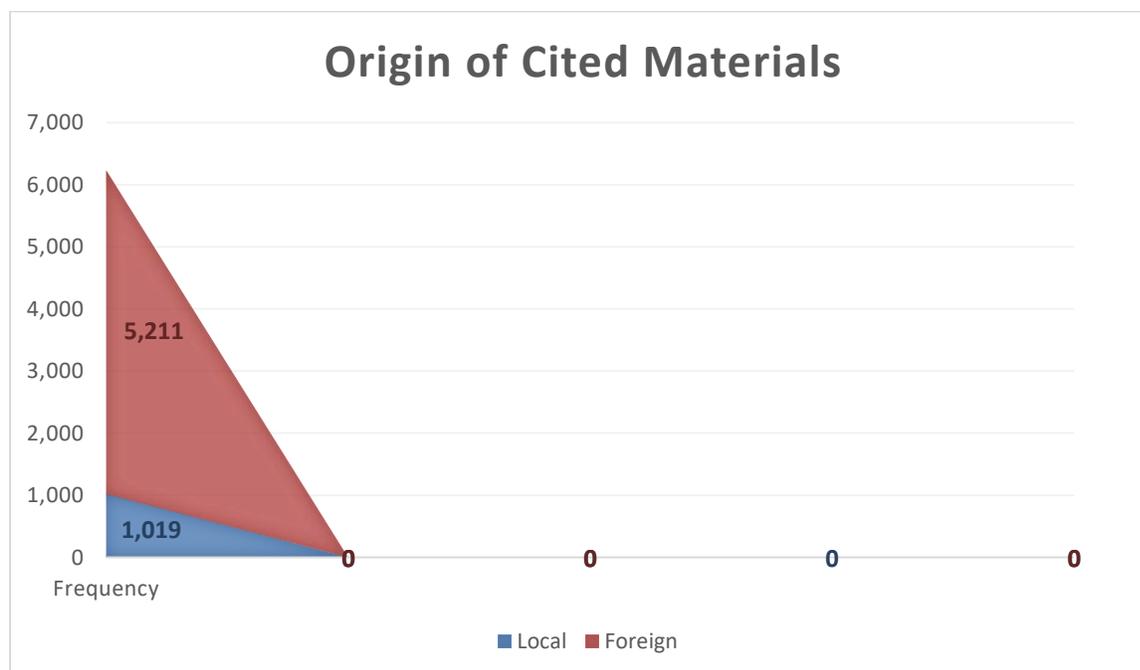
1.5 Origin of the Information Sources

Graduate school students are encouraged to include local literature and studies in writing research. Figure 5 presents the origin of the cited materials of the doctoral students. Foreign information sources garnered the highest citation with 5,211 or 83.64% of the total citations while local literature and studies got 1,019 with an

equivalent of 16.36%. This result revealed that utilization of foreign information materials were extensively utilized maybe because foreign information materials can be easily accessed online and in print. It can also be inferred that there are limited local information sources that are available in the library.

The Commission on Higher Education (CHED, 2017) required that Higher Education Institutions (HEIs) must include Filipiniana books of at least 10% of the total collection. Similarly, Philippine Association of Academic and Research Librarians, Inc. (PAARL) recommended that library holdings shall also include an extensive Filipiniana collection to meet the ever increasing demand of library users. A comprehensive acquisition of current Filipiniana titles relevant to the school's curriculum is also strongly recommended by PAARL (PAARL Standards, 2010). This study is supported by said standards in recommending additional Filipiniana resources for the PWU Library.

Fig.5. Citation According to Origin of the Cited Materials



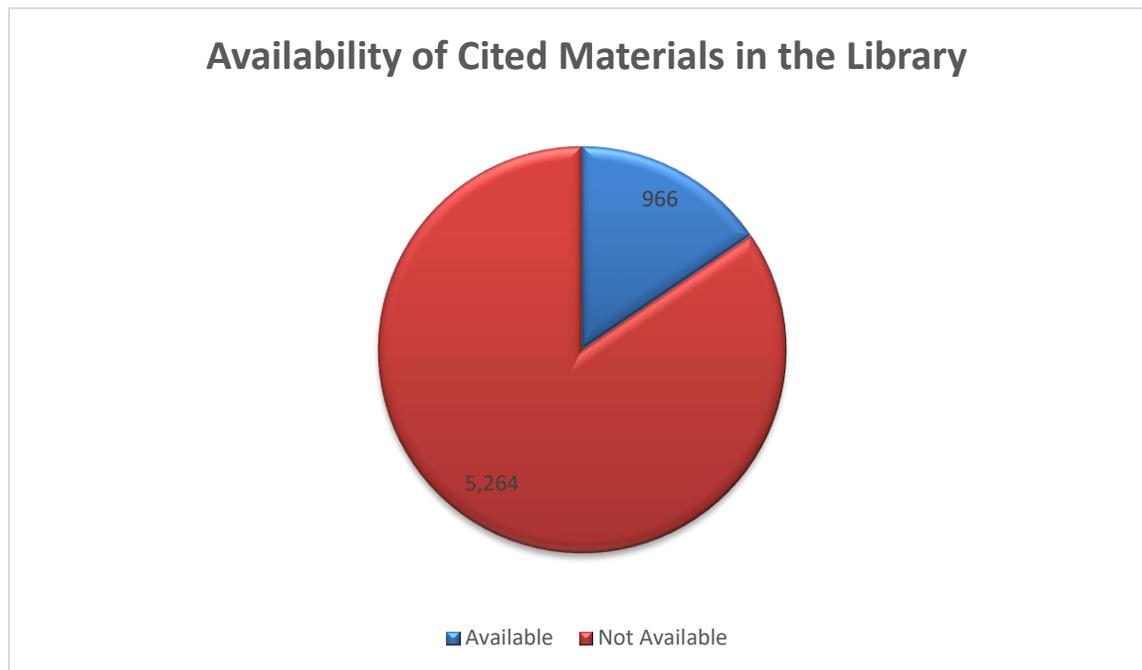
2. Capability of the PWU Library to support the information needs of its School of Education doctoral students.

2.1 Availability of Information Sources in PWU Library

The capability of the PWU Library to support the information needs of the graduate students depends on the availability of diverse information sources in the library. Availability is considered as a measure for library effectiveness (Alabi, 2011). It refers to the readiness and accessibility of information sources provided by the PWU Library for the research needs of the graduate students (Joson, 2016).

On determining the capacity of PWU library in supporting the information needs of its doctoral students, this study extracted 5,264 citations equivalent to 84.49% of the total citations not available in the library. Only 966 citations or 15.51% were available in the library. A quick interview with selected doctoral students reveals that most of the students are not aware of the library's own collection. Other graduate students asked for referral letters to visit other libraries for resources not available in the library. One student mentioned that she does not have time to visit the library because the whole day is devoted in attending classes which led her to use other resources like the internet.

Fig. 6. Availability of Cited Materials in the library



SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

Based on the result of the study, the following are the findings:

1. There are 6,230 citations from 86 doctorate dissertations from AY 2007-2008 to 2016-2017.
2. Referencing Behavior
 - The preference age of publication of the PWU Education doctorate students were from 2005-2009 with 1,866 or 29.95% followed by 1,710 or 27.45% from 2010-2014.
 - Majority of the format used came from electronic resources with 4,011 or 64.38%, while citations from print resources got 2,219 with 35.62%.

- Periodicals were recorded the highest cited information source with 2,470 or 39.65%, followed by citations from books with 1,815 or 29.13%.
- Single or personal author garnered the highest percentage with 3,359 or 53.92% and citations with no author got the lowest percentage with 278 or 4.46%.
- Majority of the cited information sources were foreign sources with 5,211 or 83.64% of the total citations while local literature and studies got 1,019 with an equivalent of 16.36%.

3. On determining the extent of use of PWU library resources, 5,264 or 84.49% of the total citations were not available in the library and only 966 or 15.51% were available in the library.

Conclusion

This study affirms the effects of the invasion of information technology in the library of the Philippine Women's University. In completing their dissertations, the doctoral students of the School of Education use more recent publications with single author, sourced from foreign periodical resources in electronic format. Thus, internet and web resources are now very essential in the Library in providing valuable information to its users.

The unavailability in the Library of the majority of information sources used by the doctoral students, which equates to the Library's inability to provide sufficient information materials to its users, serves as a challenge for PWU Library to think of effective marketing strategies to promote other resources of the library that could suffice the gap created by the meagerness of its collection.

Subscribing to online serial databases should therefore be prioritized to fully support the needs of the PWU School of Education graduate students.

Recommendation

Based on the results discussed above, this study recommends the following:

1. Promote awareness and use of available resources of the PWU library by:
 - Create a more innovative library marketing strategies to entice the use of library resources.
 - Develop a more intensive information literacy program for graduate students to make them aware of the available resources and how to access information from electronic resources subscribed by the library.
 - Involve students in the selection process of information sources and collection development program of the library.
2. Strengthen e-resources collection based on the needs and interest of the faculty and students.
3. In order to increase/improve usage of graduate school theses and dissertations, the library should provide a unified section for theses and dissertations for easy access.
4. Conduct follow up study on collection assessment to further improve the collection development efforts of the library.

References

- Adanza, E. G., Bermudo, P. V. and Rasonabe, M. B. (2009) *Methods of Research: a primer*. Manila: Rex Bookstore.
- Alabi, G. A. (2011, January) Book Availability and Performance Measure in an Academic Library: The Case of the Walter Sisulu University (WSU) Library, Mthatha Campus. *Library Philosophy and Practice*, 1-10. Retrieved from <https://search.proquest.com/docview/870326205/A8F7ADA365E046AAPQ/1?accountid=38643>
- Banateppanvar, K., Biradar, B. S. and Kannappanavar, B. U. (2013). Citation analysis of doctoral theses in botany submitted to Kuvempu University, India: a case study. *Collection Building*, 32(1), 12-21. Retrieved from <https://search.proquest.com/docview/1282130995/1B30C879ABD14A57PQ/2?accountid=38643>
- Becker, D. A. and Chiware, E. R. T. (2015) Citation analysis of master's theses and doctoral dissertations: balancing library collections with students' research information needs. *The Journal of Academic Librarianship*.41, 613-620. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0099133315001226>
- Castro, M. N. V. (2013) Citation analysis of the University of the Philippines College of Dentistry Library theses with implications on collection development. Masteral thesis. University of the Philippines. Retrieved from <http://upslislib.thepinaylibrarian.com/index.php/collections/theses-and-dissertations/?start=12>
- Chikate, R.V. and Patil, S.K. (2008, December) Citation analysis of theses in Library Information Science submitted to University of Pune: a pilot study. *Library Philosophy and Practice(e-journal)*, 222. Retrieved from <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1224&context=libphilprac>
- Commission on Higher Education. (2017) Minimum Requirements for Libraries Higher Education Institutions Common to all Programs: Collection Management. Retrieved from <https://ched.gov.ph/wp-content/uploads/2017/10/Zonal-Public-Hearings-Consultations-on-the-Proposed-Minimum-Requirements-for-Libraries-of-Higher-Education-Institutions-Common-to-All-Programs.pdf>

- Fasae, J. K. (2012) Citation analysis of dissertations and theses submitted to the Department of Agricultural Economics And Extension, Federal University of Technology Akure, Nigeria. [Electronic version]. *Library Philosophy and Practice*, 1-10. Retrieved from <https://search.proquest.com/docview/1349931846/8437CDA7426C47C8PQ/1?accountid=38643>
- Frias, W. S. A. (2014, Aug.) E-books, e-journals, e-resources: what do our faculty need?: an analysis on the use of electronic resources by DLSU faculty researcher. [Electronic version].
- Frias, W. S. A. (2015) Investigating the information preferences of university researchers in the Philippines: Sketching the collection profile of the future. [Electronic version]. The International Academic Forum (IAFOR) Nagoya, Japan.
- Gohain, A. and Saikia, M. (Jan 2014) Citation analysis of Ph.D theses submitted to the Department of Chemical Sciences, Tezpur University, Assam. [Electronic version] *Library Philosophy and Practice*: 0_1, 1-13. Retrieved from <https://search.proquest.com/docview/1738032656/34411CC2262B489EPQ/4?accountid=38643>
- Griffin, K. L. (2016) Citation analysis for core journals in educational leadership. *Collection Building*. 35 (1), 12-15. Retrieved from <https://search.proquest.com/docview/1754504816/FA94E999296841FAPQ/2?accountid=38643>
- Haycock, L. A. (2004, April) Citation analysis of education dissertations for collection development. [Electronic version]. *Library Resources & Technical Services* 48 (2), 102-106. Retrieved from <https://search.proquest.com/docview/216889831/B1094B3FBB784B49PQ/1?accountid=38643>
- Hoffmann, K. and Lise, D. (2012, July) A Review of citation analysis methodologies for collection management. *College & Research Libraries*. 73 (4), 321-335. <https://search.proquest.com/docview/1032137143/A87AA576BA364669PQ/1?accountid=38643>
- Joson, C. G. (2016) The extent of utilization of electronic resources and print materials in the library by the students and faculty: basis for a proposed library intervention program. [Masteral thesis]. Philippine Women's University.
- Kayongo, J. and Helm, C. (2012, Jan.) Relevance of Library Collections for Graduate Student Research: A Citation Analysis Study of Doctoral

Dissertations at Notre Dame. [Electronic version]. *College & Research Libraries*, 73 (1), 47. Retrieved from <https://search.proquest.com/docview/921470263/6FD2AC53EB844AAPQ/1?accountid=38643>

Philippine Association of Academic and Research Librarians. (2010) Collections. Retrieved from <https://www.slideshare.net/PAARLOnline/2010-paarl-standards-for-academic-libraries-fina-l-draft-proposal>

Philippine Women's University (2014) Main Library: Vision and Mission. Retrieved from <https://www.pwu.edu.ph/support.html>

Philippine Women's University (2014) School of Education: History. Retrieved from <https://www.pwu.edu.ph/soe.html>

Philippine Women's University (2014). Vision and Mission. Retrieved from <https://www.pwu.edu.ph/about.html>

Visitacion, V. B. (2017) Citation Analysis of Undergraduate Theses on Human Resource Management at De La Salle-College of SaintBenilde's Learning Resource Center: An Assessment Tool for Collection Development.". *Proceedings of the IATUL Conferences*. Paper 5. Retrieved from <https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=2192&context=iatul>