



# **UNIVERSITI TEKNOLOGI MARA**

## **COLLECTION EVALUATION THROUGH CITATION ANALYSIS TECHNIQUES: A CASE STUDY OF MASTERS' STUDENT AT FACULTY OF HUMAN DEVELOPMENT, UNIVERSITI PENDIDIKAN SULTAN IDRIS (UPSI)**



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(2017143693)**

**MSc**

**July 2019**



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Thesis submitted in partial fulfillment  
of the requirements for the degree of  
**Master in Library Science**

**Faculty of Information Management**

**July 2019**

## AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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Choose an item. : Collection Evaluation Through Citation Analysis  
Techniques: A Case Study of Masters' Student At  
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## ABSTRACT

This study applies citation analysis method to examine the use of information resource by students of the Master in Education , Faculty Human Development at Universiti Pendidikan Sultan Idris (UPSI) in preparing their thesis. References from 20 thesis in a year 2017 submitted at Tuanku Bainun Library were examined for : types of resources; format of the resources, year and age of publication, library holdings whether the is adequately responding their student's research demand and the impact factors of the journals used in student writing. The aim of this study is to improve the existing collection development available for the student and the librarians can utilised it to support research needs. As a result, the study shows that books and journals are still the most used sources for information. The library had provide 70 per cent of the citations available and were supplied for the students to be used. This study also indicates that citation analysis is a good tool in promoting the library's impact for sustainability in the future and the significant of library roles in supporting students for their academic journey. Based on the results. recommendations were made for user education program on current library resources should be incorporated with current and latest subscription. Not only that, classes or workshop using Mendeley or citation builder must be compulsory to the masters' student in UPSI so that there is no incomplete citation.

Keyword : Citation analysis; bibliometrics ; library holdings, library collections, Tuanku Bainun Library.

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## TABLE OF CONTENTS

	Page
<b>AUTHOR'S DECLARATION</b>	<b>iv</b>
<b>ABSTRACT</b>	<b>v</b>
<b>ACKNOWLEDGEMENT</b>	<b>vi</b>
<b>TABLE OF CONTENT</b>	<b>vii</b>
<b>LIST OF TABLES</b>	<b>x</b>
<b>LIST OF FIGURES</b>	<b>xi</b>

### CHAPTER ONE INTRODUCTION

1.1	Introduction	1
1.2	Background of the Study	2
1.3	Problem Statement	3
1.4	Objectives	5
1.5	Research Questions	6
1.6	Significance of Study	6
1.6.1	The Use of Citation Analysis as a Tool for the Librarians.	7
1.6.2	The Use of Citation Analysis to Analyze Research Activity.	7
1.7	Limitations of this Study	7
1.8	Definition of Term	8
1.8.1	Bibliometrics	8
1.8.2	Collection Evaluation	8
1.8.3	Collection Management	8
1.8.4	Citation Analysis	9
1.8.5	Impact Factors	9

### CHAPTER TWO LITERATURE REVIEW

2.1	Introduction	10
2.2	Collection Evaluation	10
2.2.1	Overview	10

2.2.2	Collection Evaluation Methods	10
2.3	Bibliometrics	12
2.4	Use of Citation Analysis Techniques	13
2.4.1	History of Citation Analysis	13
2.4.2	Use of Citation Analysis	14
2.5	Importance of Citation Analysis Techniques	17
2.5.1	Citation Analysis as Indicators for Collection Development	17
2.5.2	Citation Analysis Enables Us to Check Whether Users are Using the Collection	17
2.5.3	Bibliometric Analysis Becomes Part of the Criteria Adopted For Selection For New Titles	18
2.5.4	Citation Analysis to Determine What Extent the Library Collection Met the Needs of Students.	18
2.6	Application of Citation Analysis - Objectives	19
2.7	Application of Citation Analysis – Users	19
2.8	Application of Citation Analysis – Subjects	20
2.9	Citation Analysis Studies Reviewed and Variables Analysed	21
2.10	Proposed Framework Through Citation Analysis Techniques.	24
2.10.1	Types of Resources Cited	25
2.10.2	Format of Resources Cited	25
2.10.3	Year and Age	26
2.10.4	Library Holdings	26
2.10.5	Impact Factors	27

## **CHAPTER THREE RESEARCH METHODOLOGY 29**

3.1	Introduction	29
3.2	Research Design	29
3.3	Population and Sample	31
3.4	Data Collection	32
3.4.1	Defining the First Spreadsheet	33
3.4.2	Defining the Second Spreadsheet	33
3.4.3	Defining the Third Spreadsheet	36
3.5	Data Analysis	37

## **CHAPTER FOUR RESULTS AND FINDINGS 38**

4.1	Introduction	38
4.2	Distribution of Citation by Types of Materials	38
4.3	Distribution of Citation by Format of Materials	40
4.4	Chronological Year and Age Distribution of Total Citation	42
4.5	Distribution of Citation by Library Holdings	43
4.6	Core Journal	45

## **CHAPTER FIVE CONCLUSIONS AND RECOMMENDATIONS 48**

5.1	Introduction	48
5.2	Summary of the Study	48
5.3	Conclusions	50
5.4	Recommendations	50
5.5	Recommendations for Futher Research	51



## LIST OF TABLES

Tables	Title	Page
Tables 1.1	Level of Usage	12
Tables 1.2	Proposed Framework Through Citation Analysis Technique	28
Tables 1.3	Research Design	30
Tables 1.4	Table Structure for Citing Document	33
Tables 1.5	Table Structure for Citing Document	34
Tables 1.6	Table Structure for Year and Age of Citation	35
Tables 1.7	Table Structure for Core Journals	36





## LIST OF FIGURES

Figures	Title	Page
Figures 1.1	Thesis Available in UPSI Institutional Repository	31
Figures 1.2	Masters' Thesis of Faculty of Human Development	32
Figures 1.3	Ranking of Types of Materials of Cited Document.	38
Figures 1.4	Ranking of Types of Materials of Cited Document.	39
Figures 1.5	Format of Materials of Cited Document.	40
Figures 1.6	Publication Format of Materials of Cited Document	40
Figures 1.7	Chronological Year and Age Distribution of Total Citation	42
Figures 1.8	Chronological Year and Age Distribution of Total Citation	43
Figures 1.9	Distribution of Citation by Library Holdings	44
Figures 1.10	Distribution of Citation by Library Holdings	45
Figures 1.11	List of Core Journals	46



## CHAPTER ONE INTRODUCTION

### 1.1 Introduction

Every year academic libraries spent millions of dollars on their collection development. Due to this fact, the process of library collection evaluations become an essential part in development of collection as it become complex task to consider with many variables, viewpoints and stakeholder groups. (Gorman and Miller, 2000). According to Henry et al. (2008), evaluation of library collections is an important part for library to ensure the educational mission of institution is achieved by fulfil the need of the user. Beside, (Gregory, 2011, p.114) in his book stated that library evaluation can be one of an assessment project in supporting the mission and goals of the organization in which it is part, and it should be lead to a plan of action detailing how the library's collection development activities should proceed in order to obtain the best match between the collection and the mission and the goals of the library.

According to (Agee, 2005) study, evaluation of collection can be managed correctly to distinguish the gaps in the collection , the efficient use of budgets, book shelves, staffing and also searching time by the student either online or in the shelves. In a depth, it provide clear picture currency of the library collection and collection issues. Beside (Ahmadieh, Nalbandian, & Noubani, 2016) in their study stated that academic library are facing pressure on collection budgets so it is very important libraries must justify their collection wisely.

According to (Kelly, 2014) in her study stated that librarian are suggested to implement collection evaluation to ensure the library expenditures are aligning well with library goals. In addition to that, collection evaluation assist librarians focus and give efforts on their funding towards the resources that best suit the needs of the institutions.

Therefore, this research is to identify the usage of library collections by checking references listed in student thesis. Leiding (2005) found that footnote and reference list that contain adequately information to validate the original item can be defined as a citation. In the same vein, (Ahmadieh et al., 2016) identified that library can effectively respond either their collection development are fully satisfy by their student through analysing bibliographic citations through student theses.

In this chapter, a brief of literature review that support citation analysis techniques will be one of the indicators that can evaluate library collection. Other sections of Chapter One include the background of the study, statement of the problems, objectives of the study and research questions. Finally, the limitations, significance of the study and definition of related terms are stated.

## 1.2 Background of the Study

History of our nation's in education started at Universiti Pendidikan Sultan Idris or Sultan Idris University of Education (UPSI) which plays an important part to the nations. UPSI offers nine (9) faculty and one (1) Postgraduates Unit to make them the only academic body that specialized in education programmes and training for teachers. The current student body of Universiti Pendidikan Sultan Idris numbers are 4,582 diploma, 16,476 undergraduates, 4,393 Maters's students, and 1,203 Doctoral students.

Along with the formation of UPSI in 1997, Institute of Graduate Studies at Universiti Pendidikan Sultan Idris (UPSI), formerly known as Postgraduate Unit, was established to offers programmes for Master and Doctor of Philosophy (PhD) levels. This Institute is to increase the function and fulfil the need to develop Graduate Programmes.

In an academic background, a postgraduates student from Institutes of Graduate Studies need to complete their research project and compulsory to prepare and submit their research thesis in printed and digital format the end of his/her programme at Tuanku Bainun Library, UPSI. Each theses and dissertations are written and reviewed will include reference list to support of previously scholarly work.



In this study, it will examine the apparentness of library collections through the listed references in the thesis. In previous studies (Iivonen, et.al., 2009, Rosenberg, 2015, Alves, et.al, 2014) have also examined the availability of library own's collection sources in the dissertations . According to Smith (1981), analysis of citation in thesis and dissertation can create the huge impact on development of collection and also services to the users. In addition to that, thesis are specifically applicable items of research tp find out the impact of library collection as it represents university's research and at the same time it produced specialised and specified knowledge (Iivonen, et.al., 2009) . In line with this, libraries must be able to provide complete resources in order to meet the user's information needs, supporting in learning, teaching and research activities (Alves, et.al, 2014)

### 1.3 Problem Statement

Through--out the twenty century, library collections are shifted to electronic journals, electronic books, the World Wide Web and online database have emerged as important formats to the library users. However, the increasing price of electronic resources become a major problem for academic library. Therefore, the library need a mechanism to understand the scholarly need of their students (Ahmadieh et al., 2016).

According to the circulation statistics released by Circulation Unit of Tuanku Bainun Library, it clearly identifies from 2015 to 2017 amount of borrowing item by graduates' student are reduce. In 2015 there 5,968 students from graduates' category, only 1,809 students are borrowing books from the library. And the number start reduces from year by year. Thus, this study is very important to analyse either printed form of library collections are being used or not. The decisions for allocating budgets for purchasing the library collections also can be reviewed yearly through statistics from circulation unit and the shifting number of students and faculty in research program. (Currie & Monroe--gulick, 2013).



Currently, Tuanku Bainun Library provide electronic and printed formats of information resources based on collection development policy. However, in this twenty century, our collection development policy still not include the citation of analysis for decision making instrument in collection acquisition and evaluation (Alves et al., 2014). Therefore, this study, will suggest to the Tuanku Bainun Library management to implement citation analysis techniques in the future routine as one of the tools to evaluate library collections. According to Tucker (2013), Collection Management Department can use this citation analysis as a yearly data collection process and every year they can continue update the information”

The emergence of technology affected the changing the current trends in research fields and the behaviour of students seeking information. Thus, librarians are require to study method to examine actual use of library collections in order to deliver the collections and services that fulfil the needs of their users. According to (Ahmadieh et al., 2016) study, they identified that librarian can make decision on collection development policy to enhance services through analysis of citation. And at the same time, it explores the more important materials used by the users.

The major change of resources from printed to electronic access give burdens to the academic library when the library is not affordable of paying books, online database and journal subscription. The financial difficulties on collection budgets have been mention in previous studies. Ahmadieh et al., (2016) found that in this 21<sup>st</sup> century libraries always faced challenges in choosing, controlling and abandon decision because of libraries nowadays are investing more electronic resources through purchasing and subscribing library resources for ease users in searching and discover the information. Thus, the analysis of citation will be one of a method for library collection growth to build a strong academic collection and at the same time it determines its usefulness.

As February 2019, collections of the Tuanku Bainun Library at UPSI comprises 235,752 titles and 366,702 items for printed materials only. And this amount is increase year by year to fulfill the reading list requested by the faculty at UPSI. Based on this, library faced lack of space or saving storage and hard to decide what to keep on the shelves and what to abandon. Even all the printed books bought by the library are

suggested from the academician, but some resources are not appropriate or suitable for the students to use in their research. Thus, citation analysis could determine the main sources in specific area of subjects and fields. Beside that, acquisition unit can be advise to have more effort in purchasing books.

Tuanku Bainun Library at UPSI also subscribes to a great number of online databases with total amount 2,163,516 titles includes e--books, journals, articles, proceedings, newspapers and etc. According to Alves et.al (2004), in the context of scientific research, librarian can use bibliometrics through mathematical and statistical model which it is useful tool to detect information usage pattern and also provide guideline in decision making on library collection development. This is very important to ensure libraries meet the information needs and establish specific demand of their users. This statement agreed by (Becker & Chiware, 2015) which is bibliometric techniques of citation analysis can be used to evaluate bibliographies in masters' thesis and doctoral dissertation

#### 05-4506832 pustaka.upsi.edu.my Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah PustakaTBainun ptbupsi **1.4 Objectives**

The present aim of this study is to better understand the usage of the Tuanku Bainun Library. The objective included:

- a) To determine the types of materials used by masters' student in preparing their thesis
- b) To determine the format of materials used by master's student in preparing their thesis.
- c) To determine the year and age of material cited in masters' student in preparing their thesis.
- d) To determine the core journals cited in masters' student in preparing their thesis.
- e) To determine how well the references were available in Tuanku Bainun Library.

## 1.5 Research Questions

To help researcher achieve the aim and objective if this study, there are several research questions on this study to be answer. At the same time, it analyzes the criteria of the thesis submit to the Tuanku Bainun Library. In depth, the study is required to answer the following questions?

- a) What are the most-used materials used by masters' student in preparing their thesis?
- b) What are the format of materials used by master's student in preparing their thesis.
- c) What is the year and age of material cited in masters' student in preparing their thesis?
- d) What are the core journals cited in masters' student in preparing their thesis?
- e) Are the references cited in masters' thesis available at Tuanku Bainun Library?

## 1.6 Significance of Study

The finding of this study is useful to the Tuanku Bainun Library and UPSI as well. It will identify the library collection strength and at the same time can overcome the weaknesses of the collections. According to Sapijah(1997) and Smith (1981) study, they explained two major analysis as a citation analysis. The first one is citation analysis can be use as a tool for the librarians. Second, it can analyze activity of research by the students.

### **1.6.1 The Use of Citation Analysis as a Tools for the Librarians.**

Based on (Ahmadieh et al., 2016) citation analysis can be utilized by librarians to better understand their library resources includes type, citation age, language, subject area, core journals and frequency that are helpful in decisions to selecting resources need of their users.

### **1.6.2 The Use of Citation Analysis to Analyse Research Activity.**

Citation of analysis can assist in distinguish the quality of the references used by researchers. The more information is cited, the more information use by the people and it can indicate the rank of impact factor and increase trustworthiness of information cited in the references. (Rosenberg, 2015).

### **1.7 Limitations of this Study**

There is no specific guideline for citation analysis methodology in this study. Thus, this study faced several challenges and limitations, including the following issues:

- a) Incorrect or uncompleted citation and references record input by the students. For example, information was constantly uncompleted with some inadequate information of the thesis such as the journal title, volume, number and some of the students wrongly key in year for a book or journal publication. It will lead to wrongly calculating the year and age of materials used. In addition to that, some citation are not complete as the students did not used any citation builder such as Mendeley to record the references. That incomplete citation was used for calculating the types of materials used in preparing their thesis.
- b) The sampling of this thesis was chosen from one faculty only in a year 2017 because of time constraint. If the sample thesis is chosen from the whole faculty in UPSI the result or finding may be affected because it may provide more view of this study.

## **1.8 Definition of Term**

Several terminologies have been identified and frequently used in this study. The terminologies are defined as follows:

### **1.8.1 Bibliometrics**

Two Greek words that is “biblio” and “metriko’s” are combined together and become bibliometrics’ (Zafrunnisha, 2012). Bibliometrics as the elements of quantitative approaches used to count, trace and examine resources used based on scholarly literature. (Roamer and Borchardt, 2015).

### **1.8.2 Collection Evaluation**

Evaluation of collection is an essential part of the major process in collection development that include the formulation of policy, acquisition, selection, processing and deselection. In addition to that, (Wallace and Fleet, 2001, p :118) stated that “it is concerned with determining the strengths and weaknesses of a collection of library materials in terms of the level of intrinsic quality, the extent to which that collection supports and furthers the library’s mission and goals, and the value of that collection to the library’s user and potential users”

### **1.8.3 Collection Management**

The process of planning, implementation and evaluation of collection is a set of collection development. (Baughman, 1977). Other terms used as collection management, information resources management and materials management that involves the process of identify, select, acquisition and evaluation of library materials include printed, electronic and audiovisual materials to be used for the community or user. (azlibrary.gov)

#### **1.8.4 Citation Analysis**

In a library context, based on the information cited by the researchers in a bibliography, footnote, end--note, or text in their thesis or dissertations can be defined as the citation analysis. This citation analysis will provide clues that help librarians develop strategies to meet the information needs of researchers. (Nisonger, 2003)

#### **1.8.5 Impact Factors**

Impact Factors often abbreviated as IF was first described by Eugene Garfield, the creator of the Institute for Scientific Information (ISI) on 1961. According to (Cox and Ellis, 2014), impact factors is defined when scientific journals been measured by their broadly used to rank or calculated by the Scientific Institution (ISI) and subsequently published yearly in Journal Citation Report (JCR) . The study believed that, the more higher impact factor of the journals the more important and useful than the lower impact journals.