



THE CITATION AND LINK ANALYSIS AMONG
HADITH BULUGH AL-MARAM MIN ADILLAH AL-
AHKAM BY IMAM IBN HAJR AL-'ASQALANI

BY

MUHAMMAD ALIF BIN ISMAIL

A dissertation submitted in fulfilment of requirement for
the degree of Master in Library and Information Science

Kulliyyah of Information and Communication Technology
International Islamic University Malaysia

APRIL 2014

ABSTRACT

This research focused on citation and link analysis among hadith in *Bulugh al-maram min adillah al-ahkam* by Imam Ibn Hajr al-‘Asqalani. The citation and link counts involved 101 of 1399 hadith which on topics of introduction to marriage (*Nikah*), wedding gift (*Maskahwin*), reception (*Walimah*), divorce (*Thalaq*), menstrual cycle (*‘Iddah dan Ihdad*) and livelihood (*Nafkah*). The purpose of this research is to identify the pattern of citation and link within the contribution made by narrators (*Rawi*) among the Imam Sab’ah, co-narrators (*Mukhrij*) among the Successors of the Followers of Prophet Muhammad P.B.U.H and *Rijal* (NoName transmitter). It is also intended to recognize the number of hadith cited by the transmitters. This research used Protégé version Beta 4.2 to analyse and illustrate the link graphically. Name of relationships in Object Property Hierarchy is also considered. The relationship among the transmitters and hadith is described through Arc Types and Object Property Hierarchy. Based on the results, Muslim (42 of 160 citations) and Ibn Hibban (13 of 53 citations) dominated the citation and link counts. On the contrary, less domination among transmitters is Tirmidzi (17 of 160 citations) and other transmitters with one citation, for instance, Abu ‘Awamah, Abu Hatim, Abu ‘Isa at-Tirmidzi, Abu Ya’ala, Al-Bazzar, Ibn ‘Adiy, Ibn Khuzaimah, Ibnul Madini, Jama’ah and Zuhaily. Additionally, the most popular hadith cited by transmitters is introduction to marriage (*Nikah*), which is 76 of 172 citations from narrators (*Rawi*) and 20 of 54 from co-narrators (*Mukhrij*). Considering these findings, the necessary patterns of hadith transmitters revealed the contribution and relationship among them are among the people of Hadith.

خلاصة البحث

ركز هذا البحث على الاقتباس وتحليل الارتباط بين الأحاديث في كتاب بلوغ المرام من أدلة الأحكام للإمام ابن حجر العسقلاني. شمل الإقتباس والربط على 101 من بين 1399 حديث، والتي كانت عن النكاح، هدية الزواج، الوليمة، الطلاق، دورة الطمث، والنفقة. هدف هذا البحث هو التعرف على نمط الاقتباس و الإرتباط ضمن مساهمة الراوي و بين المخرج الإمام شعبه، من بين خلفاء أتباع النبي محمد عليه الصلاة والسلام والناقلين. كما يهدف هذا البحث أيضا إلى التعرف على عدد الأحاديث التي استشهد بها الناقل. يستخدم هذا البحث برنامج بروج الإصدار بيتا 4.2، لتحليل و توضيح الإرتباط بالرسوم والصور. اسماء العلاقات في التسلسل الهرمي في الملكية معتبرة في هذا البحث. تم توصيف العلاقة بين الناقلين و الحديث عبر نوع القوس والتسلسل الهرمي للملكية . استنادا إلى النتائج، مسلم (42 من 160 الاستشهادات) و ابن حبان (13 من 53 الاستشهادات) بالإعتماد على الاقتباس و الإرتباط. على العكس من ذلك ، أقل هيمنة من الناقلين هو الترمذي (17 من 160 الاستشهادات) والناقلين الآخرين كل منهم باقتباس واحد، على سبيل المثال ، أبو عوامة ، وأبو حاتم ، وأبو عيسى الترمذي، ابو يعلى البزار، ابن عدي ، ابن خزيمة ، ابن المدني ، و جمعه والزجيلي. بالإضافة إلى ذلك، الحديث الأكثر إقتباسا بين الناقلين هي أحاديث النكاح ، والتي هي 76 من 172 استشهادا من الرواة و 20 من 54 من المخرجين . وبالنظر إلى هذه النتائج ، الصلة الضرورية بين الناقلين كشفت المساهمة والعلاقة فيما بينهم.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion; it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Library and Information Science.

.....
Roslina Othman
Supervisor

I certify that I have read this study and that in my opinion; it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Library and Information Science.

.....
Ahmad Bakeri Abu Bakar
Examiner

This dissertation was submitted to the Department of Library and Information Science and is accepted as a fulfilment of the requirement for the degree of Master of Library and Information Science.

.....
Wan Ali Wan Mamat
Head, Department of Library and
Information Science

This dissertation was submitted to the Kulliyah of Information and Communication Technology and is accepted as a fulfilment of the requirement for the degree of Master of Library and Information Science.

.....
Abdul Wahab Abdul Rahman
Dean, Kulliyah of Information and
Communication Technology

DECLARATION

I hereby, declare that this dissertation is the result of my own investigation, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Muhammad Alif Bin Ismail

Signature

Date

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

**DECLARATION OF COPYRIGHT AND AFFIRMATION
OF FAIR USE OF UNPUBLISHED RESEARCH**

Copyright © 2014 by Muhammad Alif Bin Ismail. All rights reserved.

**THE CITATION AND LINK ANALYSIS AMONG HADITH IN
BULUGH AL-MARAM MIN ADILLAH AL-AHKAM BY IMAM
IBN HAJR AL-‘ASQALANI**

No part of this unpublished research may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission of the copyright holder except as provided below.

1. Any material contained in or derived from this unpublished research may be used by others in their writing with due acknowledgement.
2. IIUM or its library will have the right to make and transmit copies (print or electronic) for institutional and academic purposes.
3. The IIUM library will have the right to make, store in a retrieval system and supply copies of this unpublished research if requested by other universities and research libraries.

Affirmed by Muhammad Alif Bin Ismail

.....
Signature

.....
Date

ACKNOWLEDGEMENTS

Foremost, praise is to Allah the Almighty, on whom ultimately we depend for sustenance and guidance. With all the blessings, patience and strengths that He has given upon me the completion of this research.

I would like to express my gratitude to my supervisor, Assoc. Prof. Dr. Roslina Othman, for her excellent guidance, patience and encouragement extended to me. I would also like to thank to my examiner, Prof. Ahmad Bakeri Abu Bakar, for his assessment. Without their persistent help, this research would not have materialized.

My sincere thanks go to those at Department of Library and Information Science, especially lecturers and classmates, for their encouraging words and thoughtful criticisms, the staff who assisted me with the administrative task necessary for completing my master degree program. My sincere thanks also go to Universiti Sains Islam Malaysia (USIM) for giving me the opportunity to continue this Master degree program under Fellowship Scheme.

My deepest appreciation and gratitude goes to my parents, Ismail Mat Sari and Masitah Jasa, to my mother-in-law, Siti Zabidah Mustafa, to my beloved wife, Sara Zulhene Mohd Zol, my siblings and my in-laws. Without their continuous and endless support, encouragement and love, I will not be able to go through the hardship of this venture.

Finally, I place on record, my sincere appreciation, thanks and tribute to one and all who directly or indirectly, have lent their hand in the successful completion of this research.

LIST OF TABLES

<u>Table No.</u>		<u>Page No.</u>
1.1	The name of narrators (<i>Rawi</i>)	5
1.2	The groups of narrators (<i>Rawi</i>)	5
1.3	The 16 chapters (<i>Kitab</i>)	7
1.4	The 15 topics (<i>Bab</i>) on marriage	8
1.5	The 6 topics (<i>Bab</i>) used for the research	8
2.1	Classification of narratives according to 5 criteria	29
3.1	The compilation method for chapter of marriage (<i>Kitab nikah</i>)	33
3.2	The sample calculation table of narrators (<i>Rawi</i>)	36
3.3	The sample calculation table of the co-narrators (<i>Mukhrij</i>)	36
3.4	The sample calculation table of <i>Rijal</i> (NoName)	37
3.5	The number of hadith populations	39
3.6	The group of narrators (<i>Rawi</i>), co-narrators (<i>Mukhrij</i>) and <i>Rijal</i> (NoName)	40
3.7	Sibling Property used to describe the relationship between hadith-to-narrators and narrators-to-hadith	44
4.1	Citation and link analysis frequencies for narrators (<i>Rawi</i>) and co-narrators (<i>Mukhrij</i>)	52
4.2	Citations for narrators (<i>Rawi</i>)	54
4.3	Composition based on the number of hadith cited by narrators (<i>Rawi</i>)	55
4.4	Composition on the number of hadith cited by narrators (<i>Rawi</i>)	58

4.5	Composition of hadith on <i>Nikah</i> which cited by narrators (<i>Rawi</i>)	59
4.6	Composition of hadith on <i>Nafkah</i> which cited by narrators (<i>Rawi</i>)	62
4.7	Links analysis for co-narrators (<i>Mukhrij</i>)	65
4.8	Composition on the number of hadith has link for co-narrators (<i>Mukhrij</i>)	66
4.9	Composition of number of hadith has link by co-narrators (<i>Mukhrij</i>)	69
4.10	Composition of number of hadith on <i>Nikah</i> has highly link by co-narrators (<i>Mukhrij</i>)	71
4.11	Composition of no. hadith has lowest link by co-narrator (<i>mukhrij</i>)	73
4.12	Citation and link analysis for no. hadith has cited and link by <i>Rijal</i> (NoName)	74
4.13	Tabulation category of Object Properties Hierarchy	75
4.14	The contribution of co-narrator (<i>Mukhrij</i>) works	77

LIST OF FIGURES

<u>Figure No.</u>		<u>Page No.</u>
3.1	Class hierarchy of Narrator_Dirayatulhadith and Texthadith_Riwataulhadith	38
3.2	The topObjectProperty is defined for the relationship	38
3.3	Relationship through OntoGraf of Narrator_Dirayatulhadith and Texthadith_Riwayatulhadith	39
3.4	First OPH of narrators (<i>Rawi</i>) e.g “Bukhari isCited Nikah1”	41
3.5	Inverse relationship e.g “Nikah1 hasCitedBy Bukhari” at the second OPH	42
3.6	Classes Protégé consisting of Class Hierarchy, Annotations and Description	43
3.7	Symmetric is ticked for restriction and its assist to inverse the Sibling Property (hasCitedGradedSahihBy) and (isCitedGradedSahih)	44
3.8	Arc Types for illustrating the arrows in OntoGraf	45
3.9	Ontograf illustrated the Narrator_Dirayatulhadith and Texthadith_Riwayatulhadith	46
3.10	Ontograf illustrated the Sibling Class of Narrator_Dirayatulhadith	46
3.11	Ontograf illustrated the Sibling Class of Texthadith_Riwayatulhadith	47
3.12	Both Sibling Classes Narrator_Dirayatulhadith and Texthadith_Riwayatulhadith	47
4.1	Citation and link analysis frequencies for narrators (<i>Rawi</i>) illustrated in Ontograf	53
4.2	Highly cited hadith is by Muslim (42 citations)	56
4.3	Lowest cited hadith is by Tirmidzi (17 citations)	56

4.4	Composition hadith cited by narrators (<i>Rawi</i>) illustrated in Ontograf	59
4.5	Highest hadith in Nikah cited by Muslim (18 citations)	60
4.6	Lowest hadith in Nikah cited by Nasa'i (7 citations)	61
4.7	Lowest citations by Nasa'i with different Object Properties	61
4.8	Highest hadith in Nafkah cited by Nasa'i (3 citations)	63
4.9	Lowest citation; Nafkah1 hasCitedBy Bukhari (1 citation)	63
4.10	Lowest citation – Nafkah12 hasCitedBy Tirmidzi (1 citation)	64
4.11	Composition no. hadith has link for co-narrators (<i>Mukhrij</i>) illustrated by the Ontograf	67
4.12	The highest link analysis by Ibn Hibban (13 citations)	67
4.13	The lowest link counts by Abu 'Awamah, Abu Hatim, Abu Isa at-Tirmidzi, Abu Ya'la, al-Bazzar, Ibn 'Adiy, Ibn Khuzaimah, Ibnul Madini, Jama'ah and Zuhaily	68
4.14	Composition of number of hadith has link by co-narrators (<i>Mukhrij</i>) illustrated by the Ontograf	70
4.15	Number of hadith on <i>Nikah</i> has highly link by co-narrators (<i>Mukhrij</i>) illustrated by the Ontograf	72
4.16	Lowest link counts by co-narrator (<i>Mukhrij</i>) illustrated by the Ontograf	73
4.17	Citation and link analysis for <i>Rijal</i> (NoName)	74

ABBREVIATIONS

<i>Matan</i>	The text of narration/hadith
	Text
<i>Sanad</i>	The meaning of narration/hadith
	The chain of narration
	Chain of transmitters
	Narration
<i>'Ilm riwayat al-hadith</i>	Science of understanding hadith
<i>'Ilm dirayah al-hadith</i>	Science of hadith transmission
<i>Isnad, Al-Isnad</i>	The little support, with particular hadith
<i>Sahih</i>	Authentic
<i>'Ibadah</i>	Worship
<i>Mu'amalah</i>	Transaction
<i>Munakahat, Nikah</i>	Marriage
<i>Jinayah</i>	Criminal
<i>Kitab</i>	Chapter
<i>Bab</i>	Topic
<i>Al-Ayah</i>	Verse(s)
<i>Takhrij al-hadith</i>	Knowledge of hadith authentication
<i>Rawi</i>	Narrators
<i>Mukhrij</i>	Co-narrators
<i>Kitab an-nikah/nikah</i>	Chapter of marriage
<i>Isnad system</i>	Hadith transmission network
<i>Huffaz</i>	Those are remembering Al-Quran
<i>Tabi'in</i>	Successors of Followers
<i>Fiqh</i>	Islamic law

TABLE OF CONTENTS

Abstract	ii
Abstract in Arabic	iii
Approval Page.....	iv
Declaration	v
Copyright Page.....	vi
Acknowledgements	vii
List of Tables	vii
List of Figures	x
Abbreviations	xii
CHAPTER ONE: INTRODUCTION	1
1.0 Background of the study	1
1.1 Problem statement	8
1.2 Research objectives	10
1.3 Research questions.....	11
1.4 Definition of terms.....	12
1.5 Limitation of the study.....	14
1.6 Significance of the study	15
1.7 Summary.....	15
CHAPTER TWO: LITERATURE REVIEW	16
2.0 Introduction.....	16
2.1 Citation analysis works.....	16
2.1.1 Usefulness of citation analysis works	18
2.2 Link analysis works	20
2.2.1 Usefulness of link analysis works	20
2.3 Literature for hadith.....	22
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY	30
3.0 Introduction.....	30
3.1 Selection of the hadith	30
3.2 Compilation method of Bulugh al-maram.....	32
3.3 Compilation method of Bulugh al-Maram Terjemahan Melayu	33
3.4 Scheduled the citation counts into table	34
3.5 Protégé	36
3.6 Populations	38
3.7 Procedures.....	39
3.8 Data analysis	41
3.9 Summary.....	46
CHAPTER FOUR: FINDINGS AND ANALYSIS	48

4.0 Introduction.....	48
4.1 Citation for narrators (<i>Rawi</i>) and Co-narrators (<i>Mukhrij</i>)	49
4.2 Citation analysis for narrators (<i>Rawi</i>).....	51
4.2.1 Hadith cited by narrators (<i>Rawi</i>)	55
4.2.1.1 Highest topic cited by narrators (<i>Rawi</i>).....	57
4.2.1.2 Lowest topic cited by narrators (<i>Rawi</i>)	59
4.3 Link analysis for co-narrators (<i>Mukhrij</i>)	61
4.3.1 Hadith has link by co-narrators (<i>Mukhrij</i>)	65
4.3.1.1 Highest topic has link by co-narrators (<i>Mukhrij</i>)	67
4.3.1.2 Lowest topic has link by co-narrators (<i>Mukhrij</i>).....	69
4.4 Citation and link analysis for <i>Rijal</i> (NoName transmitters)	70
4.5 Category of object properties for research.....	71
4.6 Contribution of co-narrator works.....	73
CHAPTER FIVE: DISCUSSION AND CONCLUSION.....	75
5.0 Introduction.....	75
5.1 Recommendations.....	76
5.3 Limitations	77
5.4 Further research	78
5.5 Summary	78
REFERENCES.....	79
APPENDIX I: COVER PAGE OF BULUGHUL MARAM TERJEMAHAN MELAYU BY SYEIKH IDRIS AL-MARBAWI	83
APPENDIX II: PRINT SCREEN OF PROTÉGÉ 4.2 BETA.....	84
GLOSSARY.....	85

CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND OF THE STUDY

Bibliometrics is quantitatively analyzing scientific and technological literature. It is an application of mathematics and statistical methods to books and other media of communication. Bibliometrics analysis consists of bibliographic information of publications. Sengupta (1992) gives the definition that bibliometrics is a sort of measuring technique by which interconnected aspects of written communications can be quantified.

The purpose of bibliometrics study is to examine the impact of a particular paper or field. Other than that, according to Hulme (1923), bibliometrics study also known as statistical analysis or statistical bibliography. He added that the purpose of statistical bibliography is to shed light on the process 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 analysis its various facets of written communication.

In bibliometrics studies, citation and link analysis are the measures for this collaborative research between information science and Islam studies. Sean Eom (2009) said that citation analysis is often used to determine the most influential scholars, publications or universities in a particular discipline by counting the frequency of

citations received by individual units of analysis (authors, publications, etc.) over a period of time from a particular set of citing documents.

Besides that, Thomas Mandl (2007) stated that link analysis research identifies structural aspects while exhibiting strong correlations to the number of links. It is a heuristic method. He added that another reason for setting links is thematic similarity. However, the quality assessment cannot be the only reason for setting a link. The quantity assessment is also important for setting a link. From that, the link can be systematically calculated in order to identify the number of relationships between the links. Conversely, Yang (2000) commented that the quality or authority value derived from the link-structure needs to be aggregated with the retrieval ranking. The retrieval ranking locates the highest and lowest number of link-structures. Furthermore, it also describes the frequency used of link-structures. Hence, the quality and authority of link-structure needs are affected by the retrieval ranking.

Conceptually, Thomas Mandl (2007) said that link study is the most well-known and consists probably the PageRank algorithm and its variants. However, it assigns two types of values which are authority value or hub value, content pages and link pages. Then, this study indicates the structural aspects of narrating the hadith which reveal the main correlation to the number of links from each hadith. Furthermore, by means of content pages and link pages, the number of links toward a hadith is considered as a main indicator for quality of hadith.

In order to study this topic, this research selected to discuss on the topic of Hadith. According to Ismail Abdullah and Shayuthy Abdul Manas (2007) in their book, Hadith is defined into two meanings; literal meaning and technical meaning. In literal meaning,

Hadith means “new” or “recent”, the opposite of old. It is used for all kinds of conversations, stories, speeches and communications. In technical meaning, hadith according to scholars of hadith (*Muhaddithun*) means “what was transmitted on the authority of the Prophet P.B.U.H, his deeds, saying, tacit approvals or description of his physical features and moral behavior.”

There are substantial topics of hadith which are closely related to this research which are the text of narration (*Matan*) and the chain of narration (*Sanad*) of the hadith. In fact, there is a discussion on the condition of the narrator and from whom it was narrated. The selected topics focus on both text and narration. In brief, text in technical meaning “it is where the chain of a hadith stops or ends up. It is the original words, at the end of the chain of transmitters, whether being narrated from the Prophet P.B.U.H or from anyone else.” Besides that, the chain of narration in technical meaning “it is narrating through the text is a ‘chain’ because the authenticity of the hadith depends on the reliability of its reports and the linkages among them.”

Furthermore, the text and chain of narration are also classified in science of hadith (*Mustalah al-hadith*) which are entitled science of understanding hadith (*‘Ilm dirayah al-hadith*) and the science of hadith transmission (*‘Ilm riwayat al-hadith*). Ismail Abdullah and Shayuthy Abdul Manas (2007) noted through definition by Ibn al-Akfanī of the science of understanding hadith as “it is the science which comprehends the words of the Prophet P.B.U.H and his actions, its narrations, regulations and proliferation of its literal expression.” Another view of science of understanding hadith is the one Haji Khalifah, which said “it is the science that investigates about the meaning and concepts of hadith terms and their meaning, based on Arabic literal maxims and *Shariah* principles, as it is

necessary to be consistent with Prophet's way of life." On the other hand, Mohammad Hashim Kamali (2002) has also defined science of understanding hadith as knowledge which concern with the truth, meaning and message of the hadith, and the law or ruling that is conveyed by the text.

The second substantial classification is science of hadith transmission. Ismail Abdullah and Shayuthy Abdul Manas (2007) referred to Ibn al-Akfani in their book about science of hadith transmission, "it is the knowledge through which we know the reality of the narration, its conditional rules and conditions of transmitters and categories of various reports." Meanwhile, they added the view of Haji Khalifah where he said that "it is the science through which we investigate how the hadith is linked to the Prophet P.B.U.H, conditions of its narrators, in terms of their memory and reliability; also its chain continuation or otherwise, etc."

Besides that, according to Mohammad Hashim Kamali (2002), this hadith transmission its refers to transmission of hadith and the soundness and continuity or otherwise of its *Isnad* and also the manner in which the hadith was received, retained and delivered, or subjected to validation and impoundment, etc., without looking into the meaning and implications of the text of hadith.

Hence, the book of *Bulugh al-maram* is selected for this research where the book explained on jurisprudence and *Shafi'i* School of Thought (*Mazhab as-shafi'i*) written by writer's Imam Ibn Hajr al-'Asqalani who noted 7 narrators in his introduction. Then, Muhammad Mustafa al-A'zami (2002) detailed those 7 narrators as follows:

Table 1.1
The name of narrators (*Rawi*)

Name of Imam	Nicknames	Date of birth and death
Abu Abdullah Ahmad b. Hanbal al-Shaybani	Ahmad	164-241 A.H
Abu Abdullah Muhammad b. Ismail b. Ibrahim b. al-Mughirah al-Bukhari	Bukhari	195-256 A.H
Imam Muslim b. Hajjaj b. Muslim Abu al-Husayn al-Qushayri al-Naisaburi	Muslim	204-261 A.H
Sulayman b. Ishaq al-Sijistani	Abi Daud	202-275 A.H
Muhammad b. Isa b. Sarwah al-Tirmidhi	Tirmidhi	209-279 A.H
Imam Abu Abd al-Rahman Ahmad b. Ali b. Shu'ayb al-Nasa'i	Nasa'i	215-303 A.H
Muhammad Ibn Yazid Abu Abdullah Ibn Majah al-Qazwini	Ibn Majah	209-273 A.H

Instead of narrating the hadith individually, Imam Ibn Hajr al-'Asqalani classified them into groups. The groups show the collective work in narrating the hadith where it is able to influence the position and grade of hadith. The groups are known as *Sab'ah* (group of 7), *Sittah* (group of 6), *Khamsah* (group of 5), *Arba'ah* (group of 5) and *Muttafaq 'alayh* (group of 2).

Table 1.2
The groups of narrators (*Rawi*)

<i>Sab'ah</i> (7)	<i>Sittah</i> (6)	<i>Khamsah</i> (5)	<i>Arba'ah</i> (4)	<i>Muttafaq 'alayh</i> (2)
Ahmad	Bukhari	Ahmad	Abi Daud	Bukhari
Bukhari	Muslim	Abi Daud	Ibn Majah	Muslim
Muslim	Abi Daud	Ibn Majah	Tirmidzi	
Abi Daud	Ibn Majah	Tirmidzi	Nasa'i	
Ibn Majah	Tirmidzi	Nasa'i		
Tirmidzi	Nasa'i			
Nasa'i				

The hadith has been narrated by these well-known narrators and they have been classified firmly into these groups. Furthermore, there are hadith narrations where they are jointly written by the other narrators which are not stated by Imam Ibn Hajar al-‘Asqalani. These narrators are assumed as *Al-Isnad* (the little support, with reference to particular hadith). They used to signify the activity that is involved in attributing the hadith to its narrators in every generation, for example:

*“Dan diriwayatkan daripadanya r.a bahawasanya Nabi saw adalah apabila mendoakan seorang yang telah berkahwin beliau bersabda: Telah diberkatkan Allah bagimu, dan telah diberkatkan Allah atasmu, dan Ia mengumpul antara keduamu di dalam kebaikan. (Telah diriwayatkan oleh **Ahmad** dan **Imam yang empat**. Dikatakan dia hadith sahih oleh **Tirmidzi**, **Ibnu Khuzaimah**, dan **Ibnu Hibban**).”*

The hadith above has been narrated by Ahmad and group of 4. At the same time, along with the narration, Ibnu Khuzaimah and Ibnu Hibban also contributed at the same line. In fact, they classified the hadith as authentic (*Sahih*). As a result, their contributions will be acknowledged into link analysis counts for the research. Then, further research will be included into data analysis (see Chapter Four).

Bulugh al-maram consisted of 16 chapters and it was based on 4 pillars in Islam which are worship (*Ibadah*), transaction (*Mu’amalah*), marriage (*Munakahat*) and Criminal (*Jinayah*). The detail of 16 chapters is as follows:

Table 1.3
The 16 chapters (*Kitab*)

No.	Name of chapters	Total of hadith by chapters
1	<i>Thaharah</i>	127
2	<i>Solat</i>	306
3	<i>Jenazah</i>	59
4	<i>Zakat</i>	47
5	<i>Puasa</i>	53
6	<i>Haji</i>	69
7	<i>Jual Beli</i>	170
8	<i>Nikah</i>	171
9	<i>Jenayah</i>	41
10	<i>Hudud</i>	46
11	<i>Jihad</i>	55
12	<i>Makanan</i>	36
13	<i>Sumpah dan Nazar</i>	16
14	<i>Qada' (Guaman)</i>	31
15	<i>Memerdekakan</i>	16
16	<i>Jami'</i>	123
		1399 hadith

From 16 chapters, 101 of 1399 hadith will be analyzed for this research. The 101 hadith are selected from the chapter of marriage (*Nikah*) which is listed in the 15 topics (see Table 1.4). Therefore, the topics (*Bab*) that will be discussed in the research are marriage (*Nikah*), wedding gift (*Maskahwin*), reception (*Walimah*), divorce (*Thalaq*), menstrual cycle (*'Iddah dan Ihdad*) and livelihood (*Nafkah*) (see Table 1.5).

Table 1.4
The 15 topics (*Bab*) of marriage

Topics consist in hadith of marriage	
Name of topics	Total of hadith by topics
<i>Nikah</i>	31
<i>Persamaan Darjat dan Hak Pilih</i>	11
<i>Pergaulan dengan Isteri</i>	14
<i>Maskahwin</i>	11
<i>Walimah</i>	14
<i>Pembahagian Giliran</i>	10
<i>Khulu'</i>	1
<i>Thalaq</i>	14
<i>Ruju'</i>	2
<i>Ila', Zihar dan Kafarah</i>	6
<i>Kutuk Mengutuk</i>	9
<i>'Iddah dan Ihdad</i>	19
<i>Menyusui</i>	11
<i>Nafkah</i>	12
<i>Pemeliharaan</i>	6
	171 hadith

Table 1.5
The 6 topics (*Bab*) used for the research

Topics	Total of hadith by topics
<i>Nikah</i>	31
<i>Maskahwin</i>	11
<i>Walimah</i>	14
<i>Thalaq</i>	14
<i>'Iddah dan Ihdad</i>	19
<i>Nafkah</i>	12
	101 hadith

1.1 PROBLEM STATEMENT

The citation and link analysis are commonly used in other fields such as information technology, information science, mathematics, etc. Dr. B S Maheswarappa (1997) found that one-fourth of all the articles published in Library and Information Science periodicals are on bibliometrics and its related topics. He also found that many of the Social Science and Science periodicals are also carrying a large number of articles on bibliometrics.

From that, bibliometrics through citation and link analysis can be expanded to other fields such as Islamic studies especially hadith. Hadith studies are very concerned about the sources because the narration (*Sanad*) and understanding or meaning (*Matan*) of the hadith might be incorrectly misconception. The reasons are severed relationship between the narrators and the loss of the authentication in the meaning or understanding of the *hadith*. It is different from Quranic studies where the verses (*Al-Ayah*) are perfect and no doubt to question. Therefore, citation and link analysis are able to retain the actual sources.

The identification to the rank of citation among the hadith and narrator is also addressed as a statement of the problem. Both the rank of hadith and narrator will be reflected from the 101 hadith which are selected from 1399 hadith in *Bulugh al-maram*. These reflections are identifying the highest and lowest number of citations. But, there is an obstacle of measuring where it is potentially added or missed the information of citations. Conversely, in hadith studies, the rank of citation is measured by knowledge of hadith authentication (*‘Ilm takhrij al-hadith*) which helps to identify the authentic narrator and to understand the text of hadith by using the related book of hadith studies. Knowledge of hadith authentication is the science of hadith extraction and authentication,

including validation of chains of transmitters (*Sanad*) of a hadith by these science scholars and grading hadith validity. From the chains of transmitters and grading hadith validity seems to be similar due to the research topic.

Furthermore, citation and link analysis are commonly studied on the volume of journals which was first recorded by P.L.K. Gross and E.M. Gross in 1927. From that, another statement of a problem is to adapt the chain of hadith and narrator into citation and link analysis tools such as Protégé for this research. In fact, the previous research on this topic is limited to be evidence. Moreover, the number of hadith and the chain of narrators in *Bulugh al-maram* are different from the journals. The number of hadith is different for each chapter and topic. Each hadith in the topic is presented with a number where it is not necessarily the same for the other topic even though it is in the same chapter, for instance hadith no. 1 on *Maskahwin* and *Walimah*:

Hadith on *Maskahwin*:

“Dan diriwayatkan daripada seorang shabat Nabi yang bernama Anas bin Malik ra daripada Nabi saw, bahawasanya beliau telah memerdekakan Shafiyah binti Huyay rah dan ia menjadikan kemerdekaannya itu sebagai maskahwin. (Bersetujuan atasnya riwayat Bukhari dan Muslim)”

Hadith on *Walimah*:

“Dan diriwayatkan daripada seorang sahabat Nabi yang bernama Anas bin Malik ra bahawasanya Nabi saw melihat sahabatnya bernama Abdurrahman bin Auf bekas warna kuning, maka sabdanya: Apa ini? Katanya: Ya Rasulullah, sesungguhnya aku telah berkahwin dengan seorang perempuan dengan maskahwin emas seberat biji kurma. Maka Nabi mendoakannya: Semoga Allah memberkatimu, dan buatlah walimah walau dengan seekor kambing. (Bersetujuan atasnya riwayat Bukhari dan Muslim, dan lafaz itu bagi Muslim)”

Both hadith on *Maskahwin* and *Walimah* are represented through No. 1 even though there are different texts of hadith. First hadith is explaining on “freedom of the