

Universiti Teknologi MARA

**The Selection of Social Networking Sites using Fuzzy
Analytical Hierarchy Process**

Nor Nazuin binti Nazarail

**Report submitted in fulfilment of the requirement for Bachelor of
Science (Hons.) Management Mathematics Faculty of Computer and
Mathematical Sciences**

July 2020

STUDENT'S DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



.....
NOR NAZUIN BINTI NAZARAIL

2017342263

AUGUST 5, 2020

ABSTRACT

Today online social networking platforms are expanding rapidly in use both personally and professionally. The adoption of digital channels is becoming more prominent around the world, with people of different cultures gradually accessing the internet to engage in networking sites. Nowadays, the rapid growth of social network use has made a magnificent channel for offering various services, increasing the beneficiary of services and business. Social networks have penetrated all ages of internet users and become an important means of communication and entertainment, including in the student community. As the number of social networking sites grows, the selection of networking sites for university students, including Twitter, Facebook, Google+, Instagram and so on, is becoming increasingly critical for website operators and advertisers alike. This platform is becoming essential for business performance in dealing with modern generations to increase revenues and profits. Moreover, as the number of social networks increases, the user's tendency to make a choice is difficult. The market for social networking sites is highly competitive and changes in line with the trend. The objective of the research is to rank the most popular social networking sites among users whether Facebook, Instagram and Twitter. Therefore, this study proposes a solution by developing a mathematical technique which is Fuzzy Analytical Hierarchy Process (F-AHP) to estimate the relative importance of site criteria used in deciding the social site. The result of this study shows that the Instagram as the first ranking with Functionality as the preferred criteria chosen and Revenue-generating opportunities as the sub-criteria with the highest normalized value.

Keywords: Fuzzy Analytical Hierarchy Process (F-AHP), Social Networking Sites, Ranking, Criteria.

TABLE OF CONTENTS

CONTENTS	PAGE
SUPERVISOR'S APPROVAL	ii
DECLARATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF FIGURES	ix
LIST OF TABLES	x
LIST OF ABBREVIATION	xiii

CHAPTER ONE: INTRODUCTION

1.1	Background of the Study	1
1.2	Problem Statement	3
1.3	Objective of the Study	3
1.4	Scope of the Study	4
1.5	Significance of the Study	4

CHAPTER TWO: LITERATURE REVIEW

2.1	Social Networking Sites	5
2.2	Analytic Hierarchy Process	6
2.3	Fuzzy Analytic Hierarchy Process	7
2.4	The Applications of Fuzzy Analytic Hierarchy Process	7
2.5	Previous Studies on Social Networking Sites	10
2.6	Summary	11

CHAPTER THREE: RESEARCH METHODOLOGY

3.1	Method of Data Collection	12
3.2	Technique of Data Analysis	12
3.3	The Process of Fuzzy Analytic Hierarchy Process	13
3.4	Ranking of Alternatives	19

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1	Determine Criteria's Weights with Respect to The Goal	20
4.2	Determine the Weights of Sub-criteria with Respect to the Criteria	25
4.3	Determine the Weights of Alternatives with Respect to the Criteria	28