



Sudan University of Science and Technology
College of Graduate Studies

**A Proposed Model for Evaluating the Quality of
Social Networks (Face book) System in Sudan**

نموذج مقترح لتقويم جودة أنظمة شبكات التواصل الاجتماعي
(الفيسبوك) في السودان

*A thesis submitted as partial requirement for
MSC in Information Technology*

By:

Shima Gadalla Abdalla

Supervisor:

Dr. Nisreen beshier Osman

February 2020

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ اللَّهُ تَعَالَى:

﴿قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ﴾

الآية (32) سورة البقرة

صدق الله العظيم

Dedication

I would like to dedicate this study to the following:

To our beloved Allah for giving us the light as a guide to this research

First to my family, who are always supportive to me, specially my father who encouraged me to enroll in this master program, and who is my role model and inspiration to always achieve higher levels in my life just like him

To Dr. Nisreen Beshir Osman my supervisor, who guided me through the way, and helped me to make to the research

and

My friends, who were always encouraging me when the workload was heavy

Abstract

Social media can provide instant news faster than news outlets or traditional sources and can be a huge wealth of information, but there is also an increasing need to verify and determine the accuracy of this information. The main problem is that there is a need to provide an integrated model that takes into consideration the different factors of quality of social network systems.

The objectives of this study is to analyze the various models and theories use for the evaluation of social network systems (SNS), and to propose a model for its evaluation.

The evaluation of this study is to determine the main attributes of the model which include, the speed of system response, flexibility, graphical user interface, accuracy of languages, coverage of countries, suitability of religions, privacy and security of networks used, in addition of the verification of the model and its attributes.

The research methodology is to investigate the model according to the related work done by other researchers.

The results of this study showed that all attributes were very efficient in the evaluation of the quality of Social Network Systems.

The researcher is highly recommended that social network systems (SNS) should be used as a quality tools to trust social media application quality, and to be applied to the systems other than social networks.

المستخلص

توفر وسائل التواصل الاجتماعي أخبارًا فورية أسرع من منافذ الأخبار أو المصادر التقليدية ويمكن أن تكون ثروة هائلة من المعلومات ، ولكن هناك أيضًا حاجة متزايدة للتحقق من دقة هذه المعلومات وتحديدًا المشكلة الرئيسية هي أن هناك حاجة لتوفير نموذج متكامل يأخذ في الاعتبار العوامل المختلفة لجودة أنظمة الشبكات الاجتماعية.

تهدف هذه الدراسة إلى تحليل مختلف النماذج والنظريات المستخدمة في تقييم أنظمة الشبكات الاجتماعية (SNS) ، واقتراح نموذج لتقييمها.

يتم تقييم هذه الدراسة لتحديد السمات الرئيسية للنموذج والتي تشمل ، سرعة استجابة النظام ، والمرونة ، وواجهة المستخدم الرسومية ، ودقة اللغات ، وتغطية الدول ، والأديان ، وخصوصية وأمن الشبكات المستخدمة ، بالإضافة إلى التحقق من النموذج وخصائصه. منهج البحث هو فحص النموذج وفقًا للدراسات السابقة الذي قام به باحثون آخرون.

أظهرت نتائج هذه الدراسة أن جميع السمات كانت فعالة للغاية في تقييم جودة أنظمة الشبكات الاجتماعية. يوصى الباحث باستخدام أنظمة الشبكات التواصل الاجتماعي كأدوات ذات ثقة في جودة القياس وتطبيقها على الأنظمة الأخرى غير الشبكات الاجتماعية.

Table of Contents

الأيــــة.....	VI
DEDICATION.....	VI
ABSTRACT.....	IV
المستخلص.....	V
TABLE OF CONTENTS.....	VI
LIST OF FIGURES	X
LIST OF TABLES	XII
Chapter one	
1-1 Background:.....	1
1-2 Problem statement:	1
1-3 Objectives:	1
1-3-1 General Objective:.....	1
1-3-2 Specific Objectives.....	1
1-4 Research scope:	2
1-5 Research Organization:.....	2
Chapter two	
2-1 Introduction:.....	3
2-2LiteratureReview:.....	3
2-2-1Social media network System:.....	3
2-2-2 Quality Attribute:.....	3
2-2-2-1 Modifiability:.....	3
2-2-2-2 Performance:.....	3
2-2-2-3 Usability :.....	4
2-2-2-4 Reliability :.....	4
2-2-2-5Security:.....	4
2-3Related Work:.....	4
2-3-1 Service quality and social media.....	4
2-3-2 Evaluation for social network.....	5

2-4 summary of related works.....	6
Chapter Three	
3- 1 Introduction:.....	7
3-2Methodology.....	7
3-2-1 investigating the related work:.....	7
3-2-2 proposing a model for evaluating of the quality SNS :.....	7
3- 4 Attributes of the model:.....	8
3-4-1 System Latency :	8
3-4-2 Flexibility:.....	8
3-4-3 Graphical User Interface :.....	8
3-4-4 Supported Languages :.....	8
3-4-5 Regulations:.....	8
3-4-6 CountriesRestrictions:.....	8
3-4-7 Privacy :.....	9
3-4-8 Securing information :.....	9
3-4-9 Accessibility :.....	9
3-6 verifying the model.....	9
Chapter four	
Data collection and Data analysis	
Data collection:.....	11
3-2-4-1Gender:.....	11
3-2-4-2 Age group.....	12
3-2-4-3 Address.....	13
3-2-4-4 the application load speed affects how good it is.....	14
3-2-4-5 Sound or Audio Media affects the speed of social networks:.....	15
3-2-4-6Videos affect the speed of social networks:.....	16

3-2-4-7 Images affect the speed of social networks:.....	17
3-2-4-8 Application's contents affect their speed:.....	18
3-2-4-9 Network applications accommodate all new things:.....	19
3-2-4-10 Network updated periodically:.....	20
3-2-4-11 Networks provide all the member's needs:.....	21
3-2-4-12 Networks accommodate all age groups:.....	22
3-2-4-13 Social media are well designed:.....	23
3-2-4-14 Networks use different colors in user interface design:.....	24
3-2-4-15 Social media are easy to use:.....	25
3-2-4-16 The design of social networking applications affects the extent of user acceptance.....	26
3-2-4-17 Social media supports all languages.....	27
3-2-4-18 The written language is understandable:.....	28
3-2-4-19 The language used is Classy:.....	29
3-2-4-20 Social media are available in all regions:.....	30
3-2-4-21 Social Networks are compatible with the different countries:.....	31
3-2-4-22 Social Network is compatible with multiculturalism:.....	32
3-2-4-23 Social Network follows guidance of Islam:.....	33
3-2-4-24 The contents of the social Network are compatible with Islamic guidance: ...	34
3-2-4-25 Social Network helps to preserve religious teachings:	35
3-2-4-26 Social media maintains user privacy:.....	36
3-2-4-27 Privacy provides a positive impact on the quality of social media..... applications:.....	37
3-2-4-28 the availability of privacy encourages the use of social media:.....	38
3-2-4-29 Social media maintain the confidentiality of information:.....	39

3-2-4-30The confidentiality of information positively affects the number of Users' access to social media.....	40
3-2-4-31Users have the confidence in Social network:.....	41
Data analysis:.....	42
3-2-4-32System latency attributes:.....	42
3-2-4-33Flexibility attributes:.....	43
3-2-4-34Graphical user interface:.....	44
3-2-4-35Language attributes:.....	44
3-2-4-36Regional attribute:.....	45
3-2-4-37Religion attributes:.....	45
3-2-4-38Privacy attributes:.....	46
3-2-4-39Security attributes:.....	46
Chapter Five	
4-1 Results and discussion.....	47
Chapter Six	
5-1 Conclusion:.....	48
5-2 Recommendation:.....	48
References.....	49
Appendix.....	50

List of figures:

Figure (3-1): proposed model for evaluating of the quality.....9

Figure (3-2): Gender.....15

Figure (3-3): Age group.....16

Figure (3-4): Address.....17

Figure (3-5): the application load speed affects how good it is.....18

Figure (3-6): Sound or Audio Media affects the speed of social networks.....19

(3-7): Videos affect the speed of social networks.....20

Figure

Figure (3-8): Images affect the speed of social networks.....21

Figure (3-9): Application's contents affect their speed.....22

Figure(3-10): Network applications accommodate all new things.....23

Figure(3-11): Network updated periodically.....24

Figure(3-12): Networks provide all the member's needs.....25

Figure(3-13): Networks accommodate all age groups.....26

Figure (3-14): Social media are well designed.....27

Figure(3-15): Networks use different colors in user interface design.....28

Figure (3-16): Social media are easy to use.....29

Figure (3-17): The design of social networking applications affects the extent of user acceptance30

Figure (3-18): Social media supports all languages.....	31
Figure (3-19): The written language is understandable.....	32
Figure (3-20): The language used is Classy.....	33
Figure (3-21): Social media are available in all regions.....	34
Figure (3-22): Social Networks are compatible with the different countries.....	35
Figure (3-23): Social Network is compatible with multiculturalism.....	36
Figure (3-24): Social Network follows guidance of Islam.....	37
Figure (3-25): The contents of the social Network are compatible with Islamic guidance.....	38
Figure (3-26): Social Network helps to preserve religious teachings.....	39
Figure (3-27): Social media maintains user privacy.....	40
Figure (3-28): Privacy provides a positive impact on the quality of social media applications.....	41
Figure (3-29): the availability of privacy encourages the use of social media.....	42
Figure (3-30): Social media maintain the confidentiality of information.....	43
Figure (3-31): The confidentiality of information positively affects the number of Users' access to social media.....	44
Figure (3-32): Users have the confidence in Social network.....	45

List of Table:

Table (3-2): Gender.....15

Table (3-3): Age group.....16

Table(3-4)Address.....17

Table (3-5): the application load speed affects how good it is.....18

Table (3-6): Sound or Audio Media affects the speed of social networks.....19

Table(3-7): Videos affect the speed of social networks.....20

Table (3-8): Images affect the speed of social networks.....21

Table (3-9): Application's contents affect their speed.....22

Table(3-10): Network applications accommodate all new things.....23

Table(3-11): Network updated periodically:.....24

Table(3-12): Networks provide all the member's needs.....25

Table(3-13): Networks accommodate all age groups.....26

Table(3-14): Social media are well designed.....27

Table(3-15): Networks use different colors in user interface design.....28

Table (3-16): Social media are easy to use.....29

Table (3-17): The design of social networking applications affects the extent of user acceptance.....30

Table (3-18): Social media supports all languages.....	31
Table (3-19): The written language is understandable.....	32
Table (3-20): The language used is Classy.....	33
Table (3-21): Social media are available in all regions.....	34
Table (3-22): Social Networks are compatible with the different countries.....	35
Table (3-23): Social Network is compatible multiculturalism.....	36
Table (3-24): Social Network follows guidance of Islam.....	37
Table (3-25): The contents of the social Network are compatible with Islamic guidance.....	38
Table (3-26): Social Network helps to preserve religious teachings.....	39
Table (3-27): Social media maintains user privacy.....	40
Table (3-28): Privacy provides a positive impact on the quality of social media applications.....	41
Table (3-29): the availability of privacy encourages the use of media.....	42
Table (3-30): Social media maintain the confidentiality of information.....	43
Table (3-31): The confidentiality of information positively affects the number of Users' access to social media.....	44
Table (3-32): Users have the confidence in Social network.....	45

Table (3-33): System latency attributes.....	46
Table (3-34): Flexibility attributes.....	47
Table (3-35): Graphical user interface.....	48
Table (3-36): Language attributes.....	49
Table (3-37): Regional attribute:.....	50
Table (3-38): Religion attributes.....	50
Table (3-39): Privacy attributes.....	51
Table (3-40): Security attributes.....	52