



## ABSTRACT OF THE THESIS

While there are many Islamic web sites listed on the Internet, there exists no mechanism to ascertain the content quality and information accuracy from users' point of view. Therefore, this study was intended to design and propose website evaluation benchmark that could be used to assess the quality of Islamic web sites that promote the propagation of Islamic teachings. Such benchmark would allow owners of Islamic websites to collect users' feedback to judge the effectiveness of their websites. Subsequently, user's input and comments would form a basis for website improvements where changes were deemed necessary. Two validation tests were undertaken to determine the validity and reliability of the proposed web evaluation benchmark. In this context, the instrument was pre-tested on [www.islamicity.com](http://www.islamicity.com) by 16 IIUM postgraduate students. The second test involved a random sample of 100 students who evaluated the same Islamic website. Factor analysis was then conducted to assess instrument validity in terms of the convergent and discriminant validity. Overall, initial results of the validity and reliability analyses of the benchmark are very promising. Furthermore, recommendations for further improvement of the model and implications of the findings are provided. The second part of the study involved using the benchmark to rate twelve selected Islamic websites. Forty IIUM postgraduate students participated in this phase. Overall, the results obtained from the second phase of the study suggested that the benchmark demonstrated discriminatory power, which is a critical requirement for an instrument, by precisely differentiating and ranking the selected Islamic websites according to the degree of their quality. The findings also suggested quality improvements on certain areas of the evaluated websites were necessary.

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## 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 thesis for the degree of Master of Science in Management Information Systems.

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## DECLARATION

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

**Ishaka Suleiman Hassan**

**Signature.....**

**Date.....**

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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**DEVELOPING WEB METRICS FOR MEASURING THE QUALITY OF  
ISLAMIC WEBSITES**

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*This work is dedicated to my late mother, Hidayatun Amour, who passed away while still pursuing my studies in Malaysia*

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## LIST OF ACRONYMS

B2B	Business to Business
B2C	Business to Consumers
HCI	Human Computer Interaction
IIUM	International Islamic University Malaysia
PBUH	Peace Be Upon Him
S.W	Subhanahu Wataalah
SPSS	Statistical Package for Social Science

# CHAPTER 1

## INTRODUCTION

### **1.1. STATUS OF THE WEBSITE EVALUATION TOOLS**

Improving the effectiveness and quality of websites is a question of significant importance for the successes of e-commerce, e-health, edutainment and other aspects of life that use the Internet technology as an effective channel to reach the target audience. Various website evaluation tools are now available to assess the effectiveness and quality of the websites associated to these industries. Normally most of these tools are designed for use by website users to provide their subjective opinions on the value and usefulness of information for which they are targeted. Subsequently, users' feedback and comments form a basis of website improvement where changes are deemed necessary.

Currently, website quality evaluation appears to be primarily associated with online secular material while overlooking the importance of quality assessment on online religious material. Specifically, there exists no established mechanism or relevant studies on assessing the quality and the effectiveness of online Islamic resources. However, few websites have attempted to provide web rating tools for evaluation of Islamic websites (see appendix VII). These website provide two approaches to rate Islamic websites. The first one involves asking website users to indicate their overall opinion about the website using a Likert-type scale format. The second approach involves rating the website according to website popularity. Website popularity is defined in terms of the number of hits on a web page generated by a

website visitor. Both approaches of website rating are not appropriate as they are intended to merely popularise the websites instead of actually assessing the values of the content. There is no set of evaluation guidelines on which the answers should base, or a tool that would help users to best judge the quality of the relevant website. Furthermore, the approaches do not encourage users to provide feedback that would help website owners to subsequently improve the effectiveness of the websites.

When developing website assessment tools, the technical and content aspects of the website should be taken into consideration. While content aspect refers to those features related to the content of a website (e.g. accuracy, objectivity and relevancy), the technical aspect refers to those features related to the design and usability of a website (e.g. navigation, interactivity and accessibility). The two aspects make up what we call website quality dimensions or simply website metrics. In this study, we define website metrics as sets of indicators to take into account when judging the perceived quality of the website material

## ***1.2. OBJECTIVES AND SIGNIFICANCE OF THE STUDY***

The main purpose of the study was to develop Web metrics for measuring the quality of Islamic websites. Specifically, study aimed to achieve the following objectives:

- To establish initial validity and reliability of the research model.
- To use the benchmark to evaluate the quality of selected Islamic web sites.
- To make quality comparisons among selected Islamic websites.
- To provide recommendations for website quality improvement.

While there are many studies conducted to assess the quality of online material in specific industries (such as commercial and health-related and medical sectors), to the best of our knowledge, the body of literature lacks research works related to evaluation of online Islamic resources. However, this does not mean that the importance of measuring the quality of Internet material confines to profit-making websites and other forms of online secular material. In fact Islam, as a divinely revealed religion, places much emphasis on Muslims to strive for quality for every good deed they do, be it of spiritual or secular nature. According to Abu Ya'ala, the Prophet Muhammad (PBUH) said in his famous Hadīth: “Verily, Allah likes (to see) when one of you do the act, he does it well” (Ahmad Hashimy, 1996). This tradition enjoins Muslims to struggle for achieving quality and excellent work when they engage themselves in any activity that is done for the sake of seeking Allah’s pleasure and rewards (Thawāb). Thus, based on this tradition, assessing the quality of online Islamic material is one of the religious duties or acts of Ibādah (worships) upon Muslims.

**Apart from measuring the quality of individual Islamic websites, the proposed web metrics will provide a benchmark for quality comparison among Islamic websites. This implies that using the tool will allow researchers and Islamic website practitioners to determine relative values of online Islamic material.**

**Thus, if Islamic websites are evaluated in terms of their quality and then ranked with respect to each other, those sites scoring high ratings will probably make more effort to keep it up, while those low ranking websites will probably pull their socks up.**

**In a worldly point of view, developing Web metrics evaluating Islamic Websites will allow Muslim website owners and webmasters to get users' feedback on the perceived values or usefulness of their material. This especially true as there is a tendency for website owners to guess what users want to see or how users will access certain formation. However, guessing cannot always make things to happen the way they should without users' involvement. Thus, users' feedback will help Muslim website owners to identify what should be done in**

## **order to improve the quality online information where changes are necessary.**

Lastly, while there are many studies conducted to assess the quality of online material in specific industries such as commercial and health sectors, to the best of our knowledge, the body of literature lacks research works related to evaluation online Islamic resources. For this reason, this study is expected to open the door and act as a starting point for more similar works in the future. Thus, the present study will have a significant contribution to the growth of existing literature.

### ***1.3. LIMITATIONS OF THE STUDY***

As in many studies, there are certain limitations inherent in the current study. First, the focus of the study is strictly on Islamic websites. Despite this limitation, it is expected that the study will be of high interest to those who are interested in online Islamic recourses. Additionally, a good case was made in the previous section for studying Islamic websites as a distinct category. Second, while there are many ways to assess the discriminant and convergent validity of the construct, this study limited itself to factor analysis method. This implies that the proposed website evaluation model is still at preliminary stage- not final one. More rigorous and robust validation technique such as structural equation modelling should therefore be applied in the future to precisely validate the model. Most importantly, it should be remembered that the “the development of a scale is an ongoing process that really never ends” (Spector, 1992, p.69). Lastly, the primary focus of the proposed web evaluation instrument is

on typical, adult users of Islamic websites to allow them to judge the value of Islamic websites. Thus, as far as website quality assessment is concerned, the instrument are not appropriate for use by children.

#### ***1.4. DEFINITIONS OF THE TERMS***

With respect to the technical terms used in the study, the following definitions are provided.

##### **Web metrics**

This term involves defining sets of indicators to be used in judging the perceived quality of the Internet material.

##### Islamic websites

These refer to those websites whose primary purpose is to promulgate the revealed Islamic knowledge as derived from the Holy Qur'ān and the Sunnah of the Prophet Muhammad (PBUH).

##### Islamic website directory

This refers to a dedicated Islamic website that acts as a gateway (provides links) to other Islamic websites.

### Quality

This term refers to a summation of all website characteristics that would make users to meet their expectations or desired goals when accessing Islamic websites.

### User satisfaction

This term refers to a set of feelings that a typical website user will exhibit in response to the degree of the perceived value of online Islamic resource.

## **1.5. RESEARCH QUESTIONS**

To achieve the objective the present study, the following research questions were formulated:

1. What is the validity and reliability of the proposed web evaluation instrument?
2. What are the quality scores of the selected Islamic websites?
3. What are the quality ranking positions of the selected websites?
4. What should be done to improve the quality of the selected websites?

## **1.6. HYPOTHESIS DEVELOPMENT**

For the purpose of examining nomological validity of the constructs, hypothesis predicting positive relationship between website quality dimensions (Web metrics) and user satisfaction with overall quality of a website was developed as shown below.

*Website quality metrics will positively correlate with overall user satisfaction with a website.*

## **1.7. SUMMARY**

This study was aimed developing website evaluation tool for assessing the effectiveness and quality of Islamic websites. It is very important to undertake the present study as the proposed website evaluation tool will help website owners improve the quality of their websites based on the feedback and comments collected from website visitors. To validate the reliability and validity of this proposed model, we developed a number of research questions and hypothesis was formulated. Details of the tests and the results obtained are described in the later chapters.