

## FEATURES OF ISLAMIC WEBSITES, PERCEPTIONS OF MUSLIM USERS AND UTILIZATION BEHAVIOR: A CONCEPTUAL MODEL

Mansur Aliyu, Abubakar B. Tambawal, Murni Mahmud, Rasheed M. Nassr

Department of Computer Science  
Umaru Ali Shinkafi Polytechnic Sokoto  
Department of Information Systems  
International Islamic University Malaysia

[mansuraliyu@gmail.com](mailto:mansuraliyu@gmail.com)

### ABSTRACT

*Islamic websites demand special attention due the nature of the content delivered to the users. To deliver satisfying online knowledge and practice for Muslim Ummah, it is important to identify and evaluate the overall features of Islamic website (Iweb). In this paper, we explore the literature on Islamic website and e-consumer and developed a conceptual model that identifies perceived Muslim user satisfaction. The paper examines three issues namely; features of Iweb user satisfaction, perceived dimensions of this satisfaction judgment, and consequence of Muslim user satisfaction with Iweb.*

### 1. INTRODUCTION

Seeking online Islamic information and knowledge has become widespread among the Muslim online users. Equally many Islamic organizations and scholars are using Internet for their teachings and services to the Ummah. As such, an excellent website has the potential to attract more online users and encourage them to keep revisiting the website (Song and Zinkhan, 2003). Presently, there are various approaches for evaluating Islamic website. Some researchers like (Ibrahim, et al. 2010, 2009, 2008; Shafie, et al. 2010; Bakari, 2010; Mahmud, et al. 2010; Mansur, et al. 2010; Ishak, et al. 2009; Kasmani, et al. 2008; Wan Abdul Rahim et al. 2008, 2007, 2006; and Nor Shahriza & Norzelatun, 2005) focus mostly on the user interface design & content requirements for evaluating Iwebs while other researchers prefer using other methods/approaches of evaluation in examining Iwebs. This is not dissimilar to the approaches adopted by researchers in evaluating commercial websites. Accordingly, Sutcliffe (2002) adopted two approaches in the evaluation of websites; first, observation of users' errors when navigating websites; and secondly, expert style heuristic evaluation in which the quality of the interface is judged against a set of criteria- the heuristics.

Moreover, previous research identified some major dimensions for evaluating Islamic websites which include: design features (organizational, infrastructure, functionality, security/privacy, interactivity, attractiveness, and accessibility), content features (accuracy, authority, benevolence, comprehensiveness, credibility, legitimacy, objectivity, presentability, relevance, reliability, and trustworthiness) and Islamic features (Tauheed/akidah, signs, ethical values, symbols, and tools).

However, most of the past studies have focused on developing measures to evaluate various features of Islamic websites. Relatively few studies have explored the overall Iweb features based on perceived user satisfaction specifically identifying the features that influences Muslim user satisfaction and the consequence of Muslim user satisfaction (e.g. content utilization behavior).

Wan Abdul Rahim et al. (2008) define Iweb 'as genre website that accentuates Islamic ideologies, norms, and values'. Other researchers define them as websites whose main objectives are to convey Islam in accordance with the teachings of Prophet Muhammad (SAW) (Mahmud, et al. 2011; Mansur, at al. 2010). Therefore, any website whose overall contents are good and beneficial to the users can be considered Islamic. And those whose contents are harmful or abusive to the users can be considered un-Islamic.

Distinctively, this paper will focus on Iwebs where Muslims visit for the purpose of seeking Islamic information. We intend to explore the overall features and consequence of online user satisfaction from Muslim user perceptions. Thus the objectives of this study are as follows: 1) to identify the various Islamic website features (e.g. design, content, and Islamic), 2) To explore the features dimensions of perceived user satisfaction, 3) To determine the consequences, such as website utilization and user guidance, associated with the perceived Muslim user satisfaction. To develop a conceptual model for this study, we employ three user frameworks: Muslim-UI framework (Wan Abdul Rahim et al. 2006; Shafie, et al. 2010), framework for Islamic website evaluation (Mahmud et al. 2011), and framework for success factors in e-commerce websites (Joseph-Vaidyan, 2008). These frameworks are considered comprehensive in the W-MIE (Ibrahim et al. 2007) and e-commerce (Joseph-Vaidyan, 2008) literatures.

### 2. CONCEPTUAL BACKGROUND

## **2.1 Muslim-UI framework**

Significant efforts have been made in identifying and evaluating the features of Iweb from the perspective of user interface design. Empirical research on Islamic user interface evaluation was conducted by Wan Abdul Rahim et al. (2006) and further adapted by Shafie et al. (2010). Wan Abdul Rahim et al. (2006) investigates the presence of Islamic identity, Islamic traits, and usability attributes (based upon personal observation method) of Islamic websites. Furthermore, based on empirical test with a sample of 100 Islamic websites, Shafie et al. (2010) found that there is substantial presence of some Islamic attributes (e.g. Islamic identity, applications/tools, 'hot' words/signs, security) and low presence of others (e.g. Arabic text, Islamic sound, usability levels, and information architecture) in Iwebs. In their effort to promote usage of 'Muslim User Interface Framework', Shafie et al. developed an additional attribute which they called "information architecture" which comes through a checklist named Muslim-UI framework.

Using this Muslim-UI framework as a guideline, we will examine the dimensions associated with Muslim user satisfaction. Since both Islamic identity (e.g. symbols: images, objects) and Islamic traits (signs, tools) dimensions are considered critical Islamic features in Islamic website evaluation. Additional dimensions as important Islamic features for Iweb evaluation are Akidah (Ibrahim et al. 2010) and Islamic ethical values (Shihab, 2009).

## **2.2 Framework for Islamic website evaluation**

Islamic websites have become a popular medium through which Muslims and Islamic scholars accomplish many of their religious obligations. With regard to this, Muslims have found a new medium through which they can recite Quran, learn the meaning of Al-Quran and Hadith, seek for religious opinion, and interact with one another as well as with renowned scholars (Mahmud et al. 2011).

However, due to the vastness and anonymous nature of the Internet, researchers reported the lack of adequate reliability and authenticity of Islamic knowledge received online. Hence, stresses the need to monitor and evaluate the contents of Islamic websites in order to avoid fabricated and misleading information (Mansur et al. 2010; Ishak et al 2009; Kasmani et al. 2008).

These and many other reasons, motivates Mahmud et al (2011) to propose a working definition and framework to evaluate content and design features of Islamic Websites. They investigated 78 Muslim Internet users on their perceptions of Islamic website definition and identified three design features: navigation, interactivity and attractiveness; six content features: legitimacy, objectivity, authority, relevance, credibility and reliability. In this study, we found that their framework is suitable for examining perceived Muslim user satisfaction. We therefore decided to adopt the overall framework and dimensions.

## **2.3 Design factors in e-commerce website**

In 2008, Joseph-Vaidyan identified the critical success factors that enhance consumer trust in e-commerce websites and examined those factors in relation to the e-commerce success metrics using an Internet audience measurement tool. The identified factors: functional factors, infrastructure factors, security factors, and organizational factors in website design have significant positive impact on the success of e-commerce sites. It is worthwhile to note that website design and trust factors are multidimensional as such they can be employed within the context of Islamic website design. Hence, we adapt all his 4 identified design factors in e-commerce websites as a conceptual background for evaluating Iweb design features from user perceptions.

In order to propose the conceptual model, we adapt three major frameworks discussed above to give a conceptual background for investigating perceived Muslim online user satisfaction with Islamic website. The overall conceptual model is shown in Figure 1.



FIGURE 1: CONCEPTUAL MODEL

### 3. FEATURES OF ISLAMIC WEBSITE

A religious website can be considered as a group of features that convey the fundamental principles of that religion to its followers. Therefore, we can say that, Iwebs uses several features to convey the messages of Islam to the online users. Those features are classified into three categories: Islamic, content, and design. The Islamic features comprises of Akidah (Ibrahim et al. 010), ethical values (Shihab, 2009), symbols, signs, and tools/applications dimensions (Shafie et al. 2010; Wan Abdul Rahim et al. 2006). The content features consist of legitimacy, reliability, relevance, credibility, authority, and objectivity dimensions (Mahmud, 2010). Finally, the identified design features includes organizational, infrastructural, functional, and security (Joseph-Vaidyan, 2008), as well as attractiveness (Sutcliffe, 2002), and interactivity (Mahmud, 2010) dimensions. In this section, dimensions of each category have been defined and conceptualized to form part of the proposed model of perceived Muslim user satisfaction.

#### 3.1 Design Features

Website design is a “gestalt process that includes aesthetic judgments, artistic sensibility, creativity, and a consideration of goals and strategies (Song and Zinkhan, 2003)”. Song and Zinkhan view website design quality as to include such items as links, colors, user interface, information access, fulfillment policy and more. They reported that Interface design includes such issues as navigation, site organization, searching ease, user-controlled navigation, links, cross-platform design, writing style, and multimedia capabilities (Nielson, 2000; Lynch and Norton 1999; Constantine and Lockwood 1999). Therefore, the building blocks of website design are compressed within such factors as organizational,

infrastructural, functional, security (Joseph-Vaidyan, 2008) and attractiveness (Sutcliffe, 2002), and interactivity (Mahmud, 2010). Each of these six (6) design dimensions is discussed in the following section.

**3.1.1 Dimensions of perceived Iweb design features**

Joseph-Vaidyan (2008) explored the design features that enhance the customer trust in e-commerce. The author found that considerable number of organizational, infrastructure, functional, and security factors in web design have significant positive impact on the success of those websites. The author argued that, Web designers who pay attention to those four factors are likely to efficiently create more successful websites that will enhance trust and consequently user satisfaction. This situation may not be dissimilar to the efficient creation of a successful Iweb.

Therefore, in order to understand the overall design features of Iweb user interface, we adopt the critical success factors in e-commerce websites from Joseph-Vaidyan (2008): functional, infrastructure, security, and organizational factors with their heuristics.

Table 1: The Critical Success Factors adopted from E-Commerce Joseph-Vaidyan (2008)

<b>Organizational</b>	<b>Infrastructure</b>	<b>Functional</b>	<b>Security/Privacy</b>
<ul style="list-style-type: none"> <li>➤ Clearly defined site goal</li> <li>➤ Clearly defined site strategy</li> <li>➤ Helps to identify and attract users</li> <li>➤ 24x7 users/visitors support</li> <li>➤ Legal issue/website recovery system</li> <li>➤ Warranty messages</li> <li>➤ Good continuity plan</li> <li>➤ Full contact address</li> <li>➤ Owned by known Org./scholars</li> </ul>	<ul style="list-style-type: none"> <li>➤ Network speed/download speed</li> <li>➤ Site stability and reliability</li> <li>➤ Technology utilization</li> <li>➤ Processing speed</li> <li>➤ Personalized settings</li> <li>➤ Easy to use applications/tools</li> </ul>	<ul style="list-style-type: none"> <li>➤ Easy of navigation</li> <li>➤ Content management</li> <li>➤ Searching facility</li> <li>➤ Consistency site</li> <li>➤ Freshness of content</li> <li>➤ Visitors experience</li> <li>➤ User satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>➤ Availability of security measure</li> <li>➤ Unauthorized outsiders</li> <li>➤ Reliable of credit-card/account processing</li> <li>➤ Privacy statement</li> <li>➤ My privacy is protected at this website</li> <li>➤ Feel safe using this website</li> </ul>

Hence, in this study, we define Iweb design features as the extent existing critical design features aesthetically appeal to Muslim users and enhances their satisfaction with Iweb. Thus, we put forward the following hypothesis that: 1) Good organizational design features will influence Muslim user satisfaction with Iweb positively, 2) Good infrastructural design features will influence Muslim user satisfaction with Iweb positively, 3) Good functional design features will influence Muslim user satisfaction with Iweb positively, and 4) Good security design features will influence Muslim user satisfaction with Iweb positively.

*Interactivity*

Interactivity has been widely discussed in IS and HCI literature. Several authors attempt to define and evaluate user interface interactivity dimensions. Ha and James (1998) reported five factors associated with interactivity: playfulness, choice, connectedness, information collection and reciprocal communication. Online interactivity is seen as the user’s ability to exchange information back and forth with the website. That is the extent to which website users can communicate with the people; interactively search for information; and conduct transactions through the website (Loiacono et al. 2002). Furthermore, Song and Zinkhan (2003) define the interactivity dimensions as the extent to which users think that the website provides interpersonal communication and real-time responsiveness. Some researchers define interactivity on the Iwebs as the extent to which users have access to scholars; communicate with people; get feedbacks to their asked questions; full and free access to information (Mahmud et al. 2010, 2011).

Therefore, to evaluate the interactivity of Islamic website, we employ the heuristics adapted from Mahmud et al. (2002) for assessing website interactivity as:

Table 2: The Websites Interactivity Evaluation Criteria (Mahmud et al. 2002)

Q & A option, instant feedback option	Donate online option
Chat with online scholars option	Membership registration option
Bookmark/favourite option	Sign guest book option
Email to a friend option	Webmaster’s email address
Access to non-members option	Full contact information

Multi-language option Recognize return visitor Newsletters subscription option	Forum/blog option, and E-mail alert option.
--	--

Based on the above heuristics, we define interactivity as design features that support users to search and find Islamic contents instantly. *Thus, we hypothesize that good interactivity design features will influence Muslim user satisfaction with Iweb positively.*

*Attractiveness*

Iweb attractiveness has been studied extensively by Daniels (2004) and Mansur et al. (2010). Website attractiveness may be considered to be the result of matching the user’s motivations and requirements with the design features on a website (Sutcliffe, 2002). Previous studies argued that website designers are rightly concerned with aesthetic appeal and attracting users. Stressing that, if you cannot attract a user to stay on a website, it doesn’t matter how well designed the operational usability may be.

Hartmann et al. (2007) claims that “a number of previous studies have shown correlations between the perceived aesthetic quality of a system’s user interface and overall user satisfaction (Lindegaard and Dudek, 2003; Tractinsky, Shoval-Katz and Ikar, 2000). The authors hypothesize that: “User’s judgment on website attractiveness will depend on their background, in particular culture and training, the nature of the task, the importance or criticality of the decision, and interactions between decision-making criteria (e.g. design qualities such as content, functionality, usability) that are conditioned by the task context. The outcomes of user’s judgment are preferences between designs, intention to use, and actual use (behavior) base on website’s usability, content, aesthetics, reputation/identity, and customizability.” (Hartmann et al. 2007)

Therefore, to evaluate the attractiveness of Iweb user interface, we adapt the proposed heuristics for assessing attractiveness from Sutcliffe (2002): based on aesthetic design, and general arousal created by content. Sutcliffe initially uses nine (9) HCI undergraduate students to test the proposed heuristics using three airline websites.

Table 3: Sutcliffe Website Attractiveness Evaluation Criteria

<b>Aesthetic Design</b>	<b>Content Attractiveness</b>
Judicious use of colour Visual layout is symmetrical Layout is structured and consistent Depth of field Choice of media People and personality in media Unusual/distracting images	Consistent visual style Visibility of identity and brand First motivation & mood arousal Secondary motivation is stimulating Selected content requirements

As such, Iweb attractiveness is defined as the extent to which users feel that an Islamic website met their aesthetic appeal of a design, motivation and other requirements. *Thus, we hypothesize that good attractiveness design features will influence Muslim user satisfaction with Iweb positively.*

**3.2 Content Features**

Content user satisfaction is mostly examined based on user’s personal evaluation. Whenever a user receives information online he/she will physically evaluate authenticity and usefulness of that information. Authority is viewed as the extent to which users think they can trust the information on the website. As such, content quality has been defined as the extent, to which users think that the information is useful, good, current, accurate, and trustworthy (Song and Zinkhan, 2003). Moreover, in this study, we identified satisfactory Iweb content features as the extent to which Muslim users perceived that the information obtained is legitimate, objective, authoritative, relevant, credible, and reliable.

**3.2.1 Dimensions of perceived Iweb content features**

The table below shows the Iweb content dimensions and the identified heuristics associated with them.

Table 4: Heuristics for Islamic Website Evaluation

DIMENSIONS	HEURISTICS
Legitimacy	Uses authentic Tafsir as reference Uses authentic Hadith as reference Uses the 4 Mazhabs as reference The overall content is lawful The overall content is authentic
Objectivity	Not bias towards any Islamic group Not bias against any Islamic group Not bias against other religions The overall content provides true teachings of Islamic and current issues affecting Muslim around the world.
Authority	Author's credentials are clearly provided Author's contact information are clearly provided Inaccuracy can be clearly reported and provided Authentic sources/references used are clearly provided Sense of responsibility in writing are clearly showed Well-verse knowledge are clearly expressed
Relevancy	Valuable resources about Islam Useful academic resources Moral values to better understand Islam Timely information and updates Real world events (e.g. politics, Muslim world)
Credibility	Based on the true Islamic principles Based on good Islamic values Acceptable Islamic sources Renowned Islamic scholars
Reliability	Sources of the documents provided Documents are free from blunders Documents are free from typos Date of the document creation/posted Author's information consistently Contact information regarding document

Thus, the following definitions were adapted from our previous study (Mahmud et al. 2011; Mansur et al. 2010).

1. Content legitimacy is defined as the extent to which the Iweb's contents did not contradict Islamic faith, Islamic moral values, Islamic pillars, or abusive and bias documents. *Thus, we hypothesize that good content legitimacy will influence Muslim user satisfaction with Iweb positively.*
2. Content objectivity is defined as the extent to which Islamic websites avoids being biased towards or against other Islamic groups, or other religions. *Thus, we hypothesize that good content objectivity will influence Muslim user satisfaction with Iweb positively.*
3. Content authority is defined as the extent to which users are satisfy with the Islamic website content base on the reference provided, author's credentials, popularity, and accessibility. *Thus, we hypothesize that good content authority will influence Muslim user satisfaction with Iweb positively.*
4. Content relevancy is defined as the extent to which users trust the information on Islamic website as authoritative, useful, and probably up-to-date. *Thus, we hypothesize that good content relevancy will influence Muslim user satisfaction with Iweb positively.*
5. Content credibility is defined as the extent to which users perceived that Islamic website's owners provides detailed background, mission, projects, and contact information. *Thus, we hypothesize that good content credibility will influence Muslim user satisfaction with Iweb positively.*

6. Content reliability is defined as the extent to which users perceived that the Islamic website's contents are dependable, accurate, and well authored. *Thus, we hypothesize that good content reliability will influence Muslim user satisfaction with Iweb positively.*

### 3.3 Islamic Features

Islam is the religion defined and interpreted by the Quran and Sunnah of the prophet Muhammad (saw). Islamic features are identified based on the elements that best symbolizes Islam, and are acceptable by Shari'ah. A good Islamic image is important to achieve success and attracts many Muslim users. Generally, Muslim users evaluate Iweb based on whether the websites portray good Akidah, ethical values, and lawful symbols/images. Displaying unlawful pictures always portrays bad refutation and considered un-Islamic. The table below shows the Islamic dimensions and their heuristics adapted from previous studies on Iwebs.

Table 5: Dimensions and Heuristics for Islamic Website Evaluation

Akidah	Islamic Signs	Ethical Values	Islamic Symbols	Islamic Software
Iman	Islam	Honesty	Hijab	ShahadaReciter
Sunnah	Allah (swt)	Trustworthy	Moon	SalatTimer
Sahabah	Bismillah	Caring	Ka'aba	QiblaDirection
Mazhab	InshaAllah	Good services	Mosques	AzaanCaller
Sunni Scholars	MashaAllah	Good model	Arabic Text	SawmTimer
	Astagfirullah	Truthful	Islamic Arts	ZakatCalculator
	Alhamdulillah	Keep promise	Smileys/Icons	HajjiLocator/Info.
	Muhammad (saw)	Thankful	Donate Button	ZikrCounter
	Assalamu Alaikum	Tolerance	Halal Brand Image	HijrahCalender
	JazakallahuKhair	Justice		IslamicQuiz
		Beneficence		IslamicGame
		Thoughtful		IslamicScreenServers
		Merciful		IslamicWallpapers
		Honour & Wisdom		

Conversely, it is hugely significant for Iwebs to adhere to the Islamic values, principles and guidelines in terms of design strategy, content quality, interface representation, and system characteristics (Ibrahim et al. 2010). Several researchers devoted their time in identifying several features that reflects Islamic identity online (Shafie et al. 2010; Ibrahim et al. 2010; Shihab 2009; and Wan Abdul Rahim et al. 2006). For the purpose of this study, we adapted and defined several Islamic features from the previous studies.

#### 3.3.1 Dimensions of perceived Iweb Islamic features

1. Akidah: which stresses believing in the oneness of Allah (SWT) as the creator and worthy of worship. This is also called "Tauheed" which is the basis and fundamental principle of Islam. It is an important element that needs to be evaluated within the Iweb content or information (Ibrahim et al. 2010). Based on the importance of Akidah in Islam, we define Akidah on Iweb as the extent to which the Muslim user perceives that the Iweb reflects believe in the oneness of Allah, all the prophets, and does not discriminate between Sahabah (RA) and Islamic principles. *Thus, we hypothesize that good Islamic Akidah will influence Muslim user satisfaction with Iweb positively.*
2. Islamic signs: refer to as most commonly used words among Muslims for greetings and showing appreciation. Pronouncement of these words often identifies someone as a Muslim in face-to-face interactions. And therefore the same is expected in many Islamic websites when interacting with users: to welcome, to greet, to appreciate, and to invoke blessings or forgiveness from Allah (SWT). Therefore, Islamic signs on Iweb is defined as the extent to which Muslim user feel satisfied with the use of Islamic signs such as (e.g. Islam, Allah (swt), Bismillah, InshaAllah, MashaAllah, Astagfirullah, Alhamdulillah, Muhammad (saw), JazakallahuKhaair, Assalamu Alaikum, and Wassalamu Alaikum) on the website. *Thus, we hypothesize that good Islamic signs will influence Muslim user satisfaction with Iweb positively.*
3. Islamic ethical values: this is defined as the extent to which Muslim user feel that the Iweb is honest, trustworthy, caring, providing good services, a good model, truthful, keeping promise, thankful, tolerant, displaying justice, beneficence, thoughtful, merciful, honourable, and displaying

wisdom. Thus, we hypothesize that good Islamic ethical values will influence Muslim user satisfaction with Iweb positively.

4. Islamic symbols: this is defined as the extent to which Muslim user think the symbols (e.g. Hijab, Moon, Ka'aba, Mosques, Arabic Text, Islamic Arts, Smiley/Icons, Donate Button, Halal Brand Image) provides pleasure, excitement, playfulness, encouragement, entertainment, and visual and emotional appeal. Thus, we hypothesize that good Islamic symbols will influence Muslim user satisfaction with Iweb positively.
5. Islamic software: this is defined as the extent to which Muslim user finds that the applications (e.g. Shahada Reciter, SalatTimer, QiblaDirection, AzaanCaller, SawmTimer, ZakatCalculator, HajjiLocator/Info., ZikrCounter, HijrahCalender, IslamicQuiz, IslamicGame, IslamicScreenServers, and IslamicWallpapers) are interesting, motivating, satisfying, attractive, fascinating, remarkable, motivating, exciting, pleasing, appealing, and rewarding. Thus, we hypothesize that good Islamic software will influence Muslim user satisfaction with Iweb positively.

#### 4. UTILIZATION BEHAVIOUR AS CONSEQUENCE OF USER SATISFACTION

Until today there is little empirical research on Muslim user behavioural intentions towards using Iwebs (Ibrahim et al. 2008). The previous studies on Iwebs mainly focus on Iweb information architecture.

Recent studies pay much attention to the Iweb non-functional design requirements as they influence trust, credibility, and legitimacy. Researchers on Iweb pay less attention to Muslim user's judgements. Though a number of studies have shown correlations between the perceived aesthetic design quality of a system's user interface and overall user satisfaction (Tojib et al. 2006; Lindegaard and Dudek, 2003; Peterson et al. 2004; cited in Hartmann et al. 2007). The ultimate outcome of perceived Muslim user satisfaction is content utilization behavioural intentions. Meaning that, Muslim users make intention toward Iwebs based on perceptions about how these websites will improve their Islamic knowledge and practices. That will ultimately change their life positively and guidance from Allah (swt). Content utilization behaviour includes seeking knowledge, continuous learning, steadfastness and devotion, and loyalty. Based on the above discussion, we propose that perceived Muslim user satisfaction will positively affect seeking, learning, and devotion, even though previous studies did not pay much attention to explore the relationship between Iweb Muslim user satisfaction and various utilization behaviours.

Therefore, we presented our complete conceptual model in Figure 1 above in order to answers three questions namely; what Iweb features influence perceived Muslim user satisfaction?, what are the dimensions of user satisfaction?, and what is the consequence of this user satisfaction judgement? Iweb features such as design, content, and Islamic play important role in forming perceptions of user satisfaction. This user satisfaction judgment affects subsequent content utilization behaviors.

#### 5. CONCLUSION

In this paper, we discussed Iweb user satisfaction. We identified key dimensions that Muslim users use to evaluate Iwebs. Features and consequence of user satisfaction are described. We adapted two Iweb frameworks and one e-commerce model as theoretical foundations. We proposed that certain features (e.g. design, content, Islamic) of Iweb influence Muslim user perceptions of Iweb satisfaction. We introduced several major dimensions associated with Iweb user satisfaction: Islamic (i.e. Akidah, ethical values, symbols, signs, and software), content (i.e. legitimacy, reliability, relevance, credibility, authority, and objectivity), and design (i.e. organizational, infrastructural, functional, security, attractiveness, and interactivity).

Furthermore, we defined and hypothesized these dimensions to positively influence user satisfaction and consequently user's content utilization behavior. Iweb content utilization behavior is discussed as outcome of user satisfaction judgment. To evaluate Iwebs, many organizations depend on objective measures such as renowned scholars, unique visitors, large membership, updated contents, and current issues.

Iweb success is also identified by user's perceptions. Our conceptual model suggests several opportunities for Iwebs enhancement. For instance, designing an Iweb that is interactive and reliable and developing comprehensively credible contents can promote perceived satisfaction. To develop our model we employed two popular theories in W-MIE and e-commerce. This conceptual model might be



useful for evaluating the effectiveness of this new information environment, both in terms of services and in terms of website design.

However, there are several limitations associated with this paper. First, no empirical tests are conducted yet, because this research is in progress. Second, we only consider Muslim user satisfaction in an Iweb information environment. Our model might not be appropriate to evaluate regular websites and other religious websites.

Third, Muslim user satisfaction might be perceived differently depending on Islamic organization or scholar's popularity or user's religious background. For ordinary Muslim user, interactivity and scholar's popularity might be more important than reliability or credibility of the contents. In contrast, content credibility and reliability might be more important factors for a learned Muslim user.

This paper is exploratory and developed based on available literature. The number of Iwebs is growing rapidly, and more Muslims are seeking for Islamic knowledge and practices online (online-Islam). Our knowledge about Iweb design and content utilization behavior is still at its embryonic stage. This paper may serve as an initial attempt to expand our knowledge about Islam-online and online-Islam. As it reports work in progress to explore the overall Iweb features that influence user satisfaction, utilization behavior, and positive change from the Muslim user perceptions (judgment).

## 6. REFERENCE

- Bakeri, A. A. (2010). Evaluating the accessibility and visibility of Qur'anic websites. IEEE 2010.
- Constantine, L. & Lockwood, L. A. D. (1999). *Software for Use*. ACM Press.
- Danials, M. (2004). Online Islamic organization and measuring effectiveness. *Online thesis and dissertation*. Retrieved November 3, 2009. ProQuest database.
- Ibrahim, E. N. M., Wan Hamzah, W. N. I., Taslim, J., and Wan Adnan, W. A. (2010). Evaluating Trust Elements in the context of Islamic based Informational Websites. *Proceedings of International Conference on User Science Engineering (i-USER)*, Malaysia.
- Ibrahim, E.N.M., Noor, M. L. Md., and Mehad, S. (2007). "Seeing Is Not Believing But Interpreting", *Inducing trust through institutional symbolism: A conceptual framework for online trust building in a web mediated information environment*. M.J. Smith, G. Salvendy (Eds.): Human Interface, Part II, HCII 2007, LNCS 4558, pp. 64–73. Springer-Verlag Berlin Heidelberg.
- Ibrahim, E.N.M., Noor, M. L. Md., and Mehad, S. (2008). Trust or Distrust in Web Mediated Information Environment: A Perspective of Online Muslim Users. *European and Mediterranean Conference on Information Systems (EMCIS)*, Dubai.
- Ibrahim, E.N.M., Noor, M. L. Md., and Mehad, S. (2009). "Fact or Fiction?" imposing legitimacy for trustworthy information on the web: A qualitative inquiry. J. Filipe and J. Cordeiro (Eds.): ICEIS 2008, LNBIP 19, pp. 297–306. Springer-Verlag Berlin Heidelberg.
- Kasmani, M. F., Buyong, M. & Muhammad Khairi, M. B (2008). Dakwah content and its method: An analysis on Islamic websites. Retrieved from <http://www.surrey.ac.uk/politics/research/documents/CP-FaizalKasmani.pdf>
- Kasmani, M. F., Buyong, M. & Muhammad Khairi, M. B (2008). Dakwah content and its method: An analysis on Islamic websites. Retrieved from <http://www.surrey.ac.uk/politics/research/documents/CP-FaizalKasmani.pdf>
- Loiacono, E., Watson, R., and Goodhue, D. (2002). WebQual(tm): A website quality instrument. *American Marketing Association: Winter Marketing Educators Conference*, Austin, Texas.
- Lynch, P. J., & Horton, S. (1999), *Web Style Guide*. Yale: University Press.
- Mahmud, M., Mansur, A., and Tap, A. O. M. (2010). Quality Rating of Islamic Websites Features: A Single-User Evaluation. *Proceedings of 3<sup>rd</sup> International Conference on Information & Communication Technology for the Muslim World (ICT4M)*, Indonesia.
- Mansur, A., Mahmud, M., and Tap, A. O. M. (2010). Preliminary investigation of Islamic Websites Design & Content Feature: A heuristic evaluation from user perspective. *Proceedings of International Conference on User Science Engineering (i-USER)*, Malaysia.
- Nielson, J. (2000). *Designing web usability: The practice of simplicity*. USA: New Riders Publishing.
- Noordin, M.F., & Othman, R. (2006). An information retrieval system for Qur'anic texts: A proposed system design. *IEEE International Conference on Information and Communication Technologies, ICTTA'06. 2nd. Volume: 1, Page: 1704-1709*.
- Nor Shahriza, A. K., & Norzelatun Rodhiah, H. (2005). Assessing Islamic information quality on the Internet: A case of information about hadith. *Malaysian Journal of Library & information Science, 10(2)*, 51-66.
- Shafie, M., NorLaila, M. N., Abdul Rahim, W. M. I., and Husin, M. S. (2010). Muslim User Interface Evaluation Framework (Muslim-UI) for Islamic Genre Website: A Quantitative Approach.

- Proceedings of 3<sup>rd</sup> International Conference on Information & Communication Technology for the Muslim World (ICT4M)*, Indonesia.
- Song, J.H., & Zinkhan, M.G. (2003). *Features of website design, perceptions of website quality, and patronage behavior*. Retrieved November 4, 2009. <http://www.sbaer.uca.edu/research/acme/2003/papers/new/16.pdf>
- Suleman, H. I. (2005). *Developing web metrics for measuring the quality of Islamic websites*. Unpublished Master Thesis, presented to the Kulliyyah of Information & Communication Technology, International Islamic University Malaysia. Kuala Lumpur. Malaysia.
- Sutcliffe, A. G. (2002). Assessing the reliability of heuristic evaluation for website attractiveness and usability. *HICSS-35th, Hawaii International Conference on System Science*, 1838-1847.
- Tojib, D. R, Sugianto, L., & Sendjaya, S. (2006). A conceptual model for B2E portal user satisfaction. *Paper accepted at the International Conference on Business and Administration (BAI)*, 3, 12-14.
- Wan Abdul Rahim, M. W. I., Nor Laila, M. N., and Shafie, M. (2006). Towards Conceptualization of Islamic User Interface for Islamic Website: An Initial Investigation. *Proceedings of International Conference on Information & Communication Technology for the Muslim World (ICT4M)*, Malaysia.
- Wan Abdul Rahim, M. W. I., Nor Laila, M. N., and Shafie, M. (2007). *Incorporating the Cultural Dimensions into the Theoretical Framework of Website Information Architecture*. In Usability and Internationalization. HCI and Culture, N. Aykin, Ed. SpringerVerlag Berlin Heidelberg, pp. 212-221.
- Wan Abdul Rahim, M. W. I., Nor Laila, M. N., and Shafie, M. (2008). *Inducting the Dimensions of Islamic Culture: A Theoretical Building Approach and Website IA Design Application*. In 21<sup>st</sup> International Symposium Human Factors in Telecommunication: User Experience of ICTs, C. w. Khong, C. Y. Wong, B. V. Niman, B. V., Eds. Prentice Hall, pp. 89--96.
- Wan Abdul Rahim, M. W. I., Nor Laila, M. N., and Shafie, M. (2009). Web Architectural-Inducing Model (W A-1M) for Information Architecture in Cultural Context: An Empirical Investigation. *Journal of Digital Information Management*, vol. 7, no. 5, pp. 297- 304.