User and Provider Perceptions on Malaysian E-Learning Websites for Islamic Knowledge Transfer

Alahoul, M. Raheel. M.[1], Nurdiana, A.[2], And NajwaHayaati, M. A.[3]
Faculty of Science and Technology (FST), UniversitiSains Islam Malaysia (USIM), Bandar BaruNilai, 71800Negeri Sembilan, Malaysia.
Corresponding Author: Alahoul, M. Raheel

Abstract:*The development of e-Learning websites for visually impaired users (VIUs) is important for effective Islamic knowledge transfer (EiKT) to be able to take place and in order to meet the needs of the users. This paper presents the perception of the use of e-Learning websites for Islamic knowledge transfer (KT) in Malaysia according to the VIUs, Knowledge Providers (KPs) and Service Providers (SPs). The research is exploratory and applies thematic analysis to analyze the qualitative data that were collected through the use of interview. Eight factors were obtained which states the perception of the users and how the websites can be improved for VIUs to be able to make use of it. The paper presents the identified factors and suggests the considerations of these factors in making decisions in the development of e-Learning websites for VIUs in Malaysia.*
Keywords: *Islamic Knowledge Transfer, Visually Impaired Users, Knowledge Providers, Service Providers, E-learning websites.*

I. Introduction

The rapid growth of Information and Communication Technology (ICT) over the years is creating new opportunities for e-Learning. E-learning in this paper is defined as a medium for transferring Islamic knowledge to the visually impaired users'-Learning is gaining applicability as an educational and training tool for a variety of reasons, including cost savings, institution reusability, and learner flexibility. The use of e-Learning website for knowledge acquisition has increased greatly over the years. Even though e-Learning hasaccommodatednewanddifferentperspectiveson its use withICTs, however, it isbutyetto achievethelevelofintegration,acceptanceorcohesiveapplicationrequiredtofully fulfill itspotentialespecially tothe visually impaired users has most e-Learning websites have many limitations for visually impaired users (VIUs) that make knowledge transfer (in this paper, Islamic knowledge) to them very difficult to achieve (Kharade and Peese, 2012). As a result, there is need to identify the factors that it will attempt to solve these two problems by identifying the factors which influence the effectiveness of Islamic knowledge transfer to VIUs via e-Learning websites.

The purpose of this paper is to present the findings from a case study on the usage and perception of the visually impaired users, service providers (SPs) and the knowledge providers (KPs) in the use of Malaysia e-Learning websites for Islamic knowledge transfer. The next section discusses about the methodology; the subsequent section discusses about the results and discussion and finally the conclusion of the paper.

II. Islamic Knowledge Transfer

Islamic knowledge transfers as defined for this paper is the process through which Islamic knowledge is exchanged between providers and receivers through the knowledge management medium (e-Learning). Whilemuchhasbeenwrittenabouttheuseofe-Learning asatoolinteaching the impaired people, there havebeen limited researches which are explicitly focusedonIslamicknowledge(coursewarecontent developmentprocess) for visually impaired users (Zheng et al.,2012).In line with modern development, the whole IT's are based on technology in which it supports people to achieve a high degree of wisdom (Baharom, 1993) as it known in Al Qur'an language "Al'hikmah" (al-Baqarah: 269). So, in an effort to support the success of preaching, the community should learn and master the ICT and the use of e-Learning (Aziz, 2003) and benefit the technology because Islam encourages people to do so as well as to conduct research on it as long as it is not beyond ethical boundaries (Noor Shakirah, 2006). Effectiveness of Islamic knowledge transfer model can be realized if the purpose for which the website was developed is fully achieved (Abdullah et al, 2011).

III. Conceptual Model Of Effective Islamic Knowledge Transfer (E*i*KT)For VIUs In E-Learning

Due to the result of the lack of effective Knowledge Transfer model for visually impaired users via e-Learning websites (Saowapakpongchai&Prougestaporn, 2012) and more specifically effective Islamic knowledge transfer mode (E*i*KT) which is the focus of the research, the researcher tries to develop an effective Islamic KT model for VIUs by utilizing an adapted form of Abdullah et al. (2011) effective knowledge transfer in e-Learning model to facilitate the identification of factors that affect Islamic knowledge transfer for VIUs through e-Learning websites. This model has been chosen because of its e-Learning capability and the identification of influencing factors that affect e-Learning websites. Figure 1 presents the conceptual model for EIKT via e-learning websites. The researcher has extended the application of Abdullah et al. model in order to identify the factors that affect the knowledge receiver, knowledge to be transferred and the medium of knowledge transfer.

Figure 1: The Proposed Conceptual Model of E*i*KT for VIUs in Malaysian E-Learning Websites
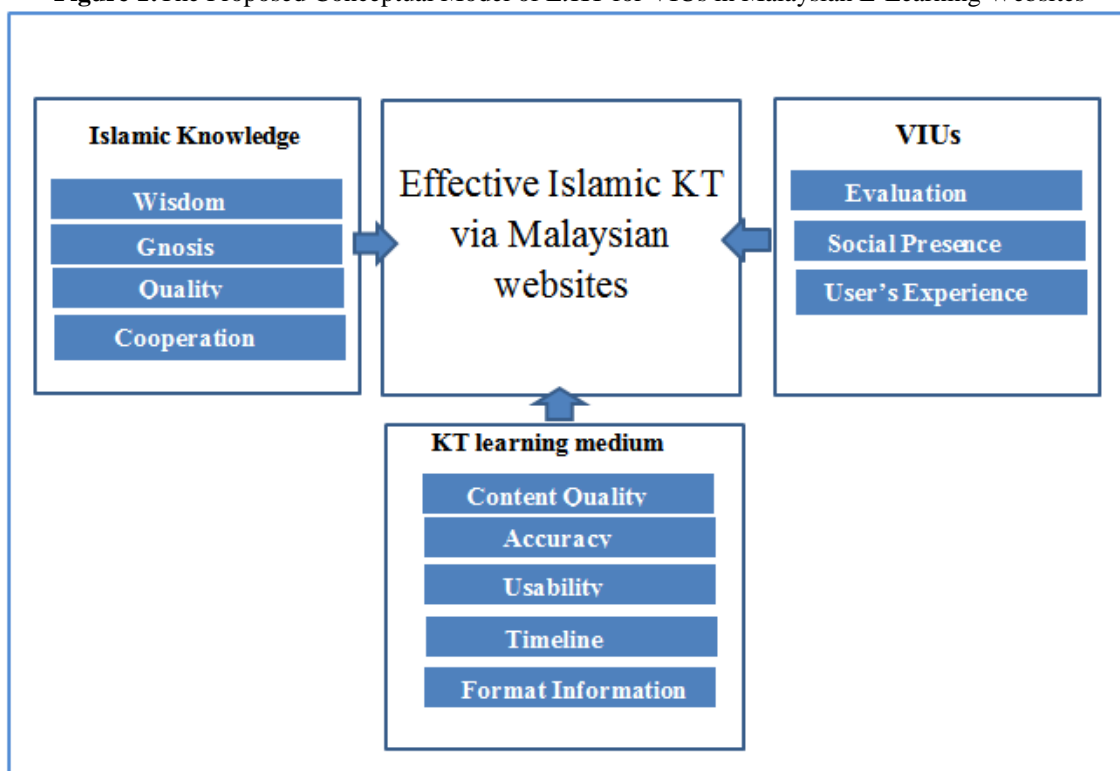
A conceptual framework has been derived using a significant number of literature reviews. The literature review concentrates on the factors and concepts which have been raised in relevant numbers of associated literatures. Table 1 presents the conceptual framework in terms of factors, associated concepts and reference with relevant literatures.

Table 1: Potential Factors for Islamic Knowledge Transfer to VIUs Through E-learning Websites

Groupings and Factors	Description	Associated Concepts & Authors
Mobile learning development	A mixture of online learning and learning using materials previously downloaded onto handheld devices helps to reduce costs and the inconvenience of signal disruption.	(Attewell, 2005; Butean, Moldoveanu&Morar, 2015)
Format Information	Ability to change the face, font type and size of interface and have control over the e-Learning website.	(Nganji, 2012; Rebaque-Rivas et al., 2013)
ICT Skills	A person's belief in his capability to effectively use technology to improve learning or teaching.	(Luskin&Hirsen, 2010; Permvattana et al., 2013)
E-learning Quality	Transfer of credible knowledge effectively and efficiently in a specific time according to the official standards required.	(Hammoudeh, 2012; Simonson et al., 2012)
ICT Infrastructure	The e-Learning websites should have appropriate supporting ICT infrastructures.	(Hussain, 2004; Al-Sobhiet al., 2010; Karunasena et al., 2012)

Usability	Usability is the ease of use of an e-Learning website for the VIUs.Adaptive, rehabilitative and assistive devices and processes for locating, selecting and helping in providing support for people with different disabilities through allowing them in accomplishing different tasks.Audio, textual and audio-visual content that users' experience when using websites and they include, videos, sounds, images, text and animations.	(Bocconiet al., 2007; Schulze &Kromker, 2010; Saowapakpongchai&Prougestaporn, 2012).
ICT Infrastructure	The e-Learning websites should have appropriate supporting ICT infrastructures.	(Hussain, 2004; Al-Sobhiet al., 2010; Karunasena et al., 2012)
Accuracy	Islamic knowledge content provided on e-Learning websites should meet with the VIUs needs and expectations.	(Wang, & Strong, 1996; Ordonez, 2014).
Timeliness	The extent to which Islamic knowledge being regularly updated.	(Reimann, 2009; Luskin&Hirsen, 2010; Ordonez, 2014)
Gnosis	Knowledge from experience especially experience of divinity or that which is beyond the five senses.	(BanuShirinet al., 2014)

Table 1: Potential Factors for Islamic Knowledge Transfer to VIUs Through E-learning Websites (continued)

Groupings and Factors	Description	Associated Concepts & Authors
Content Quality	The way content is exhibited and presented which will help in achieving easy reading and understanding.	(Abdullah et al., 2011; Simonson et al., 2012; Saowapakpongchai&Prougestaporn, 2012)
Wisdom	Selecting the right way to transfer Islamic knowledge to VIUs depending on a suitable way according to their needs and ability, and total insight and having sound judgment concerning a matter or situation through understanding cause and effect phenomena.	(Walker & Christenson, 2005; Burhan, 2012; El Garahet al., 2012)
Co-operation	Implementation of Islamic teachings on e-Learning websites should be carried out with love and affections. Islamic preaching on love and affection should be encouraged and impacted in the daily lives of users.	(Buzziet al., 2012)
Social Presence	VIUs perception of being in and belonging in an online course. An instance of a higher degree communication medium is the video while that of a lower degree communication medium is the audio. People with the same interests coming together to share knowledge regularly	(Russo & Benson, 2005; Lowenthal, 2008)
User experience	User experience is the level of positive or negative feelings which a specific user is experiencing in a particular setting during and after a product use which will propel a user for further usage.	(Betts et al., 2015; Beauregard et al., 2007; Hassenzahl, 2008; Johnson et al., 2009; Schulze &Krumker, 2010; Chu & Chu, 2010; Ordonez, 2014)
Awareness Creation	The e-Learning websites should have appropriate supporting ICT infrastructures.	(Al-Sobhiet al., 2010); (Karunasena, 2012)
Government and voluntary Support	Provision of support in terms of development of ICT infrastructures and funding by government and voluntary organizations.	(Schwester, 2009; Al-Rashidi, 2010)
Evaluation	Tasks should comply with guidelines and standards and provide feedback on all sections of the e-Learning environment.	(Luskin&Hirsen, 2010;Permvattana, et al., 2013)
E-learning Experience	Providers of knowledge must be experienced and vast to impact effective knowledge through e-Learning.	(Cooper et al., 2006)

Table 1: Potential Factors for Islamic Knowledge Transfer to VIUs Through E-learning Websites (continued)

Groupings and Factors	Description	Associated Concepts & Authors
Motivation	Giving motivation and incentive to users so that they will be able to make use of the website by providing ICT infrastructures and assistive technologies that can be bought at a reduced price for the visually impaired users.	(Faghihet al., 2013; Junuset al., 2015)
Perceived Enjoyment	The extent to which Islamic knowledge being regularly updated.	(Junuset al., 2015)

IV.   Methodology

Semi-structured interviews with 41 respondents were conducted. Therespondents which consists of 14 VIUs, 13 SPs and 14 KPswere selected from Malaysian organizations which included Malaysian Association for Blind (MAB), Society Of The Blind In Malaysia (SBM), Persatuan Orang CacatPenglihatan Islam Malaysia (PERTIS), Setapak Blindness Special Education Secondary School (SMPK), Ministry of Education (MOE), JabatanKemajuan Islam Malaysia (JAKIM), UniversitiKebangsaan Malaysia (UKM), International Islamic University Malaysia (IIUM). The VIUs refers to the group of participants that are legally blind or have vision impairment. They are the people that make use of different tools such as screen readers and screen magnifiers for them to be able to make use of the computer or the internet. The SPs refers to the group of participants that provide the information to the e-Learning users VIUs. This group consists of Information Technology instructors, officers, directors and chief executive officer. They also provide information and access to different kinds of Islamic knowledge such as Hadith, Fiqh, Tawhid and lectures. The knowledge providers group of participants includes the lecturers and teachers that teach users and impact knowledge to them. The respondents were requested to provide their opinion on the usage of e-Learning websites as a medium to learn Islamic knowledge. The interview transcripts were then analyzed, using inductive thematic techniques (Boyatzis, 1998; Braun& Clarke, 2006; Azizan, 2011). The potential factors were available to seed this analysis (see Table 1), supplemented with the outcomes of the thematic analysis which allowed the researchers to code category names that emerged from the data.

V.   Results

This section shows the response of participants on the perception of e-Learning websites which they are making use of to learn Islamic knowledge. The perceptions are presented based on the respondents that are VIUs, KPs and SPs is presented in Table 2.

Table 2: Perceptionsfrom VIUs, KPs and SPs on E-learning Usage for Islamic Knowledge Transfer

VIUs	KPs	SPs
Content Quality	Content Quality	Useful
Usefulness	Usefulness	Navigation
Navigation	Format Information	Accessibility
Accessibility	User Friendly	Useful sources of information and knowledge
Assistive Technology	Assistive Technology	
Useful source of information and knowledge	Useful sources of information and knowledge	

Visually Impaired Users (VIUs)

Drawing upon analysis of the interviews, VIUshave identified six factors based on their perceptions on the usage of Malaysian e-Learning websites for Islamic knowledge transfer. The perceptions are content quality, usefulness, navigation, useful source of information and knowledge, accessibility and assistive technology.

VIU - Content Quality

The knowledge provided on the e-Learning websites must be accurate, correct and authentic. Although the presentation of the e-Learning website may be clear, peaceful and convenient to use, the content of the e-Learning website cannot be confirmed whether it is genuine or not, therefore the VIUs are concerned about the quality of the content. As a result, they resort totrying to confirm the information provided on the websites by getting opinions from other websites so as to determine the correctness of knowledge. *"But before, I believe the information is correct I need to check with many websites to make sure the knowledge is correct. I cannot depend on the website. I need check few to get different opinion, then make a conclusion and choose the correct or which best one with the knowledge that is the best for me on this issue or other. We cannot control the content of the website; sometimes some people say something that are not true. It depends on the user to study, to make research and then come out with their own conclusion" (VIU_1:Chairman).*

VIU- Usefulness

The e-Learning websites should be designed in a way that the VIUs will find it suitable and helpful to get the required knowledge. E-learning website should be made to suit the needs of them, especially to get Islamic knowledge more in terms of audio instead of visual learning and also users can download the mp3 audio in order to listen which is better than reading on the computer screen. The usefulness of the website will encourage its users to revisit and use it more often. *"It has a lot of benefits. If I have to find any knowledge and get any information about education, life, and economy, politic or social we can use the computer or a handy phone and can Google any website you want and that is easy and helpful for us"* (VIU_12: Braille instructor).

VIU - Navigation

The e-Learning website must be easy to use in terms of its simplicity and less complex design. VIUs of e-Learning websites should be given consideration when developing website in order to suit their visual impairment and make navigation and use of the website more appealing to them. The website should have fewer pictures or diagrams and more of audio. The layout should be simple, easy to navigate to different pages and the pages should not have complex designs. *"Easy to use and navigatebecause I acquire useful and correct Islamic knowledge out of it"*(VIU_9: Teacher).

VIU- Useful Source Of Information And Knowledge

E-learning websites should serve as an easy source of general knowledge. The e-Learning website currently available includesJabatanKemajuan Islam Malaysia (JAKIM). It is known as a competent authority responsible for halal certification in Malaysia.They provide knowledge on various issues ranging from law, theology, Muamalat, worship, fatwa and other various topics. It gives information and knowledge on vast areas. The knowledge provided should not only be restricted to Islamic knowledge but also about various things outside Islam such as knowledge of other religions,other countries and people around the world in order to broaden their knowledge and understanding. *"I learn a lot from these websites sometime when I need to calculate zakat, so I just enter all the details about our salary and the website calculatesit for us. So I will know how much we need to pay for any kind of zakat according to Islamic Sharee'ah*(VIU_1: Chairman).

VIU - Accessibility

The Islamic knowledge content provided on e-Learning websites should be accurate knowledge and accessible to all its users. It should also have a very nice and simple interface which is easily accessible for the different kinds of users who will make use of it. One of the VIUs stated that some of the e-Learning websites available are useful and adds value to knowledge with their simple interface that makes it easy for accessibility. *"To find the Islamic knowledge through this website depends on your timing and speed of internet. Sometime it takes 5 minutes and may be 10 to 25 minutes"* (VIU_3: Teacher).

VIU - Assistive Technology

The installation of Job Access with Speech (JAWS) software will improve the accessibility of the VIUs to e-Learning especially when it comes in various languages. Different assistive technologies which are available to make e-Learning more accessible to its users is of great importance. In choosing the assistive technologies, language barrier should be considered as they mostly come in English language, while some people are not fluent in English language, there is the need to consider multi lingual assistive technologies which can read both Arabic and Malay text. *"I am using JAWS and also open book which is for scanning documents and books and so on. It is a software but just used for scanning something. But it is not used for accessing internet but just using for scanning books so most of the books that I read I have to scan it and then save it to the file and read it. JAWS and Non Visual Desktop Access (NVDA) which is a free, open source, portable screen reader for Microsoft Windows can be used to access the internet but I do not use NVDA"* (VIU_2: Lecturer).

Service Providers (SPs)

SPs have identified four factors based on their perceptions on the usage of the current e-Learning websitesin Malaysia as a medium to transfer the Islamic knowledge. The factors are useful, navigation, useful sources of information and knowledge, and accessibility.

SP - Useful

The e-Learning website should be helpful in order to get information and also to download audio files. The website should have the ability to download mp3 audio in order to listen which is better than reading on the computer screen. *"It is easy to use and navigate this website for useful Islamic knowledge because I use the*

correct website and I check first before I go to visit. I download article and videos. It takes 3 minutes to find the Islamic knowledge through it" (SP_8: Chairman).

SP - Navigation

The e-Learning website should have a neutral background and easy to use. The e-Learning website should not be flashy as it may further affect the sight of VIUs. Fast moving objects and extremely bright colors are not suitable for VIUs and can discourage them from further use. *"These websites are easy to use and navigate for Islamic knowledge for us as visually impaired. Because this website is not so much like any machine, not so very flashy as when the website uses so many flashy content, it will be difficult to use for the visually impaired" (SP_5: President).*

SP - Useful Sources Of Information And Knowledge

The website gives knowledge on various issues ranging from law, theology, worship, fatwa and other various topics. It gives knowledge on vast areas. The website should be made in a way that everyone can benefit from it irrespective of their ethnicity, religion and race. General knowledge should be accessible on the website. It is a good source of acquiring Islamic knowledge, and how a Muslim should live in accordance to the Islamic teachings. *"The website talks about Islam, Islam as the universal religion. It gives us in-depth understanding of Islam in general and in particular, because not only the Muslims learn from this website. There are Christians, Jews, and other people from this website as well" (SP_2: IT Instructor).*

SP - Accessibility

The websites should be easy to use to search for topics on Islamic knowledge. E-learning websites should be easily accessible for VIUs throughassistive technologies to aid them in obtaining the necessary knowledge content on the websites. *"We make use of all the media but they can't see, they can't read from the screen, so you can add to the* software*and the interface for them to focus on voice to produce the sound for them to hear" (SP_4: Director of ICT).*

Knowledge Providers (KPs)

KPs have identified six factors based on their perceptions on the current e-Learning websites in Malaysia as a medium to transfer Islamic knowledge. The factors are content quality, usefulness, and format information, useful sources of information and knowledge, user friendly and assistive technology.

KP - Content Quality

The presentation of the e-Learning website is clearand convenient to use. The e-Learning website should be of good standard with very clear layout, suitable and flexible fonts and options to suit any type of users and convenient to use. The content of the website should also be of standard and reliable. *"The website has given much information and will be very useful along the time especially for the Muslim. Most of them are correct. But I am still not satisfied because the Islamic knowledge given is not enough and complete. The websites should be updated with Islamic knowledge in every week" (KP_11: Officer).*

KP - Usefulness

The e-Learning websites give the users access to knowledge via the website with the ability to increase the font or use the audio. The website should be able to suit the needs of the VIUs and by giving guidance to them and give accurate information on topics required. When users are confused, they should be able to refer to the Islamic websites and get solution to issues that confused them. *"I feel great; it is really helpful for me. Especially Islamic websites to give me guidance and when I have some issues I will go to this website to rectify them" (KP_6: Doctor).*

KP - Format Information

The e-Learning website is simple with less complex design which makes it easy to use and navigate for VIUs. The website layout should be in accordance to the need of its users. For the VIUs, there should be careful consideration of the background by making sure it is not too colorful and conspicuous for the user. Also the fonts should be bigger with less pictures and diagrams but with more sound. *"It is really a good website. There is no graphic because for us, we do not like pictures and maps or graphics. With them the website will be inaccessible. The color of the background is simple. It is enough to use Times New Roman or Arial" (KP_10: Teacher).*

KP - Useful Sources Of Information And Knowledge
A lot of knowledge can be found on e-Learning website which is useful for the VIUs. The knowledge on the e-Learning websites needs to be useful and accurate for the users. There is a need to make sure the knowledge uploaded, shared or written are up to the standard and will add to the knowledge of the user in a positive way. The e-Learning website should be able to provide lots of knowledge to its users on the appropriate and acceptable Islamic way of life based on the Al-Quran, Sunnah and Islamic scholar works. *"They can access this website and search for Quran, Hadith or Fatwa online. The website gives an understanding on subject of Islam"* (KP_3: Lecturer).

KP - User Friendly
The e-Learning website is useful to acquire knowledge about Islam but without screen readers, it is still quite difficult for the VIUs. The e-Learning website should be designed in a way that the user can use it without encountering difficulties with the aid of screen reader for the VIUs who cannot read the prints but will prefer to listen to the audio. *"It's not easy to use for VIUs because the main problem is when you see something on the screen and the main thing is visual"* (KP_8: Director).

KP - Assistive Technology
The availability of software to enable users to use the website easily is important. It should be able to work with assistive software such as JAWS, NVDA, Duxbury, braille keyboard and screen readers in order to make the use of e-Learning more suitable for the VIUs. Since they are VIU, they need more of assistive technologies since e-Learning websites make use of more wordings. *"If we talk about VIUs or blind probably, we do not have enough facilities to read what is on the screen because that requires software to read the website. JAWS can be installed to access the website in English but what about the Malays and theArabs. That is a very big problem for non-English speakers"* (KP_2: Lecturer).

VI. Discussion
All the three groups of respondents agreed that there is a need for better assistive technologies to be developed for VIUs to be able for them to easily make use of e-Learning websites. Other factors that were mentioned included the usefulness of the websites, format information, content quality, navigation and accessibility. As reported in the extant literature on the quality of e-Learning website, several factors were identified by Jung (2011) as the factors that promote e-Learning quality which are Interaction, Staff Support, Institutional QA Mechanism, Institutional Credibility, Learner Support, Information and Publicity and Learning. An e-Learning websites should be useful and user friendly as these two factors are discovered as important determinant in its acceptability and usability (Dwivediet al., 2011; Elkasehet al., 2016). Findings from Neo et al. (2015) and Schroffetal. (2011) also showed that easy navigation and user friendliness are two important elements and influential components in the perceived intentions of users and perceived ease of use of technology to use e-Learning website. Accessibility has been extensively discussed in a review by Aquino (2015) on the need for continuing attention and support for people with disability especially on e-Learning accessibility. Also, since it has to do with the VI, technologies that can read directly from any source irrespective of internet access or not should be provided.
Previous literatures identified that easy navigation reduces the cognitive load on the users of e-Learning website (Tarafdar& Zhang, 2005). In the findings of Calisiret al., (2010) navigation and interaction were the most important factors identified. Sheeand Wang (2008) findings on learner satisfaction and its applications recommended that an e-Learning system should offer a user-friendly interface, interactive learning community, useful system content, and personalization. This is also in line with the findings of research carried out (Koohang&Paliszkiewicz, 2014; Koohang, &Paliszkiewicz, 2016) on e-Learning courseware usability found user friendly to be one of the fundamental components.

VII. Conclusion
The factors above were identified from the analysis of the interview conducted for the VIUs, SPs and KPs based on their perception of the current Malaysian e-Learning website. These factors include quality of the e-Learning website, usefulness, accessibility, navigation, useful source of information and knowledge, assistive technology, format information and user friendly. The use of the perception of the respondents about the use of e-Learning websites for Islamic KT can be considered in the development of e-Learning websites which can meet the needs of users whether they are visually or none.

References

[1]. Abdullah, S., Selamat, M.H., Cob, Z.C., Sazaly, U.S., (2011).A Measurement Framework For Knowledge Transfer In E-Learning Environment. *Information Technology Journal 10 (5): 927-943*

[2]. Al-Rashidi, H., (2013).The Role of Internal Stakeholders and Influencing Factors During the Phases of E-government Initiative Implementation (Doctoral dissertation, Brunel University, School of Information Systems, Computing and Mathematics).

[3]. Al-Sobhi, F., Weerakkody, V., & Al-Busaidy, M., (2010). The Roles of Intermediaries in the Diffusion and Adoption of E-Government Services. In AMCIS p. 385.

[4]. Aquino, K. C., (2015). E-learning and Disability in Higher Education: Accessibility research and practice. *Review of Higher Education 38(2): 305-307.*

[5]. Attewell, J., (2005). "From Research and Development to Mobile Learning: Tools for Education and Training Providers and Their Learners." 4th World Conference on m-Learning.

[6]. Azizan N. (2011). Critical Success Factors for Knowledge Transfer via Australian and Malaysia Government Education Websites: A Comparative Case Study. Thesis. School of Business IT and Logistics, RMIT University.

[7]. Baharom K., (1993). Era IT BeberapaIsu Di Sekitarnya&BagaimanaBadan-badan Islam BolehBerperanan.Kertaskerja Seminar PenggunaanKomputerAnjuran PMAIUM: K. Lumpur, 25-26 September, 5.

[8]. BanuShirin, H., Syed Hassan, S.S., Islam, M.S., (2014). Interaction In E-Learning Environment: Does It Fulfill With Islamic Teaching? Malaysian Online Journal Of Educational Management (Mojem). Retrieved April 10, 2016 from http://www.flexiblelearning.net.au/research/2003/elearning250903final.pdf

[9]. Beauregard, R., Younkin, A., Corriveau, P., Doherty, R., Salskov, E., (2007). User Experience Assessment. *Intel Technology Journal 11(1)*

[10]. Betts, K., Alex H., Cohen, Veit, D.P., Alphin, C. Jr., Broadus, C., Allen, D., (2015). Strategies to Increase Online Student Success for Students with Disabilities.*Journal of Asynchronous Learning Networks17(3).*

[11]. Bocconi, S., Dini, S., Ferlino, L., Martinoli, C., &Ott, M., (2007). ICT Educational Tools and Visually Impaired Students: Different Answers to Different Accessibility Needs. In Universal access in human-computer interaction.Applications and services (pp. 491-500). Springer Berlin Heidelberg.

[12]. Boyatzis, R. (1998). Transforming Qualitative Information: Thematic Analysis and Code Development. Thousand Oaks, CA: Sage.

[13]. Braun, V., & Clarke, V., (2006).Using Thematic Analysis in Psychology.*Qualitative research in psychology3(2): 77-101.*

[14]. Burhan, F.S., (2012). Wisdom and Islam, Institute of Arabic and Islamic Studies, Palmdale, California. Retrieved March 12, 2016 from www.islamic-study.org/wisdom_%28al-hikmah%29.htm#Flexibility

[15]. Butean A., Moldoveanu A., Morar A., (2015). From Classic Math School Books To InteractiveGamifiedE-learning.*ELSE 1: 2343–7669*

[16]. Buzzi, M. C., Mori, G., Buzzi, M., Leporini, B., Penichet, V. M. R., (2011). Making "Google Docs" User Interface More Accessible for Blind People,Proceeding of ADNTIIC 2010, International Conference on Advances in New Technologies, Interactive Interfaces, and Communicability, pp. 14-17, Huerta Grande, Cordoba,Argentina, October 20 – 22, 2010.

[17]. Calisir, F., Bayraktaroglu, A. E., Gumussoy, C. A., Topcu, Y. I., Mutlu, T., (2010).The Relative Importance of Usability and Functionality Factors for Online Auction and Shopping Web Sites.*Online Information Review34(3): 420-439.*

[18]. Chu, R. C., Chu, A. Z., (2010). Multi-level Analysis of Peer Support, Internet Self-efficacy and E-learning Outcomes – The Contextual Effects of Collectivism and Group Potency.*Computers & Education55(1): 145-154.*

[19]. Cooper, V., Lichtenstein, S. & Smith, R., (2006).Knowledge Transfer in Enterprise Information Technology Support Using Web-Based Self-Service Systems.*International Journal Technology Marketing1(2): 145-70.*

[20]. Deraman, A.A., (2003). RevolusiTeknologiMaklumatdanUmat Islam di Malaysia, JurnalPemikir April-Jun, 125 – 145.

[21]. Dwivedi Y.K, Williams M.D, Ramdani B, Niranjan S, Weerakkody V. (2012). Understanding Factors for Successful Adoption of Web 2.0 Applications.ECIS.

[22]. El Garah, W., Beekun, R. I., Habisch, A., Lenssen, G., &LozaAdaui, C., (2012).Practical Wisdom for Management from the Islamic Tradition.*Journal of Management Development31(10): 991-1000.*

[23]. Elkaseh, A. M., Wong, K. W., Fung, C. C., (2016). Perceived Ease of Use and Perceived Usefulness of Social Media for e-Learning in Libyan Higher Education: A Structural Equation Modeling Analysis. *International Journal of Information and Education Technology6(3): 192.*

[24]. Faghih, B., Azadehfar, M. R.,&Katebi, S. D., (2013). User Interface Design for E-learning Software. *The International Journal of Soft Computing and Software Engineering3(3): 786–794.*

[25]. Fereday, J., Muir-Cochrane, E., (2008).Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development.*International journal of qualitative methods, 5(1): 80-92.*

[26]. Hammoudeh, M. M. (2012). Islamic Values and Management Practices: Quality and Transformation in the Arab World. Gower Publishing, Ltd.

[27]. Hassenzahl, M., (2008). User Experience (UX): Towards an Experiential Perspective on Product Quality. In Proceedings of the 20th International Conference of the Association Francophone d'InteractionHomme-Machine (pp. 11-15).ACM.

[28]. Hussain, R. M. R., (2004). E-learning in Higher Education Institutions in Malaysia.*International, E-Mentor5(7).*

[29]. Johnson, R.D., Gueutal, H., Cecilia, M.F., (2009). Technology, Trainees, Metacognitive Activity and E-learning Effectiveness.*Journal of Managerial Psychology24(6): 545-566.*

[30]. Jung, I., (2011). The Dimensions of E-learning Quality: From the Learner's Perspective. *Educational Technology, Research and Development 59(4): 445-464.*

[31]. Junus, I.S., Santoso, H.B., Isal, Y.K., Utomo, A.Y., 2015. Usability Evaluation of the Student Centered e-Learning Environment.*International Review of Research in Open and Distributed Learning 16(4).*

[32]. Kharade, K., &Peese, H. (2012). Learning by E-Learning for Visually Impaired Students: opportunities or again marginalization? *E-Learning and Digital Media*, 9(4), 439-448.

[33]. Karunasena, A., Deng, H., & Zhang, X., (2012). A Web 2.0 Based E-learning Success Model in Higher Education. *Lecture Notes in Information Technology23: 177.*

[34]. Koohang, A. Paliszkiewicz, J., 2014. Empirical Validation of an Learning Courseware Usability Model. *Issues in Information Systems15(2): 270-275.*

[35]. Koohang, A., Paliszkiewicz, J. (2016). E-Learning Courseware Usability: Building a Theoretical Model. *Journal of Computer Information Systems56(1): 55-61.*

---

[36].   Lowenthal, P. R., (2009). Social presence.Social computing: Concepts, Methodologies, Tools, and Applications 129-136.
[37].   Luskin, B., &Hirsen, J. (2010). Media Psychology Controls the Mouse that Roars. *Handbook of Online Learning. Thousand Oaks, CA: SAGE Publications, Inc*.

[38].   Neo**,** M., Park, H., Min-Jae, L., Jian-Yuan, S. O. H., Ji-Young, O., (2015). Technology Acceptance of Healthcare E-learning Modules: A Study of Korean and Malaysian Students' Perceptions. *TOJET: The Turkish Online Journal of Educational Technology13(2)*
[39].   Ordóñez, A. C., (2014). Predicting International Critical Success Factors in e-learning (Doctoral dissertation, UniversitatOberta de Catalunya).
[40].   Permvattana, R. & Armstrong, H., Murray, I., (2013). E-Learning For The Vision Impaired: A HolisticPerspective.*International Journal of Cyber Society and Education 6(1): 15-30*
[41].   Rebaque-Rivas, P., Gil-Rodríguez, E.P., Manresa-Mallol, I., 2013. How to Design a Mobile Learning Environment?
[42].   Reimann, P., (2009). Time is Precious: Variable- and Event Centred Approaches to Process Analysis in CSCL Research.*International Journal of Computer-Supported Collaborative Learning 4(3): 239–257.*
[43].   Rudestam, K. E., &Schoenholtz-Read, J. (2009). Handbook of online learning.Sage Publications.
[44].   Russo, T., Benson, S., (2005). Learning with Invisible Others: Perceptions of Online Presence and their Relationship to Cognitive and Affective Learning.*Educational Technology & Society8(1): 54-62.*
[45].   Saowapakpongchai, K., Prougestaporn, P., (2012). Web Accessibility Model for VisuallyImpaired Students on ELearning in Higher Education.*International Journal of the Computer, the Internet and Management2(2).*
[46].   Schulze, K., Krömker, H., 2010. A Framework to Measure User Experience of Interactive Online Products. Proceedings of the 7th International Conference on Methods and Techniques in Behavioural Research.ACM.
[47].   Schwester, R., (2009). Examining the Barriers to E-government Adoption.*Electronic Journal of e-government 7(1): 113-122.*
[48].   Shee, D., Wang, Y. H. Multi-criteria Evaluation of the Web-based E-learning System: A Methodology Based on Learner Satisfaction and Its Applications. *Computers & Education 50(3): 894-905.*
[49].   Shroff, R. H., Deneen, C. D., Ng, E. M. W., (2011). Analysis of the Technology Acceptance Model in Examining Students' Behavioral Intention to use an E-portfolio System. *Australasian Journal of Educational Technology27(4): 600-618.*
[50].   Simonson, M., Smaldino, S., Albright, M., &Zvacek, S., (2012). Teaching and Learning at a Distance: Foundations of distance education (5th ed.) Boston,MA: Pearson.
[51].   Tarafdar, M., Zhang, J., (2005). Analyzing the Influence of Website Design Parameters on Website Usability. *Information Resource Management Journal 18(4): 62–80.*
[52].   Walker, D. H., & Christenson, D. (2005). Knowledge Wisdom and Networks: A Project Management Centre of Excellence Example. *The Learning Organization12(3): 275-291.*
[53].   Wang, R. Y., & Strong, D. M. (1996). Beyond Accuracy: What Data Quality Means to Data Consumers. *Journal of Management Information Systems12 (4): 5–34*
[54].   Zarinpoush, F., Von Sychowski, S., Sperling, J., 2007. Effective Knowledge Transfer & Exchange For Nonprofit Organizations. A FRAMEWORK. 2007 Imagine Canada.
[55].   Zheng, D. D., Christ, S. L., Lam, B. L., Arheart, K. L., Galor, A., & Lee, D. J. (2012). Increased Mortality Risk among the Visually Impaired: The Roles of Mental Well-Being and Preventive Care Practices Mortality Risk among the Visually Impaired. *Investigative ophthalmology & visual science53(6): 2685-2692.*