Interactive Multimedia for Learning Hajj

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ABSTRACT

Previous researches and current initial findings have shown that conventional approaches used in most Hajj supplementary learning materials are less effective in providing clear understanding to users, particularly the pilgrims. Most of the materials are based on passive learning. Thus, in order to cater for those limitations, this study proposed an idea of interactive multimedia approach in developing HajjEdu kiosk as an attempt to provide a better learning aid for supporting self-paced learning for Hajj. In addition, this study incorporates virtual environment (VE) and multimedia technology in designing the interface prototype as an attempt to persuade users especially hajj pilgrimage to use computer technology as their main supplementary learning material. Thus, this study elaborates the idea of publicly apply this application in every mosques for every states of Malaysia. Generally, this paper reviews some related literatures about Hajj, interactive multimedia technology, virtual environment and information kiosk. Lastly, this paper discusses on the results of the evaluation on the targeted users.

Keywords: Hajj Course, Multimedia Technology, Virtual Environment, Information Kiosk, Supplementary Learning Material

1. Introduction

Hajj is one of the five pillars of Islam. Every capable and able-bodied Muslim is obliged to make the pilgrimage to Makkah at least once in his lifetime. In Malaysia, Tabung Haji (TH) is the entrusted organization to handle Hajj matters which include before pilgrims leave for Makkah such as providing Hajj learning courses. These courses include talks and practical sessions (Tabung Haji, 2010). The Hajj procedures are complex

as a lot of information, rules, tasks, practical steps and Al- Quran verses, prayer and zikr have to be learnt and understood.

Even though comprehensive courses are provided by the Tabung Haji for the pilgrims, supplementary learning materials are still required (Jamaan, 2010). Currently, most of the supplementary materials are available in the form of books, cassettes, CDs or DVDs and video tapes which emphasize more on the requirements, procedures and steps in performing the Hajj. However, obtaining knowledge through these approaches seems like a rather passive activity. In a learning process, learners should be active rather than passive (Brecke & Jensen, 2007). Passive learning approaches result in the decrease of comprehension and retention among learners (Burt, 2004).

A preliminary study has been conducted to confirm this issue. It is an initial exploration in order to propose a better solution. Interviews and site observation were used as data gathering techniques. Site observation has been conducted in Selangor by observing 5 hajj courses conducted by Tabung Haji. Meanwhile, interviews were deployed with several qualified Hajj instructors (content experts) from Tabung Haji. According to the Hajj instructors, most of the Hajj learners could not practically imagine the Hajj procedures. The learners were hard to successively imagine and memorize the steps in Hajj. Furthermore, they did agree that there is a large amount of information, rules and tasks that need to be understood by the learners. Surprisingly, they also suggested the Hajj learners to refer to the supplementary materials to increase their understanding and retention towards better understanding of the Hajj procedures.

The current Mufti of Perlis Associate Professor Dr. Mohd Asri Zainul Abidin, claims the current method of operation has made the hajj course too long, adding to the perception among Muslims that worship is very difficult to implement. Obviously, the courses of professional pilgrims have to be neat, quick and easily understood by the pilgrims just in a few hours (*Berita Harian*, Aug 21, 2007).

In addition, the learners also have no choice except to participate in the traditional practical sessions held on the last stage of hajj course. The form of practicality is important for the learners to deeply understand the steps and to experience in a real life situation. According to Jabar et al. (2008), virtual environment (VE) is the best alternative to be employed during the practical training for Hajj learning based on the supplementary material. The real time of life-like environment and self-directed learning capabilities can increase learners understanding towards the Hajj

procedures. Meanwhile, the use of multimedia is the best way to convey information effectively, such as through the use of animation (Jusoh et al., 2009). In previous research done by Universiti Utara Malaysia, VE has been used for the practical steps which include Tawaf, Sa'ie and throwing of the Jamarat while multimedia for the alternative approach in conveying information.

Thus, in order to cater for those limitations, this research attempts to utilize VE and multimedia technologies in order to provide a much better Hajj learning approach. This study proposed interactive multimedia approach with implementation of Islamic concept in designing the kiosk information prototype as an attempt to provide a better learning aid for supporting self-paced learning for Hajj. In addition, this kiosk information is also intended to persuade users, and in this case elders pilgrims to use multimedia technology and VE as their supplementary method of learning hajj. The proposed application can be a further step of enhancing hajj course concept in order to prepare pilgrims and Malaysian before performing real hajj whether in nearest time or years onwards.

2. Hajj Course and Interactive Multimedia

Hajj is a required pilgrimage to Makkah for all Muslims who can afford to perform the hajj at least once in a lifetime. When Malaysian Muslims intend to perform Hajj, they will have to register with Tabung Haji. Tabung Haji will provide courses that will teach them on the procedures and guidelines to perform the Hajj. These courses include Serial Hajj Course (Kursus Haji Bersiri), Intensive Hajj Course (Kursus Haji Intensif) and Premier Hajj Course (Kursus Haji Perdana).

Normally these courses will take between 15 to 18 weeks to complete. Even though Tabung Haji provides comprehensive courses for Hajj, still these courses have some limitations. Among others is the difficulty in understanding and remembering the acquired knowledge and information as the courses are taught traditionally at a long time span. In order to overcome the limitations, learners have to resort to supplementary learning materials on Hajj that are available in the market. The materials are in various forms which include books, cassettes, DVDs and video tapes which emphasize on the requirements, procedures and steps in performing the Hajj (Yusoff et al., 2010; Yusoff et al., 2011). Most of the supplementary learning materials are based on passive learning method whereby learners are required to view the contents without involving any active interaction between them.

According to Haji Nukman (2012), hajj course was started in 1960's with the guide from a Sheikh for giving lecture. After a decade, the management was changed by introducing the term, Muassasah. Muassasah has been implemented in hajj course management until today. In 1990's, Hajj Guidance Department introduced electronic medium in giving lecture to the pilgrims by using Orthogonal Subspace Projection (OSP) projector followed by computer and slide projector in the 2000's. In years to come, books, CDs and DVDs were introduced in order to provide supplementary knowledge. In order to enhance the quality of learning, Hajj Guidance provided e-book but unfortunately this form of electronic medium did not well received among learners.

2.1 Multimedia Technology in Learning

Multimedia technology has been identified as one of the main elements in teaching and learning process (Jamalludin & Zaidatun, 2003). The use of multimedia technology has changed the way people learn and influenced the educational system in Malaysia. Computers currently play an important role in providing self-paced instruction for the learners to access information. In agreement to this, Heinich (1996) defines computers are tools that can enrich teaching techniques and provide the capability to control and manage a lot of teaching materials. The technology also helps to stimulate learner's senses, especially the visual sense in which the effect is higher in learning as compared to others (Heinich, 1998). Internet has also been used as a new tool in education and help in learning process. By using the Internet, people in Malaysia have access to information from various resources quickly and easily.

According to Mayer (2001), multimedia learning that combines animation with narrations generally improves in performance on retention tests; better than the information only displayed on text or narration. Lindstrom (1994) states that, users remember 20% of what they see, 40% of what they see and hear, and about 75% of what they see and hear and do simultaneously. The combination of multiple elements seems to increase what has been presented. Dyer and Observe (1996) state that on average, a learner will retain 10% of what they read, 20% of what they hear, 30% from pictures they see and 50% from watching what has been presented in a learning process.

2.2 Virtual Reality in Learning

Virtual reality is a significant component that will make the HajjEdu kiosk successful. Nevertheless, this technology is beneficial to the pilgrims when it comes to learning purpose. Thus, in previous research, virtual reality has been used for the practical steps such as Tawaf, Sa'ie and throwing of the Jamarat. As a case study, Mecca Sim is a Second Life project released in December 2007 with a purpose to educate both Muslims and non-Muslims who have intention to learn hajj thru virtual world (IslamOnline.net). Despite the clear differences between real and virtually mediated hajj, it is known as the full hajj experience, awe-inspiring and as close as one could get to the real thing (Krystina, 2008).

Virtual reality technology has started since 1980 and was first introduced by Jaron Lanier. He was the pioneer and research group leader in virtual reality area. According to David (1994), virtual reality is a computer-based interface that consists of human perception and system reaction that use technology to adapt the situation, similar to the real world.

Furthermore, virtual reality technology can improve productivity in order to assist in visualising the concepts, innovative and creative ideas (Wan Norazlinawati, 2009). Therefore, it can also be defined as a computer-based interface that is simulated by the use of virtual computer to let the users experience something that is similar to the real world as well as the option to visualize, manipulate and interact with the system (Normala, 2013).

2.3 Information Kiosk

Generally, a kiosk is viewed as a technology that can assist user to seek for general information in public areas with approach of self-paced control. Meanwhile, an interactive information kiosk provides interactive and useful information that offers high-quality content. It will indirectly encourage better understanding and usage of the Internet and ICT among target group generally. Many kiosks also offer 24-hour access for multiple activities, which customers prefer because they do not have to go to several places to complete a range of tasks.

Kiosks are also often preferred as knowledgeable, reliable, trustworthy, quick, patient and tireless customer service. Furthermore, kiosks can be viewed as a medium through which it is possible to train, educate, inform, communicate, persuade, and relate. However, as with

other public access systems, it is important that the kiosk is designed to support the task, the user profile and the environment in which the task is to be performed (Rowley & Slack, 2003). A useful recent article in the context of public access kiosks which reveals this bias is Maguire's (1999) review of user interface design guidelines for public information kiosks.

Information kiosk concept has a potential to be implemented as one-stop information centre for learners to seek knowledge on hajj. Such hajj course modules and practical parts can be self-paced reviewed by the learners as many times as they preferred.

3. Methods and Data

The main purpose of this research design is to determine users' acceptance and perception towards the integration of VE and multimedia approach in the supplementary hajj learning material. Data collection is very important in the process of conducting a study. Interview, site observation and questionnaires were the three types of methods applied to gain the data for this study. These research methods were conducted for the purpose of looking in-depth the understanding and collaboration between two research results (Angell & Townsend, 2011)

i) Site Observation

Site observation has been conducted in Selangor by observing 5 hajj courses conducted by Tabung Haji. This study covers teaching and learning process during the hajj courses. Data was collected through observation on current materials and tools used in all sessions especially during the lecture session. Each procedure in hajj courses has been recorded for further review. From the observations, most of the learners came from elder groups aged in range of 40 to 60 years old. Thus, most of the materials used for teaching process are based on passive learning method whereby learners are required to view the contents without involving any active interaction among them. There were five venues involved in this study:

- Masjid Jamek Ibnu Khaldun, Pekan Sungai Besi
- Masjid Sultan Abdul Aziz Shah, Shah Alam
- Masjid Al-Hasanah, Bandar Baru Bangi
- Masjid Jamek, Pekan Kajang
- Masjid As-Salam, Bandar Puchong Perdana

ii) Interview

Semi-structured interview was conducted to collect qualitative data. A set of interview questions was given to several respondents. These individuals came from different positions and backgrounds. The interviews hinted a direction for this research. These interview sessions allowed the participants to answer with more flexible answers. The purpose of this method is to identify and gather data on matters that are related to this field especially on the participants' perceptions and opinions towards the attendance at hajj courses. The following is the list of respondents interviewed by the researcher to gain the data:

- Haji Nukman Haji Fadzil, Senior Manager of Hajj Guidance, Tabung Haji Kuala Lumpur
- Mohd Badrulhisham Abdul Latif, Head of R&D Department, Tabung Haji Kuala Lumpur
- Haji Rasali, Manager of Tabung Haji Putrajaya Branch
- Haji Hamlud bin Safi'ai, Marketing Executive of Darul Mubarak (Tabung Haji's Agency)
- Hajj instructors
- Hajj participants

iii) Questionnaire

The researcher collected quantitative data during preliminary data gathering and during final prototype testing. A total of 300 close-ended questionnaires were distributed randomly to participants in 5 selected hajj courses. The purpose of this method is to gather quantitative data to analyze on user acceptance towards the proposed idea. The quantitative data gathered from questionnaires will be analyzed using SPSS in order to generate the result.

4. Findings and Discussion

From the results the researchers identified from each site observation, they identified the pros and cons on each material used for each session as drawn in the following table:

Table 1:
Analysis on materials used for hajj courses

Mediums	Pros	Cons
Book	- Contain useful information such as list of doa. - Useful for pilgrims to carry anywhere.	Limitation in providing enough information which only have form of text and images.
CD/DVD	- Apply multimedia elements. - Video narrative information.	- Passive learning method. - Contents can be viewed without involving any active interaction.
Module/ Instructional Guide	- Useful for pilgrims to carry anywhere.	- Limitation in providing enough information which only have form of text and images. - A printed version of PowerPoint slide.
Lecture	Provide PowerPoint slide and videos on the lecture session.	Takes too long to finish one session (17 series in 4 months; 2 hours per lecture)
Practical Session	Provide a real life-like situation in hajj by allowing pilgrims to participate in the practical session.	- Provide small Kaabah model to replace a real Kaabah. - Weather condition need to be considered if the practical session held at open area.
E-Book	- Typical electronic version of hajj book. - Promote interactive medium of delivering information.	- Limitation in providing enough information which only have form of text and images in electronic version.

The finding indicates that the current materials used in hajj courses are still having some limitations. Most of the supplementary learning materials are based on passive learning method whereby learners are required to view the contents without involving any active interaction between them. From the site observations, researcher identified the behaviour of participants during lecture session. There were numbers of participants that seem not to pay enough attention to the speakers (hajj

instructors) at the front whereby some of them were talking, while some of them were sleeping at the back. As what the researchers have thought, the information might not be delivered well or it might be caused by the factors of time consumption or the used of ineffective teaching tools.

Thus, based on the interview session, the researchers have proven the thought that 63% of the participants were unsatisfied with the supporting materials used especially on the lecture session. From the results, most of the Hajj learners could not practically imagine the Hajj procedures. Furthermore, they did agree that there is a large amount of information, rules and tasks that need to be understood and remembered. The learners found it difficult to successively imagine and memorize the steps in Hajj. However, for the practical parts, the learners have no choice except to be involved in the practical sessions to understand the steps and to experience in a real life situation. Surprisingly, from hajj instructors' point of view, they also suggested the Hajj learners to refer to the supplementary materials to increase their understanding and retention towards better understanding of the Hajj procedures. Thus, they did agree for any potential idea or approaches to be implemented in order to improvise hajj courses in future.

Based on the distributed questionnaires, a convenient sampling technique was applied and the age of the selected respondents was 19 years old and above. A total of 200 respondents above the age of 40 were grouped as elder while 100 respondents between the age of 19 and 39 were grouped as youngster. The researcher identified that 73% of the respondents satisfied with the hajj courses provided by Tabung Haji. Thus, 62% of the respondents preferred to choose practical sessions as the most effective methods. The results of the preliminary study indicated that fifty eight percent (58%) of the respondents experienced low understanding and retention in Hajj learning. Eighty five percent (85%) of the respondents referred to supplementary materials for learning Hajj procedures in order to better understand and increase their knowledge. The researcher also meets the objectives when 87% of the respondents agreed on the proposed idea of implementing HajjEdu kiosk as an interactive multimedia approach which incorporates VE in order to provide a much better Hajj learning approach.

5. Conclusion

From the findings, it can be proven that the current learning approach in hajj courses are not relevant to conventional training setting, whereby the methods of learning need to be continuously upgraded to meet the purpose of learning and enhance learners' satisfaction. Moreover, hajj course services need to be scrutinised and Tabung Haji need to plan a solution in order to enhance their services in future. The proposed research revealed the potential of implementing HajjEdu kiosk as a new approach for learning hajj. Thus, it will be a good opportunity for Tabung Haji to upgrade the level of understanding among participants yet meet the objective of this research. As the study meets the objective, the researcher will in further action come out with the prototype that incorporates virtual environment (VE) and multimedia technology in designing the kiosk interface. Thus, it is hoped that the idea of publicly applying this application for every mosque in Malaysia will be realised. The research study is also very applicable for future researchers who have high interest in pursuing this idea or improving the idea for better solution.

6. References

Beth Angell and Lisa Townsend. (2011). Designing and Conducting Mixed Method Studies: Workshop for the 2011 Society for Social Work and Research Annual Meeting.

Brecke, R., & Jensen, J. (2007). Cooperative Learning, Responsibility, Ambiguity, Controversy and Support in Motivating Students. A Journal of the Center for Excellence in Teaching and Learning, 57.

Burt, J. (2004). Impact of active learning on performance and motivation in female Emirati students. Learning and Teaching in Higher Education: Gulf Perspectives, 1, 1-15.

Dyer, J. E., & Observe, E. (1996). Effects of teaching approach on achievement of agricultural education students with varying learning styles. Journal of Agricultural Education, 37, 43- 51.

Heinich, P. (Ed.). (1996). Instructional Media and the New Technologies of Instruction.New York: Macmillan.

Jabar, M. F., Daud, S. K., Abdullah, C. Z., & Ahmad, A. H. (2008). Virtual Haj, Game via Experiential Design.

Jamaan, A.R.(2010). Panduan Lengkap Haji & Umrah. Johor: Universiti Teknologi MARA.

Jamalludin Harun dan Zaidatun Tasir. (2003). Basic Multimedia and its Applications in Education. Bentong. PTS Publications.

Jusoh, W. N. H. W., & Jusoff, K. (2009). Using multimedia in teaching Islamic studies. Journal Media and Communication Studies, 1(5), 086-094.

Lindstrom, R. (1994). The Business Week Guide to Multimedia Presentations: Create Dynamic Presentations That Inspire. New York: McGraw-Hill.

Maguire, M. C (1999) A review of user -interface design guidelines for public information kiosk systems. International Journal of Human Computer Studies, 50 (3), 253 -286.

Mayer, R. E. (2001). Multimedia learning. Psychology of Learning and Motivation, 41, 85-139.

Normala Rahim, Nazirah Abd Hamid, Wan Malini Wan Isa, Siti Dhalila Mohd Satar and Azilawati Rozaimee (2013). A Survey on Components of Virtual 'Umrah Application. Paper presented at the International Journal of Multimedia & Its Applications (IJMA) Vol.5, No.5, October 2013.

Rowley, J and Sla ck, F (2003) Kiosks in retailing: the quiet revolution. International

Journal of Retail & Distribution Management, 31 (6) 329 -339.

Yusoff, M. F., Zulkifli, A. N., & Mohamed, N. F. F. (2010). V-Hajj Development Utilizing Virtual Environment and Multimedia in Persuading User to Learn Hajj and Umrah. Paper presented at the 4th National Seminar of Hajj Best Practices Through Advances In Science & Technology, Universiti Sains Malaysia, Penang.

Yusoff, M. F., Zulkifli, A. N., & Mohamed, N. F. F. (2011). Virtual Hajj (V-Hajj) - Adaptation of Persuasive Design in Virtual Environment (VE) and Multimedia Integrated Approach Learning Courseware Methodology. Paper presented at the IEEE Conference on Open System, 2011, Langkawi, Kedah D.A., MALAYSIA.

Wan Norazlinawati Wan Abd Arif, Wan Fatimah Wan Ahmad, Shahrina Md. Nordin, Azrai Abdullah & Subarna Sivapalan. 2009. Designing 3 Dimensional Virtual Reality Using panoramic image.

Berita Harian. Retrieved August 21, 2007 from Berita Harian Online: http://www.bharian.com.my/

IslamOnline (IOL). Retrieved August, 2010 from www.IslamOnline.net

Tabung Haji. Retrieved August 21, 2010 from Tabung Haji Website: http://www.tabunghaji.gov.my/web/guest/bimbingan