

Formulating e-Content Guidelines for Adult Learners in Distance Education Program

Azlan Abdul Aziz¹, Che Nor Syairah Che Rozaid², Mohamad Ibrahim³ and Mohd Nor Hajar Hasrol Jono¹
¹i-Learn Centre, Universiti Teknologi MARA (UiTM), Shah Alam, Malaysia

²Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA (UiTM), Shah Alam, Malaysia

³Faculty of Art, Computing and Creative Industry, Universiti Pendidikan Sultan Idris, Tanjung Malim, Malaysia

azlanaa@fskm.uitm.edu.my, csyairah06@yahoo.com.my, mohamad@fskik.upsi.edu.my, hasrol@fskm.uitm.edu.my

Note:

Authors -

[First Name] [Family Name]

*Azlan Abdul Aziz

Che Nor Syairah Che Rozaid

Mohamad Ibrahim

Mohd Nor Hajar Hasrol Jono

Contact Person : Azlan Abdul Aziz

Contact No: +603 5543 5776

Contact email: azlanaa@fskm.uitm.edu.my

Abstract -This study intends to create a review about the expectation and requirement of undergraduate's adult learner in distance education programs towards learning materials. Various research papers have highlighted the existance of factors that could influence the adult learners' need of learning materials or e-content that is of help to them. Before an e-Content is developed, a guideline on developing e-Content should be designed based on the analysis of the adult learner's requirement. Only then will this guideline serve to create e-Content that is tailored to meet the need and requirement of the learners. The data collection is done through a survey involving the adult learners with the aims of getting the response on their acceptance towards e-learning and the features of e-Content that could facilitate their learning. The findings is then analysed to formulate the guideline for e-Content development.

Keywords: e-Content guidelines, adult learner, distance education

I. INTRODUCTION

Education serves an important function in a society. Similar to other countries in the world, Malaysia also place education at the forefront. Education matters always become the first priority and educational development have always been characterized by government's effort to adapt education to national development needs. Basically, for any developing countries, educational improvement is based on the needs of the social, economic and political development of the country (Rahimah, 1994). The Malaysia Higher Education System (MHES) always aims to upgrade the quality of education in Malaysia in the face of globalization, international competition and societal change. In accomplishing this, MHES introduced more quality education program to meet the market demands.

Education is a learning process and according to the adage, learning is a process from the cradle to the grave. In simpler terms, learning is a lasting change that results from acquiring new or modifying and reinforcing the already existing knowledge, behaviours, skills or values. It is related to exploratory activities or knowledge seeking where it becomes experience in human life. Because of that reason, Malaysia introduced lifelong learning to create a learning society that is able to meet the challenges and demands of today's world. Learning activities undertaken throughout life whether formal education where it is educational process of an individual through formal schooling with sets of curriculum and informal education that comes from the experience through interaction with the environment (A. Essam et.al., 2010). There is also another channel of education which is non-formal education that caters to particular subjects of certain group population.

To provide more learning opportunities and meet the demand of tertiary education in Malaysia, distance education - in its basic form of off-campus programs, was made available in the early 70's. The concept of distance education is about teaching and learning process between teachers and students that most of the time occur in different places. As such they interact with each other through some form of electronic medium (Michael and Greg, 2010). One of the many functions of this technology is to aid the access and distribution of learning materials or electronic content (e-content) in a e-learning environment. e-learning is the use of electronic media or information communication technology (ICT) in education such as web based learning, computer based learning, virtual classrooms and digital collaboration. There are some advantages of e-learning where it provides convenient training to student, self pacing facility to every learner, interactivity engages to users, to quick reference materials accessibility and others (Duraisamy and Surendiran, 2011).

There are some challenges that are faced by adult learner in the distance education programs. According to Ji-Hye Park (2007), 70 percent of adult learners in the distance education programs did not complete because of reasons like family situation, financial difficulties, and lack of time, learning culture, learning and access material, personal

motivation and others. There is certainly no one solution to all these issues. However, a direct link to the teaching and learning process that involves the adult learner is the learning materials or e-content.

A lot has been said and done to improve the quality of education in terms of learning materials. This research is conducted with the focus on formulating a guideline to develop e-Content that is specifically tailored for distance education students or the adult learners. The features of the e-content and the capability it affords, are hoped to help and improve the quality of their learning process. The use of such technology and the advantages it brings in the current education scenario is undisputed. Together with the right approach of e-content that includes the organization of resources differently from what works for classroom teaching, a better suited e-content can be offered to adult learners that positively match their needs. The purpose of this study is to critically examine the required features of e-Content that could

positively or negatively affected the learning process of adult learners enrolled in a distance education program. The literature review discusses on some of the information relating to adult learner and their requirement and expectation that is needed to formulate a e-Content development guidelines.

II. LITERATURE REVIEW

A. Challenges faced by adult learners

Adult learner is someone who is pursuing an undergraduate or graduate degree. Moore and Kearsely (1996) state that basically most of the adult learners fall in the age range of 25 until 50 years. Adult learners are dissimilar with child learners or the traditional students as they are faced with more challenges and responsibilities, especially to those who have family, work and at the same time pursue a distance study. A few researchers state that most adult learners in distance education program have some form of barriers to continue their study which consist of external and internal factors (Merriam and Caffarella, 1999; Zirkle, 2001). External factors or barriers are like job conflict, family time constraints and financial issues (Ahl, 2006; Cercone, 2008; Park and Choi, 2009; Zirkle, 2001). They have more responsibility and they need to spend their time and finance to study, family and work. Besides that, other barriers that exist in their study is the lack of feedback between students and lecturers (Zirkle, 2001; Doley et.al., 2000). This is another important factors that could determine the quality of study because the learning process becomes more efficient through a two-way communication. Other than that, scheduling conflicts (Ahl, 2006), managerial support and personal issues (eg : health) being the barriers to some of the students (Park and Choi, 2009). Distance education students will

learn anytime and anywhere. They need to be independent to manage their learning process because they lack training in class. So, managerial scheduling and time should be done better to have a good learning way (Gulbahar and Alper, 2011). At the same time, they also need a good learning material to support their study.

For the internal factors, there are some barriers that exist to distance learning students such as social integration, academic integration, technology Park and Choi (2009) and technically usability issues (Gulbahar and Alper, 2011). These barriers also influence distance education students. Another one is motivation. Motivation can be present through the choice of task, effort, persistence and achievement (Pintrich Schunk, 1996), and it should be the behavioral indicators to ensure learner put more effort and persistence in their learning task.

Based on all challenges faced by adult learners, it is relevant to focus on learning material factor as it is closely related to the learners and the learning process. Adult learner environment is different to the child learners as mentioned in the above aspects. Based on their problem above, we know that their learning process can be anytime and anywhere due to their locality that limits the face-to-face sessions as available in the traditional classroom. They have limited time to read a text book and attend the class like full time students, so, it becomes one of the barriers to them to get full knowledge, comprehension and skills like in the traditional classroom setting. Besides that, their time must be used effectively because they should struggle better (Conlan et.al., 2012). So, they need e-content/learning material that is flexible to be taken at most of time and effective to use.

B. Principles of adult learner

Adult learners have their own principles and strategies to construct their learning to become more effective (Carlos, 2010; Knowles, 1970; Smith 2002). They are independent (Dee et.al., 2006) and are motivated also self directed to achieve their objective in the learning process (Fidishun, 2000; Herod, 2012; Michael and Greg, 2012). Each adult learner has different experience and the progression in life becomes an increasing resource of their learning. So, they are interested to something that relates to the developmental stage of their life (Cercone, 2008; Levine, 2001; Michael and Greg, 2012). Other than that, they have readiness to learn, their desire to learn will increase because as a worker, they need to maintain old skills and learn new skills (Michael and Greg, 2012). Besides that, adult learners are relevancy oriented and goal oriented where they want to know what they learned and what they want to achieved (Awal, 2012; Michael and Greg, 2012). Adult learners are also practical (Michael and Greg, 2012) because of their experience and real life environment as such they are considered creative and able to solve the problem in their learning. Awal (2012) also states that adult learners learn through doing. They should do some exercises to practice their knowledge and skill.

Other than that, adult learners learn best when something that is learned is applicable for immediate use (Ji-Hye Park, 2007). To achieve the goals of learning, adult learners have their own learning process which is deemed appropriate, based on the principles of life.

Much of the learning is based on adult learner experience as mentioned in the review. They will implement their experience in their learning, at the same time some of them have clear objective of what they want to achieve in their learning. Besides that, they also have the desire to learn something new. So, from this observation, it can be said that adult learner want a feature of learning material that provides information or exercises that give new skills, knowledge as well as providing the solution that is needed. It will be also more meaningful if the information obtained can be applied to the workplace.

C. Adult learners learning style or preferences

Learning style is a way an individual prefer in learning process. Learning style is some combination of characteristics such as cognitive, affective and physiological factors that serve as a reference to an individual to interact with the learning environment (Boyd and Murphrey, 2004; Keefe, 1979). Each adult learners has his own learning preferences or learning styles to make their learning process become more easily and efficient. They have their own strategies to achieve their learning objective because each of them has different intellectual abilities. According to Dwyer (1972), "...different reading strategies have different instructional structures and functions in facilitating student achievement of different types of learning objectives". The learning style does not concern about what learners learn but what is important is how they prefer to learn.

There are various ways of classifying differences in learning style based on three classification group of learners which are first, right and left brain. Second classification group is auditory, visual and kinaesthetic and the third group is activists, reflectors, theorists and pragmatists (Dwyer, 1972; Kolb, 1984; Vassiliou, 2009). Each category of adult learner has their own learning style and it is divided into several stage mode. The types of stage mode that is usually used by some of the learners is based on the category of their ability such as concrete experience (eg: laboratories, field work, observations), reflective observation (eg: journals, logs, brainstorming), abstract conceptualization (eg: e.g. papers, lectures, analogies) and active experimentation (eg: simulations, case study, homework) (Boyatzis, 1999; Kolb, 1984). Besides these modes, the other learning way is introduced from a combination of learning techniques such as accommodators that are a combination of concrete experience and active experimentation (eg: feeling and doing),

diverges which is a combination between concrete experience and reflective observation (eg: feeling and watching), assimilators where it is a combination between active experimentation and reflective observation (eg: thinking and watching) and the last mode is converges. It is a combination of abstract conceptualization and active experimentation (eg: thinking and doing). At this point it is evident that each student has different characteristic and they have different learning styles or learning preferences. The challenge for university instructors is to face with the learning differences among their students (Torres and Cano, 1994). Therefore a learning process can be implemented in many ways based on people comfort ability.

It is also apparent that adult learners have their own style relating to their preferred learning process as it is based on the ability of the individual to achieve what they learn. From the combination group of adult learner, it hope that some features of learning material that fulfills their requirement and characteristics can be formulated.

III. RESEARCH METHOD

The research method that is used in this paper is questionnaire. The scope of respondents is under graduate adult learners in a distance education program. The objective of this research is to identify adult learner acceptance towards electronic learning and to identify e-Content features of a courseware that are preferred by the adult learners. The questions are based on the review of the adult learners' criteria, adult learning style or preferences and the barriers that are faced by adult learners.

The questionnaire contains three parts where the first part is on the demographic of the respondents, the second part is to measure the adult learners acceptance towards electronic learning and the third part is to identify the e-Content features, of a courseware, preferred by the adult learners. The respondents need to choose between five levels Lickert scale with the highest value indicating the highest level of agreement.

IV. FINDINGS

The findings show that the respondents fall in the age range of 20 - 29 years in the distance education program. The survey shows that 80% of the respondents agree and 20% strongly agree where they are able and keen to interact with technology. It also shows that 70% of the respondents have the motivation to learn and use the e-Content. Besides that, 80% of the respondents are comfortable using technology in a learning environment. Half of the respondents prefer electronic learning that is simple and fast although some of them still do not have confidence in using electronic learning. Something needs to be done to improve electronic learning material performance possibly by adding

interactive features because 80% of the respondents prefer interactive application on education. Based on the findings, it shows that 80% of the respondents agree that electronic learning is a way that can help them to add quality in their learning process if the e-Content development is based on their requirement.

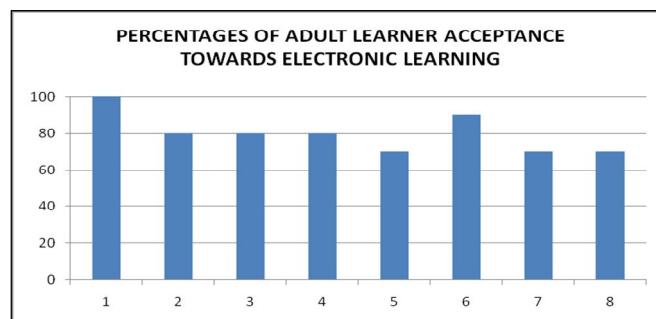


Figure 1. The percentages of adult learner acceptance towards electronic learning.

Label details:

1. The belief in own capability to interact with technology
2. The willingness to participate in electronic learning
3. The initiative and motivation to learn and use e-Content
4. The comfortability composing text on a computer in a learning environment
5. The preference to learn through electronic learning
6. The benefit of using interactive application on education
7. The course content method of delivery is important and I think e-content is one of the way.
8. The learning process is of more quality by using e-Content

The findings in the design of e-Content part show that 60% of the respondents agree and 30% that strongly agree that e-Content should have some exercises to improve their knowledge and 90% of the respondents prefer e-Content to have some assessment to measure their understanding. Besides that, all the respondents prefer that e-Content should contain some form of visualization like graphs, charts, pictures, diagrams and images to make it more interesting and understandable and only 60% of the respondents agree e-Content should have more text. In addition to that, 90% prefer e-Content to have some audio and all of them agree that it also should have effective navigation. 100% of the respondents agree that the information presented should be in accordance to its respective topics. The e-Content also should have examples and explanations to improve their level of understanding; as indicated in the finding, more than 60% respondents approve that statement. Besides that, 80% of the respondents agree only the critical topics should be included into the e-Content. The configuration color and background of the e-Content should be clear and harmonious as denoted by 80% of the respondents in the survey. The findings also show that some of the respondents suggest the feature of e-Content should be available to all environments, including mobile phones, desktops and tablets and the information and exercises provide new skills and knowledge.

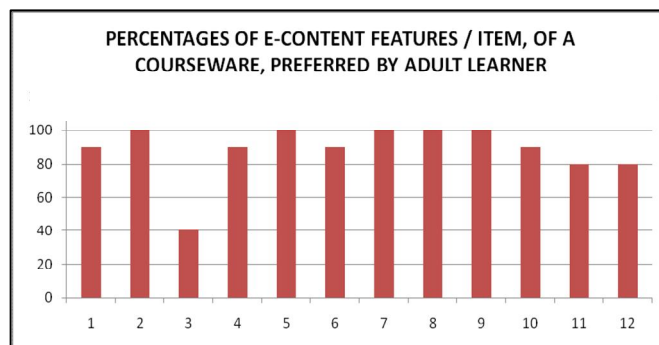


Figure 2. The percentages of e-content features or items, of a courseware, preferred by adult learner.

Label details:

1. The e-Content should have some form of exercises to improve knowledge
2. The e-Content should contain some form of visualization to make it interesting and understandable like graphs, charts, pictures and diagrams and image.
3. The e-Content should have more text because I like to read and it is easily understand in the learning process
4. The e-Content needs to have assessment for motivation and to provide explanation
5. The e-Content should be more interactive and user friendly
6. The e-Content should have some audio because learning process will be more effective through listening
7. The information presented in the e-Content should be simple to aid understanding and readability
8. The menu on the e-Content should be easy to find and have effective navigation
9. The information presented in the e-Content should be in accordance to the respective topics
10. The e-Content should have examples and explanations to support better understanding
11. Only critical topic should be included in the e-Content
12. The configuration color and background are clear and harmonious for the e-Content

Upon the completion of the survey which was done to a group of adult learners, it can be seen that the higher percentages of the elements that are preferred by them in the e-Content can be divided into three parts which are interactive, content and motivation.

Interactive Part

1. Visualization like Graphs, Charts, Pictures and Diagrams and Image
2. User friendly
3. Audio
4. Effective Navigation
5. Configuration Color and Background are Clear and Harmonious

Content Part

1. Less text but compact and accurate
2. Information present in a simple way, easy to understand and read
3. Information should be in accordance to the respective topics
4. Have example and explanation
5. Focus on critical topics
6. Information and exercises provide new skills and knowledge

Motivation Part

1. Have exercises to test level of understanding
2. Assessment as a motivation to adult learner
3. Available to other environments, including mobile phones, desktops and tablets

V. CONCLUSION

As a conclusion, based on the literature review about the challenges faced by adult learners especially in the distance education programs, there is a need for specific e-Content that is tailored for adult learners. Adult learners have more barriers in terms of financial, limitation of time, responsibilities, job conflict, lack of communication with lecturer, scheduling conflicts, managerial support, lack of learning materials and others. It is almost impossible to provide a solution to all of the adult learners' problems. However, one possible way that is closely related to them is by providing learning materials or e-Content that is of great use to them. Nowadays, electronic learning is important because of the ever increasing development of information and communication technology.

The technology usage is contributed to the learning environment which at the same time turns the learning process into a flexible one. Adult learners especially in the distance education programs, usually learn through electronic means either to get the relevant notes, assignments or as a communication medium with the lecturers. At present, there are a lot of e-Learning materials being produced professionally by vendors or leisurely by educators. The development of e-Content hopefully can address some of the adult learners problems such as manage their time, responsibilities, access to good learning materials that fulfills their requirement and at the same time having reference or reading materials in a just-in-time format unlike the textbooks.

The development of e-Content materials which are meant for the adult learners should adopt and include the e-Content features that are preferred by them. In the literature review, it is evident that each adult learners has his own principles and strategies in their own learning process. They are independent and self directed, so, the features of the e-Content should contain facilities for them to get the learning materials. Besides that, the e-Content should contain the relevant topics and exercises so that they can improve their skills as well as implement it at the workplace. Adult learners motivation will be increased if the e-Content is able to provide something new to learn and can be of immediate use.

A good design of e-Content has to include the adult learning style or preference as it differs from each adult learner. Even though there are a myriad learning styles within a group of adult learners as there are many possible ways of learning adopted by adult learners based on their abilities and categories (auditory, visual, kinesthetic, theorist and others) there is a need to find a common ground where the e-content developed should cater to most if not all types of learning styles. Thus formulating a guideline for e-Content development which focuses on the adult learners is clearly a right step towards that direction.

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