

EMERGING TRENDS OF WEB 2.0 TOOLS IN ADULT EDUCATION

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ABSTRACT:

The use of Web 2.0 technology in teaching and learning activity has given learners and lecturers many opportunities to establish intensive communication and interaction virtually. Some direct feedback can be given by the lecturer to the students using Web 2.0. Adult learners as self-directed learners in higher education with rich resources of learning experiences can potentially use Web 2.0 to support their collaborative learning activities. The emergence of Web 2.0 as a collaborative technology brings about effective interaction and communication virtually among students or with the lecturer. Online learning is one of the collaborative learning models usually used by adult learners. There are many Web 2.0 tools available such as Facebook, Twitter, YouTube, Blogs, Wiki, and Podcast for educational purposes. This paper provides a review of using Web 2.0 tools for adult learners.

Keywords: Web 2.0, adult learners, collaborative learning, online learning

INTRODUCTION

Technology has grown significantly in the world; it was begun in the 1400s with the appearance of the printing press until the invention of Website in the 1900s (Bishop & Verleger, 2013). In education, Websites are being used in educational settings especially in teaching and learning activities (Baltaci-Goktalay & Ozdilek, 2010). The Web is commonly used for accessing learning resources; learners can study online or download the learning materials easily (Allison, Miller, Oliver, Michaelson, & Tiropanis, 2012). Nowadays, more than a thousand learning materials called Open Courseware (OCW) or Open Educational Resources (OER) can be freely accessed on the Web. Richter and McPherson (2012) stated that Open Courseware provides free educational resources online and everyone is allowed to access it. Besides enabling sharing of learning resources, the Web plays a very significant role in establishing communication and interaction between teachers and students or among the students. Today, some technology tools have been used in teaching and learning activity as two way communication between the students and teachers (Adam & Nel, 2009).

The term Web 2.0 was firstly used in 2004 as a second generation of Website allowing users to create and share information or knowledge directly online (Pieri & Diamantini, 2014). Web 2.0 was invented as a second age of the Internet which established two way communications between users (Barnatt, 2008). Compared to traditional Web 1.0 which does is less interactive and does not allow the user to interact and communicate with other users, Web 2.0 is very much more interactive. Web 1.0 is defined as the Web where the user only can read while in the Web 2.0 the user can read and write (Baltaci-Goktalay & Ozdilek, 2010). With the use of Web 2.0, people can meet and talk directly even in different far locations through the computer. Nowadays, students can express and share their ideas through virtual technology Web 2.0 and the students can build good relationship with others not only in the classroom, but also outside it (Harris, & Rea, 2009).

Emergence of new Web 2.0 technology has supported two way communication among individuals in teaching and learning activity. Web 2.0 applications enable individuals to create, share, communicate, and collaborate on the web, regardless of geographical, temporal or technological skill constraints (O'Reilly, 2005). The advent of Web 2.0 has established the social learning interaction in education despite the learners being in different locations. Web 2.0 incorporates a strong social component, including user profiles and it allows users to share text, video, and photo postings along with comments, ratings and tags (O'Reilly, 2005). Web 2.0 gives space for users to share the information and build two way communication; everyone is allowed to share the video, audio, picture, and text on various different Web 2.0 tools. The new practice of teaching and learning activities has come to the world of education after reforming Web 1.0 to Web 2.0 (Bennett, Bishop, Dalgarno, Waycott & Kennedy, 2012).

WEB 2.0 FOR THE TEACHING AND LEARNING PROCESS

Although Web 2.0 applications were not originally designed for education, these tools finally gave the opportunities for student collaborative learning. In the teaching and learning process, Web 2.0 applications can

support individual learning and allow learners to collaborate with each other (Hsu, Ching, & Grabowski, 2014). Web 2.0 is an interactive Web that allows multiple users to work together in a group, share and exchange information through text, audio or video conferencing (Allison et al., 2012). Web 2.0 tools are used to support the learners' collaborative learning activities whereby all are allowed to share and work together toward resolving issues or solving problems.

The characteristics of Web 2.0 consist of communication and collaboration (DiBlasi, 2010). The source of knowledge is not from the teacher but from every student; the learners are demanded to learn from and teach their peers even though they never meet physically face to face. Moreover, Web 2.0 tools allow the instructor to give immediate feedback on student work (Hsu, Ching, & Grabowski, 2013). By using Web 2.0 in the teaching-learning process, the learners are demanded to work collaboratively by exchanging ideas and information; they might use their previous knowledge to solve the problem of learning (Dewiyanti, Brand-Gruwel, Jochems, & Broers, 2007).

THE ROLE OF WEB 2.0 IN ADULT EDUCATION

Adult learners refer to graduate and postgraduate students in higher education (Serdyukov & Serdyukova, 2006). Adult learners study independently because they are mature enough and have previous knowledge and experience in their learning activities. Adult pedagogy is built based on self-directed learners where the learners have their previous knowledge or experience in a current learning situation (Serdyukov & Serdyukova, 2006). The use of Web 2.0 will guide adult learners to study autonomously. As mentioned by Knowles (1991), adult learners are based on self-directed learning skill, have the intrinsic motivation in learning activity and they learn based on personal experience and background. Self-directed learning is defined as an active learning based on constructivism learning theory; the students are goal-directed and have intrinsic motivation in learning (Pintrich & Zusho, 2002). Adult learners should be involved in learner-centered learning activity (Serdyukov & Serdyukova, 2006). Therefore, the adult learners can study autonomously with the guidance of Web 2.0 tools.

Characteristics of adult learners are based on collaborative approach (Brookfield, 1985). The use of Web 2.0 is relevant for adult learners because it is an interactive web designed based on collaborative learning (Ford, Bowden, & Beard, 2011). The application of collaborative learning as an active learning is relevant to adult learners as the active learners. Constructivist theory is the character of collaborative learning in which learners may construct knowledge by themselves by interacting and collaborating with group members and the environment (Su, Yang, Hwang, & Zhang, 2010). The collaboration in teaching and learning activities is not only to share the information in one way communication, but also to comment, discuss and give feedback on other peers' work (Maguire, Maguire, Hyland, & Marshall, 2014). The principle of Web 2.0 in education is based on user centered, social interaction and collaboration and related to the use of modern learning theory such as constructivism (Vygotsky, 1978).

Collaborative learning is usually applied for adult learners and more particularly an andragogical approach (Serdyukov & Serdyukova, 2006). Collaborative learning for adult learners is establishing both interactive learning and autonomous learning; the learners will collaborate with the instructor and the learners virtually (Ryan & Serdyukov, 2003). The emergence of Web 2.0 as a collaborative technology brings the effective interaction and communication virtually and online learning is one of learning models usually used by adult learners in teaching and learning activities (Hsu, Ching, & Grabowski, 2013). Online learning is conducted where the learners learn virtually in different locations and the teacher will guide, facilitate, instruct and give some feedback on their online learning work; the students also can use their own learning resources and procedures (Serdyukov & Serdyukova, 2006).

IMPLEMENTATION ON USING WEB 2.0 TOOLS FOR ADULT LEARNERS

The majority of adult learners are working people with a career; they are busy and need to balance their studies with their work and career (Bates, 2014). Therefore, the use of online learning through interactive website will benefit adult learners. They need less guidance from the instructor because they already have enough previous learning experience. Virtual learning or online learning can be conducted whether on campus or off campus (Moloney & Oakley, 2010). Most adult learners learn in an asynchronous learning that allows them to study at leisure (Hsu, Ching, & Grabowski, 2013). They do not need to spend much time face to face with the teachers or with their friends to discuss virtually at the same time or in synchronous learning; through self-directed learning skill, the learners can boost their motivation to study independently with the guidance of Web 2.0. An asynchronous online course is a self-paced learning designed for adult learners because they hate to waste learning time and many Web 2.0 tools can be used such as e-mail, Wikis, online discussion board, blogs and

social media (Serdyukov & Serdyukova, 2006). Raj (2011) mentioned that discussion and chat room, e-mail, social media and video streaming are usually used as the media for online learning.

Online learning with asynchronous environment is very different from conventional learning because it is self-regulated learning; students do not physically present themselves or meet face to face in the classroom. The learners have their own responsibility of learning because they decide their own time and place of learning and everything depends on their convenient time and place (Wang, Shannon, & Ross, 2013). Therefore, the course is successful when students have self-directed learning skill and intrinsic motivation to support their individual learning (Marks, Sibley, & Arbaugh, 2005).

The main purpose of online learning is to establish student-centered learning activities; students learn based on their experience to enhance satisfaction of learning (DuCharme-Hansen & Dupin-Bryant, 2004). Historically, online learning was implemented to support part time higher education students who are usually busy with their work or career (Caywood & Duckett, 2003). Web 2.0 tools such blogs, social media, and Wikis are used for active learning. Web 2.0 is used not only to access the information, but also to share information with other users and to give responses or comment (Maloney, 2007).

The Web 2.0 offerings such as social networking websites, wiki and communication instruments which emphasize collaboration and sharing among users are easy to use. In fact, the Web 2.0 not only allows for content sharing, collaboration and communication among users, but also lets the users, even those with little experience with ICTs to produce content. The use of Web 2.0 in learning environments allows all the actors involved to actively participate in the learning process, giving them the possibility to generate and propose contents, to stimulate discussions and in general to create real learning communities (Pieri & Diamantini, 2014). All of these Web 2.0 tools can be applied for online learning. Social networking such as Facebook allows users to interact with other users even in different locations (Mazman & Usluel, 2010). The use of video conference as a method of student-student or student-teacher interaction within learning objects is possible through tools such as Skype and webinars (Meskill & Anthony, 2007). By using these tools, the students can see body language, view facial expressions, have enhanced perception of voice inflections, and deeper understanding of classmate and teacher contributions where simple text based interaction may create a sense of transactional distance (Stein, Wanstreet & Calvin, 2009). Using these tools will increase collaboration and improve their social interaction among students.

WEB 2.0 TOOLS TO ENHANCE ADULT LEARNING

This part suggests practical ways of using different Web 2.0 tools such as Blog, YouTube, Twitter, Facebook, Podcast and Wiki to promote collaborative learning between adult learners and teachers. According to Ford et al. (2011), Web 2.0 tools such as blogs, wikis, and YouTube can be used to facilitate learner-instructor collaboration. These technology tools will help to create online social interaction where the individuals can create the content according to their interests and needs; the tools are used both in the formal or informal learning context (Bisgin, Agarwal, & Xu, 2012; Musiał, & Kazienko, 2013). Social network tools play an important role to support collaboration in the teaching and learning process, knowledge sharing, and establishing interaction and communication between users in different places (Brandtzæg & Heim, 2007). Social networks are known as virtual group interactions that establish the collaboration, social connections, and exchange of information among the users. The social networks also act as the media connecting people around the world to exchange information and everyone can chat with friends and talk through video call despite huge distances between them (Calvi, Cassella, & Nuijten, 2010; Lee & McLoughlin, 2008)

Facebook is a form of social media facilitating students to discuss and communicate with each other virtually (Metzger, Finley, Ulbrich & McAuley, 2010). Millions of people use Facebook for various purposes; it connects people around the world to communicate easily and every user can share information and give comments to other users (Mazman & Usluel, 2010). It allows the students to meet virtually outside the classroom to exchange ideas about the course (O'Keeffe & Clarke-Pearson, 2011). Twitter is also the same with Facebook as a popular social media playing a significant role in producing rich discussion among students (Junco, Heiberger, & Loken, 2010). Twitter brings the learners together through in collaborative learning and they can work with peers and exchange ideas (Morgan, 2014). Twitter encourages students to do better work because they have to present or publish their work on this media and other users will read and give comments (Howard, 2011).

YouTube, another Web 2.0 video-sharing site, is a good example of an application that enables users to upload or share the content freely. Video-sharing sites usually allow users to share and comment on the content, which could also engage viewers in social interaction and knowledge construction (Hsu, Ching, & Grabowski, 2013). Most adult learners in the United States accessed online video in 2013. DeCesare (2014) mentioned that the

access of online video by adult Americans especially YouTube has increased from 69 percent in 2009 to 78 percent in 2013. Many online video courses provided on YouTube can be adopted by adult learners as the instructional video of learning (Raths, 2014). With free online YouTube video, the students can access learning material everywhere and anytime outside the classroom (Hamdan et al., 2013).

Blog is a collaborative tool of Web 2.0 used to publish ideas and thoughts, communicate and interact with peers, often to solve a problem (Popescu, 2014). A blog is an online diary allowing learners to create an account, write and publish their writing, photos and video on their own Web page; it also includes the discussion space and comments from visitors (Alexander, 2006; Castenade, 2007). People can publish information collected from various resources and it establishes the relationship with other users in the blog discussion space to exchange the ideas. Blog can enable building of communities of practice for learning (Luehmann & Tinelli, 2008). Blog providers offer brief online tutorials to assist the user in creating his or her free blog.

Wiki is a collaborative writing task and the member can write and edit the writing on the Wiki (Popescu, 2014). Wiki is a community portal page used for collaborative learning and quite similar with blog that allows the users to write and post comments on the page, also to edit other users' writing (Platt & Peach 2014). The use of Wiki will increase the students' motivation on writing skill, since they are allowed to write, publish and edit the text on Wiki (Martinsen & Miller, 2012). In addition, Podcasting is a digital media that can be used to support adult learning (Lee, McLoughlin, & Chan, 2008; Maikat, Martinez, & Jorstad, 2007). Podcasting is used based on iPod which involve audio making and recording (Ting, 2014).

CONCLUSION AND SUGGESTIONS FOR FUTURE STUDIES

The emergence of new Web 2.0 technology has supported two way communication among individuals in teaching and learning activity. Adult learners as self-directed learners who have much experience in learning activities are potential users of Web 2.0 in their learning. Face to face or traditional learning can be altered by using virtual learning or online learning. Web 2.0 tools such as Facebook, Twitter, YouTube, Wiki, Blogs, and Podcast are potentially very useful tools to use in virtual learning with collaborative activity. The use of these Web 2.0 tools will facilitate learner-instructor collaboration in online learning.

However, the use of Web 2.0 is not only limited applied for adult learners in higher education, but also applied for schools students in the blended learning model. One example of future research is on using Web 2.0 for blended learning in the secondary school. In blended learning, students will have physical or face to face meeting in the classroom and use Web 2.0 when outside the class. Students can use Web 2.0 tools when doing homework such as using YouTube Edu to watch learning material or using Wiki to practice writing at home.

In addition, Web 2.0 also can be applied in the flipped classroom model. In the flipped classroom, the students learn outside the class by watching the lecture video and do discussion while in the classroom. There are so many free lecture videos provided on the Web such as YouTube or Ted Talk; the students can directly give comments after watching them. A future study on applying of Web 2.0 media to support the flipped classroom model will be very interesting. Therefore, future research can be potentially conducted on the implementation of the flipped classroom model supported by Web 2.0 media.

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