Educational Portal for Web-Based Courses (EPIC) as a new hybridized communication solution for In-service OUM Student-Teachers: The Experience of EPIC Online Supervisor (EOS)

Widad bt. Othman, Open University Malaysia
Lim Tick Meng, Open University Malaysia
Shawira bt. Abu Bakar, Open University Malaysia, shawira@oum.edu.my

Abstract

The emergence of web-based social media has made it possible for people to communicate freely with one another, regardless of time and place. This has resulted in a changing notion about teaching and learning. In particular, educators from all over the world are beginning to pay attention to the possible roles of web-based social media in enhancing learning. Traditional mode of teaching and learning is very much teacher centered with information transfer mainly in a one-way manner. Learning is bounded by time and space. The use of social media enables the creation of a hybrid learning environment that leverages on the strengths of both traditional learning and the more constructivist learner-centred learning. OUM adopts a blended approach where learning is enabled through multi mode strategies. Here, learners learn self-managed learning with print modules or web-based modules and learning materials, face-to-face interactions and learning via online forum discussion. This form of learning provides learners with the best of both worlds by giving learners the guidance that can be achieved in an actual classroom, as well as the flexibility and openness of self-paced learning through online and virtual learning methods which allow students to experience online learning through online forum discussions. To explore the possibility of implementing effective learning via a fully online learning environment, OUM has designed and developed a web-based learning system named as EPIC. As a first step towards implementing learning via hybridized communication environment, four fully online courses were conducted, supported by the EPIC learning environment. The four courses are namely: Co-Curriculum, Professional Practice, Professional Development and Inclusive Education. These courses are not only fully taught fully online, but the assignments were also designed in a scaffolding format. This paper will highlight how OUM students' (in-service teachers) explore and perceive EPIC as a new hybridized communication media as perceived by the EPIC online supervisor (EOS).

Keywords: hybrid learning (blended learning); challenges; flexibility and accessibility.

Introduction

The advancement of the internet-based technology has brought about both challenges and opportunities in areas of education and training, and in particular, in areas of e-learning. E-learning is generally referred to learning that is conducted on the Internet through the use of electronic media. With the use of internet technology, appropriate software and learning management system, it is possible to set up learning environments where learning materials can be easily shared or transferred between facilitators and learners who are far apart from one another physically. Synchronous and asynchronous communication between the facilitator and the elarners, or among learners themselves, can be established via the use of e-mail, online chat forums and video conferencing software or devices. Unlike traditional classroom learning environment, e-learning environment enables course materials to be available and accessible to unlimited number of learners seven days and twenty-fours hours. In other words, learning is independent of time and place. (Dziuban, Hartman, & Moskal, 2004; Osguthorpe & Graham, 2003). This is particularly beneficial for adult learners who have to find time off to do their studies. Despite the many benefits, a number of disadavantages of e-learning has been identified. It appears that the lack of face-to-face interaction in the e-learning environment may hinder the socialization process of individuals. The communication between the facilitator and the elarners may also be superficial. Concerns about the learning and interaction issues in e-learning environments have prompted educators to study the possibility of setting up new learning environments that leverage of the strengths of both e-learning and traditional learning. An example is the kind of learning that

Open University Malaysia promotes, which is commonly known as blended learning or sometimes described as hybrid learning.

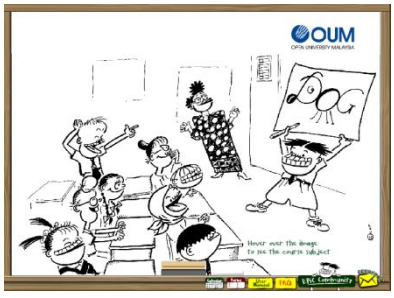
There are varied definitions of blended learning put forward in the literature. Singh & Reed (2001) define blended learning as a learning program where more than one delivery mode is being used with the objective of optimizing the learning outcome and cost of program delivery. Singh (2003) sahres the same view that the use of vlended learning is to optimize the achievement of learning objectives. But he exerts that in order to achieve that, it is necessary to apply the "right" personal learning technologies to match the "right" personal learning style and to transfer the "right" skills to the "right" person at the "right" time. Similarly, Thorne (2003) views blended learning is a possible way to leverage technology to tailor to the demands and needs of individual learners, but at the same time enable interactions and participations of the many learners, as in traditional learning.

It needs however to be cautioned that technology by itself does not warrant the successful implementation of blended learning. Educators themselves need to be a "hybrid" in both technology and pedagogy to be able to innovate technology to capitalize on the strengths of both e-learning and traditional learning. This paper describes one of such innovations in Open University Malaysia.

Background of EPIC

Learning in a traditional learning institution is rigidly contrained by time and place. And these (time and place) are the two main factors that hinder adult learners from pursuing their studies. In recent years, the Malaysian Ministry of Education has taken a number of positive steps to encourage primary school teachers to upgrade their qualifications to that of degree level. One of these was to provide opportunities to teachers to further their studies via open and distance learning such that the teachers need not leave their job. To assist the Ministry to achieve this meaningful goal, Open University Malaysia has offered the Bachelor odf Teaching Programme which provided learning via blended mode that included face-to-face facilitation, online forum and self-managed learning using the digital or print modules. But in view of the constraints faced by learners who are also teachers, the Faculty of Education and Languages of OUM designed and developed the proprietory EPIC (Educational Portal for Internet). EPIC is a web-based portatl tailored to provided a fully online learning environment for specially selected subjects, with the main objective of lessening the number of face-to-face classes that the elarners have to attend. Currently, EPIC is set up to manage four online online courses: Co-Curriculum, Professional Practice, Professional Development and Inclusive Education.

Flexibility and accessibility via EPIC



EPIC is designed as a structured microworld for self-managed learning of selected subjects. All course materials related to the subjects can be easily accessed once learners log into the system. Assignments provided in EPIC are structured in a scaffolding manner. Even though EPIC is designed specifically for self-managed learning, learners in the EPIC enviorment are however assigned to an EPIC online supervisor (EOS) who would provide guidance to each and every learner throughout his/her study of the subjects. The guidance is particularly aimed at helping learners to undergo the continuous process of learning whilst completing their formative assignment.

As EPIC designers, we believe that the use of such web-based learning portal allows the facilitator to reach every learner, including those who live in the remote area (provided that they have internet access). Thus, EPIC opens opportunities to learners to have access to relatively obscure subjects. There is, in fact, a huge library of courses and training offered around the globe. Web-based learning has made it possible to study nearly any subject from nearly anywhere in the world.

It needs however to be cautioned that not every learner is receptive to such mode of learning as it doesn't replicate the experience of a real classroom. What's more, web-based learning requires more learners initiatives and discipline than traditional classroom learning. Advances in computing power, communication network and sophisticated technology may render web-based learning a better alternative for college education, training and skill enhancement provided that learners are ready mentally as well as in terms of knowledge and skills.

Based on several studies, findings on web-based learning were diverse and non conclusive. However, one pertinent finding was, courses or training that need extensive explanations, demonstrations and involve graphs and equations such as economics and mathematics, the traditional face-to-face is far more superior and easily understood as compared to web-based learning. Courses that rely on readings and cross-references like psychology and education, learners were to learn more by mean of web-based as compared to traditional face-to-face, Maki (2002).

Several other studies depicted as follows; Education and psychology learners benefited and gained more by means of web-based learnings, however, nursing and statistics students scored higher by mean of traditional learning mode, Wang (2000). While there is no definitive conclusion from these studies, it does suggest that there is potential for achieving comparable or even higher learning outcomes in web-based courses mode.

To ascertain learners' readiness in the implementation of EPIC, the learning process has been observed though stringent research has yet to be carried out. The observation focused on the specific areas: (a) learning outcome, (b) learners satisfaction, and (c) pedagogical usability.

(a) Learning outcome

Based on several studies, their findings were rather diverse and non conclusive. However, one pertinent finding was, courses or training that need extensive explanations, demonstrations and involve graphs and equations such as economics and mathematics, the traditional face-to-face is far more superior and easily understood as compared to web-based learning. Courses that rely on readings and cross-references like psychology and education, learners were to learn more by mean of web-based as compared to traditional face-to-face, Maki (2002).
Several other studies depicted as follows; MBA and psychology learners benefited and gained more by means of web-based learning's, however, nursing and statistics students scored higher by mean of traditional learning mode, Wang (2000). While there is no definitive conclusion from these studies, it does suggest that there is potential for achieving comparative or even higher learning outcomes in web-based courses mode.

(a) Learners Satisfaction

When gauging the level of student satisfactions between learning using EPIC as compared to traditional learning mode, indicators used were convenience of access, delivery mechanism and personal interaction with their instructors. The observation indicates that learners were satisfied with the ease of accessing learning materials in EPIC. There are however a lack of human touch and real-time guidance by the facilitator. Consequently, learners are of the opinion that EPIC may not be suitable for courses that require learning of complex calculations, but more suitable for courses that require more reading and like Education and psychology.

(b) Pedagogical Usability

This approach of learning emphasizes on trouble-free interaction with the software in use aiming at supporting the learning process. Hence, the concept of pedagogical usability is focus to the learning process and utility of pedagogical software: learner control, learner satisfaction, simplicity, reduction of complexity, collaborative learning, applicability and flexibility. Pedagogical usability and technical usability should be considered concurrently as they are strongly related to each other. In certain cases, increased technical usability could influence negatively pedagogical usability since the high level of technical usability does not contribute necessarily to the learning outcome. However, the usability concept must be extended to capture issues that are fundamental to learning and tailored towards learner-centred approach than lecturer-centred methods in order to realize learning benefits.

New technologies and IT improvements have lent strong support to the development and utilization of online technologies in the delivery of course materials. This is due to the fact that, similar course objective and goals were achieved in the online environment, same degree of learning outcome achieved, course satisfaction was comparable, learners are comfortable with the technology and delivery environment except that it lack of personal interaction. The use of online course, better known as web-based learning, are very beneficial for the university community. The use of technology has many benefits to the learning environment. Essentially, online technology makes education available at any time and any place and at the same time provides a comprehensive and comparable learning environment. Yet, as with any endeavour, there are pros and cons, which must be taken into account for a balance strategy where learners enjoy the convenience provided by the web-based learning but missing the personal interaction as a tradeoff with the traditional classroom environment. However, the integration of any web-based courses can be beneficial to both the learners and the university. For instance, web-based courses can be a productive strategy for increasing course enrolment in between semester break or short courses which traditionally shown lower enrolment figures.

The convenience factor encourages the learners to take courses anywhere and anytime. Obviously, there are also other benefits of the technology associated with the web-based learning environment in terms of supplementing the traditional course environment. This technology can provide a valuable information portal in a variety of traditional course settings. These results may indicate that a hybrid type of course could provide the ideal balance between interaction and convenience.

Current technological and IT advancement and innovations offered so many delivery options available with so much information and knowledge to convey to our potential learners. The internet and intranet hold tremendous potential for the rapid dissemination of knowledge and information to a worldwide workforce when utilized correctly. There are several distinct advantages of designing, developing and delivering web-based learning using EPIC.

The advantages are:

1. Extendibility, accessibility and suitability: Learning at own pace, any time and any place.
2. Collaborative and exploratory learning environment.
3. 4. Inexpensive worldwide distribution
5. Accessed from any computer keeping delivery cost down.
6. Ease of content update: Changes to content are instant and made available immediately

Based on informal feedbacks from both learners and EOS, EPIC helps learning in the following ways:

- **Varied inputs for content construction.** EPIC is a dynamic framework which allows non-linear access. It also allows for content to not only be delivered, but to be engaged with by learners through discussion, dialogue, and forum. Content can be provided through hyperlinks

to text, multimedia resources, online discussions, chats, personal blogs, wikis, etc. Throughout the process of exchange, content is worked on and applied by the learner. The more varied the inputs, the more likely that students will engage with content more effectively.

- **Relevant learning scaffolds** (including instructor intervention, collaborative knowledge building, and meaningful, self-directed research). The scaffolding method gives opportunity to learner's for higher-level cognitive strategies in loosely structured assignments. Research into online or distance learning shows consistently that students look for teacher intervention more directly in an online environment than in a face to face environment (Moore,1993; Reynard 2003). That is, when learning is self-directed, students know exactly when they need the instructor and why. Additionally, students will look for relevant learning supports as part of their learning process. Hyperlink technology can of course provide much in way of online support and resource; however, teacher intervention should always be in a timely manner and directly addressing the questions or queries of the students. Additionally, projects or assignments that promote students working together on the construction of new ideas for knowledge building create immediacy to the learning and a continual connection with their peers throughout the process.
- **Heightened interaction** (with self (learner), with instructor (EOS), with other students, and with content) provides heightened interaction for the learner. The synchronicity of an online environment allows for flexibility for the learner but also an open connection to the learning at all times. Synchronous connections provide an immediate connection that promotes a sense of community for the learners.
- **Transformative learning outcomes** Each assignment is required to produce a reflective journal. Based on the reflective journals produced, students have realized the relevancy of the course for their specific interests, and it was often not until their learning has been summarized and synthesized and applied through this paper that they appreciated the learning that had taken place. In other words, the web-based learning would not have had the same relevancy to their professional life without the prior engagement and interaction with course content that had taken place throughout the course.

The Challenge to EPIC

In the early stage of implementing EPIC, learners have a fear for technology and often see EPIC as a hybrid learning environment that is to replace the face to face tutorial and as a way to diminish their learning experience. Furthermore, the EOS feels overwhelmed by having too many student responses to read through. As a developer (faculty), viewpoint's is that EPIC provide an opportunity for the learning process to become much more engaging for learners and for learners too, to drive the learning process more directly.

Nonetheless, for remote areas, learners facing difficulties accessing the EPIC due to:

a) Bandwidth/browser Limitations May Restrict Instructional Methodologies
   - Video, audios and intense graphics can affect delivery and limited.
b) Limited Bandwidth Means Slower Performance:
   - Sounds, videos and large graphics make 'waiting time' longer.
c) Time Required for Downloading Applications

Conclusion

The rapid expansion of the internet and increasing software capabilities are influencing the dynamics of teaching and learning on many different levels. Web-based learning tools are constantly being re-designed to improve their effectiveness. As such, numerous studies show that, web-based courses are widely accepted and at times even expected as being part of learners experience in education. Concurrently, when the web-based tools are professionally developed, implemented, maintained and administrated, the positive support for learning can be very rewarding and capable of attracting more

learners. The tools themselves can have an impact on learners' perceived learning in positive or negative ways.

Nothing before has captured the imagination and interest of education simultaneously around the globe more than the web-based learning. Claims have been made that the web-based learning is able to free teaching and learning from the physical boundaries of classrooms and the time restraints of tutorial schedules. Moreover, the web-based learning can help us refocus our institutions from teaching to learning, from teacher to learners. Thus, making education more attainable by more people: that is, expanding education opportunities in the workplace, community or home, for those unable to attend school or college due to cultural, economic or social barrier. Via web based learning like EPIC, EOS can become more connected and more aware of each learner, and learners can become more aware of their own learning and take more responsibility for it. Hybrid is presenting teachers with an opportunity to increase learner participation and maximize the learning potential of each learner; however, teachers need the professional development support in redesigning instruction and modifying their teaching methods accordingly.

References

Boyle, T., Bradley, C., Chalk, P., Jones, R., & Pickard, P. (2003). Using blended learning to improve student success rates in learning to program. *Journal of Educational Media, 28*(2-3), 165-178.

Brown, R. (2003). Blending learning: Rich experiences from a rich picture.
Training and Development in Australia, 30(3), 14-17.

Donnelly, R. (2010). Harmonizing technology with interaction in blended problem-based learning. *Computers & Education, 54*(2), 350-359.

Driscoll, M. (2002). *Blended learning: Let's get beyond the hype*. Retrieved from http://www-07.ibm.com/services/pdf/blended_learning.pdf

Dziuban, C. D., Hartman, J., Juge, F., Moskal, P. D., and Sorg,S. (2006). Blended learning enters the mainstream. In Hand-book of Blended Learning: Global Perspectives, Local Designs, edited by C. J. Bonk and C. R. Graham, pp.195–208. San Francisco, CA: Pfeiffer Publishing.

Dziuban, C. D., Hartman, J. L., & Moskal, P. D.(2004). Blended learning, Educause Center for Applied Research, Research Bulletin, 7, retrieved March 15, 2014

FINN, A. ve Bucceri, M. (2004). A case study approach to blended learning. Los Angeles: Centra Software, retrieved March 15, 2014.

Hadjerrouit, Said. (2010). A Conceptual Framework for Using and Evaluating Web-Based Learning Resourses. University of Agder, Norway.

Maki, W.S & Whitteraker, P.D. (2002). Multimedia Comprehension Skill of Web-based and Lecture Course. Journal of Experimental Psychology. May 2000.

Nokelainen, P. (2006). An Empirical Assessment of Pedagogical Usability Criteria For Digital Learning Material. Education Technology & Society, 9 (2).

Storey, M. A & b. Phillips. (2002). Evaluating the Usability of Web-based Learning Tools.
Education Technology & Society5, (3), 2002, University of Victoria, Canada.

Osguthorpe, R. T., & Graham, C. R. (2003). Blended learning environments: Definitions and directions. Quarterly Review of Distance Education, 4(3), 227–233. Singh, H., & Reed, C. (2001). A white paper: Achieving success with blended learning, retrieved March 15, 2014

Thorne, K. (2003). Blended learning: How to integrate online and traditional learning, London: Kogan Page.

Wang, A. Y. & Newlin, M. (2000). Characteristics of Students Enrol and Study Psychology Web-based Class.Journal of Education Psychology, 92 : 137-143.

Weber, Michael & Lennon, Ron. (2007). Multi-Course Comparison of Traditional Verses Web-Based Course Delivery System. The Journal of Education Online, Vol. 4, No. 2, July 2007