

# Online Learning to Enhance Teacher Professional Development

Shironica Karunanayaka, The Open University of Sri Lanka

[spkar@ou.ac.lk](mailto:spkar@ou.ac.lk)

## INTRODUCTION

The dramatic changes in the information and communication technologies (ICTs) over the last few decades have had significant implications for new teaching and learning approaches. Modern educational technologies offer the potential for drastic changes in teachers' roles, aiming at improving the quality of teaching-learning process. Teachers of today face many new challenges in order to cater for students who grow up with the emerging technologies. The inadequacies in the conventional approaches in teacher education to meet the complex demands thrust upon the teaching profession has led to increased use of open and distance learning methods in teacher professional development programs. Continuing professional development of teachers, especially in the use of ICTs to support teaching and learning, has currently become a crucial need.

The Faculty of Education of the Open University of Sri Lanka (OUSL) offers several professional development programs of study using ODL techniques, aiming at expanding opportunities for personnel in the field of education to enhance their professional competencies. "Teacher Educator as an Educational Technologist" is one of the courses in a practitioner-oriented professional development program for teacher educators, Master of Arts in Teacher Education-International (MATE-I) program. This course was developed as a fully online course, using the learning management system (LMS) Moodle. This is offered as a stand-alone course to practicing teachers and teacher educators who desire to develop their competencies in the use of educational technology (ET). The duration of this course is six months, and the participants are awarded a certificate after successful completion of it.

The main objective of the online course ESE 4242, "Teacher Educator as an Educational Technologist" is to develop competencies among teachers/teacher educators to design, develop, implement and evaluate appropriate educational technologies. During this course, the participants are required to develop a rationale for using ET, design learning experiences, select and use appropriate media to develop a technology-enhanced learning material, and evaluate its effectiveness with their students. This is achieved through the unique pedagogical design adopted, Scenario-based learning (SBL), where learners are presented with authentic situations (i.e. scenarios) in the form of a storyline in which students are required to assume a key role that they might actually perform in real life, and engage in challenging activities leading to achievement of the desired learning outcomes. (Karunanayaka, Lekamge, Gunawardena, Naidu, & Menon, 2005; Naidu, Menon, Gunawardena, Lekamge & Karunanayaka, 2005).

The course design allowed opportunities for participants to actively engage in their learning process as distant learners, mainly through tutor-mediated interactions. They engaged in a number of learning and assessment tasks which are linked to each other, with the support of learning resources and instructor guidance. The participants were encouraged to collaborate and share experiences among each other, as well as engage in continuous self-reflection throughout the process. The online learning environment in Moodle LMS was designed to facilitate these activities, together with continuous tutor support online.

This paper describes an investigation on how online learning has supported developing professional competencies of teachers and teacher educators. It specifically focuses on the following research questions:

1. What were the reasons that motivated participants to join the online course?
2. What are the advantages gained by them?
3. What are the challenges faced by them?
4. What are the strengths of the online course that facilitated learning and any limitations which may have hindered learning?
5. What are the impacts of online learning on the participants, as teachers/teacher educators?

## **REVIEW OF LITERATUE**

Often, the conventional technology-training courses for teachers are criticized as not being effective in preparing teachers to use technology in their classrooms (Somekh, 1997; Schrum, 1999). The emphasis on such courses was observed to be more on technical matters, instead of pedagogical aspects. Open and Distance Learning (ODL) and Information and Communication Technologies (ICT) are considered essential to replace the existing conventional approaches in professional development programmes for educators (Menon, 2004). Due to their potential in improving provision, widening access to learning, and helping to overcome time or distance barriers, ICTs are increasingly being used in professional development programs (Selvyn, 2003). Using online methods can be considered as an effective way for teacher professional development, by enabling them to have access to a vast range of resources and communication facilities, and thus developing new competencies in teacher.

Online learning is considered better achieved through interactivity among learners, rather than learning alone (Kawachi, 2003). Thus, in any professional development program, encouraging learner collaboration becomes an important component. This is especially needed in distance education systems where opportunities for students to meet frequently are limited by time, distance or resources. (Robertshaw, 2000). ICT can play a major role to enhance learner collaboration through effective use of e-mail, chat and computer conferencing (Sharma & Chaudry, 2003). However, the courses need to be well designed, and the use of networked technologies should add value to learning (Haughey, 2000). Professional development programs should facilitate engagement of educators in a collaborative dialog with other educators. ICT becomes a powerful tool in professional development, as it allows educators to be creative thinkers, problem-solvers, risk-takers and innovators (Koufman-Fredrick et al., 1999). Use of online discussion forums in which learners can share their professional experiences are particularly valuable in continuing professional development programs (Bates, 2003).

Research conducted on online professional development of teachers reveals that numerous opportunities are offered to teachers through this approach. Benefits such as increased understanding of content areas, access to experts and information resources, support for new ideas and teaching methods, increased confidence in their own abilities have been cited by teachers (Millen et al., 2002). Further as a result of online learning experience, it has been found that teachers gained confidence in self-regulated and reflective learning, while developing a social bonding among them (Karunanayaka, 2006). However, despite the benefits teachers also face many challenges and to participate in online professional development, teachers have to be motivated and they need to have the discipline to stay involved (Zibit, 2004). While many initiatives in online teacher professional development is taking place rapidly, it is essential to be concerned about the best practices for the design and implementation of online teacher development models (Dede, 2006).

## **METHODOLOGY**

This investigation was conducted as a case study of the first cohort of students in the online course ESE 4242, "Teacher Educator as an Educational Technologist". The participants were 25 students enrolled in the course, who were either teacher educators or teachers, working in different educational institutions at different provinces of Sri Lanka. Descriptive data was collected during the three-month period December 2007 to March, 2008, using multiple methods such as, implementing an online questionnaire and content analysis of students' postings recorded in the LMS, and student reflections in their online learning portfolios.

The online course was offered only in English medium. It was designed and developed in Moodle LMS, utilizing its facilities to create a conducive learning environment to the students who were distant learners. It was designed in such a way that the students were directed and encouraged towards self-initiated learning. The content area was structured into five main areas in a topic-wise manner, including an introduction to the course, and four main topics in the subject matter content. Under each area, different types of activities were spread out on a weekly-basis, for 24 weeks, together with supportive learning resources. In addition to the main content area, there were several other areas such as, Course Overview, Learner Support, Student Input and Social Area.

Initially, an orientation workshop was conducted to introduce the Moodle LMS to the students and familiarize them with the online learning environment as this was a novel experience for all students. Instructors and students met only during this one-day orientation session and two more hands-on workshops on audio-video production and multimedia production conducted at OUSL during mid-course. All the other activities and communications were done totally online. The main type of online activity used in this course was Discussion Forum. Several other types of activities such as quizzes and crossword puzzles were used as well. Discussion fora included tutor-mediated threaded discussions with the whole group on various content-related problems and also smaller-group activities such as online debate and storyboard competition. Students were also requested to maintain their online learning portfolios, constantly reflecting on their learning experiences. The learner support area including "Help Wanted/Help Given" allowed students to clarify problems and help each other while the social area, "Virtual Canteen", enabled students to engage in non-course related social discussions.

## **RESULTS & DISCUSSION**

### **Background information about participants**

The 25 participants of the study included 10 male students and 15 female students, all either teachers or teacher educators full time working in educational institutions at different parts of the country. A majority were of the age group 41-50, and with more than 10 years of professional experience in the field of education. However there were also a smaller percentage of students in the age group 31-40, with less than 5 years of professional experience. All of them had claimed either excellent or good in their English language skills, while a majority claimed as proficient in using the computer and the Internet. Out of the 25 students, four had dropped out from the course after three months.

### **Reasons that motivated participants to join the online learning course**

The participants stated different reasons that motivated them to join this online course, such as 'learn to use technology in education'; 'to find effective teaching methods'; 'to improve the quality of my teaching'; 'to update my knowledge'; 'to get the new trend of technology in education'; 'to improve IT knowledge'; 'to enable me to do better at my work place'; 'want to be a teacher with innovations'; and 'to improve my career'. These comments clearly indicate that the participants' main intention in following this online course was to enhance their professional development.

### **Advantages of online learning to participants**

The questionnaire survey revealed that online learning has been extremely valuable to the participants in many ways such as receiving regular notices, interacting with subject matter content, carrying out the learning activities and receiving feedback, interacting with tutors and peers, reflecting on their learning process and applying what is learnt in their profession. A majority was satisfied extremely or to a great extent about the relevance, clarity, quality, adequacy and flexibility of the learning activities and the resources provided in the online learning environment

Feedback received from the participants after three months of engagement in the online learning activities revealed that they found it was interesting, enjoyable and beneficial for their profession as evident by following quotes.

“Learning is a challenge and it is fun. I enjoy it. I am becoming confident in using technology...I am sure going to use it and become an expert.”

“I learned how to use this technology in my working environment as an effective tool for teachers as well as for students.”

“As I'm working with senior colleagues I'm getting lot of experiences about the field as well as life. At the same time I feel through this kind of learning we can develop good attitudes, for instance sharing, discussing, interacting etc.”

The above views clearly indicate that the participants appreciated the advantages offered to them by this novel mode of learning especially in their professional development. Additionally, other benefits such as the ability to learn at their own place and pace as distance students were also mentioned.

“The online learning is really flexible enough for me to learn at my own pace and to log into whenever I am free and in a correct mood to do so. I think that such kind of teaching-learning mode best suits the employed and adult learners than the traditional classroom teaching-learning process.”

### **Challenges faced by the participants**

Common challenges faced by many participants while engaging in this course were in relation to either technological issues or time management issues, as revealed by following quotes.

“The unexpected technological problems. The power failure, difficulties in accessing the internet...”

“I'm really busy. So the biggest problem is the time management...But I always try to manage it.”

“Keeping up with course work while attending to other numerous duties and responsibilities...”

As all participants were learning online while working full time as adult learners, with work and family responsibilities, it is inevitable that they found time management very challenging. However, their motivation to continue with the course compelled them to adjust their study times.

### **Strengths and Limitations of the online learning environment that affected learning**

The participants identified several strengths of the online learning environment that facilitated their learning such as, ‘access to ample resources’; ‘sequence guidance of instructors’; ‘ability to share ideas with others through engagement in discussions’; ‘getting feedback from teachers and

colleagues'; 'ready responses and encouragement given by the tutors'; 'learning at your own pace' and 'the ability to look back at your work'.

Discussion forum was mentioned as a main strength by most participants.

"...Posting our ideas to the main forum and getting feedback from the teachers and colleagues really helped me in my learning.."

"The discussion forum is one of the strengths that facilitates the learners to gain a vast knowledge through discussions"

"At the same time most important thing is we have opportunities to discuss many topics even outside the course through "virtual canteen"...Thus we are able to develop our social skills, communication skills etc".

The ability to engage in self-regulated learning in the online learning environment as well as the ability to reflect on your own learning were also mentioned as strengths.

"The learning is fully controlled by me and it is more convenient than the conventional methods because we hardly find time nowadays to engage in learning all days at a study centre."

"Learn at your pace, and the ability to look back at your work, when you have missed something in the learning process, which is not possible in a lecture. Every action I do I am learning something"

As the above views reflect, the participants who are full-time working professionals appreciate the asynchronous communication facility-discussion forum available in the online learning environment, as it allows self-initiated and self-regulated as well as collaborative and reflective learning. Further, they value obtaining tutor and peer feedback for their postings.

"I was amazed to see the immediate feedback, from the Course Coordinators and fellow on-liners on the talking points."

"I was able to rectify my mistakes due to the energetic responses received...ample help was given to improve collaborative skills, by encouraging to help each other and make progress together."

While several participants responded that they found no limitations in the online learning environment, some mentioned certain issues that hindered their learning such as technical problems and time management problems. These were also mentioned as challenges.

"I still have the problem of time management. Otherwise I have nothing to worry about this."

"I could not find any shortcomings up to now in my online journey except the discussions on the forum are dominated by a limited number of students"

One mentioned that she had difficulty in reading lengthy reading materials online and had to take printouts, and another stated that inability to read all online resources affected active participation in discussions.

"... I feel some difficulties in contributing to the main forum. Until I read the resources carefully I feel it is difficult to put forward my views."

“There is so much of knowledge and information it is very difficult to grasp them all.”

Interestingly, access to ample online resources which was considered as a strength was also considered a limitation by some, due to the inability to cope up with all.

### **Impact of online learning on participants’ professional development**

The participants stated various impacts online learning is having on them in developing their professional competencies. Based on their reflections, some main categories were identified as follows: Gaining new professional knowledge, Transfer of Learning, Development of technological skills and Increased self-confidence as professionals. Some examples for each category are given below:

Gaining new professional knowledge and skills:

“From this course I’m not only gaining knowledge of content but different types of technological aspects as well.”

“I had some initial difficulties and doubts about my teaching...and now I have the blessings of having the opportunity to learn the finer art of teaching in fulfilling my wish.”

Transfer of Learning:

“I’m able to integrate many new experiences gaining from this course into my profession, so now I’m doing things with awareness and understanding.”

“Now I’m trying new methods I have learnt from the course...they like them very much and such activities help them to improve in many ways.”

Development of technological skills:

“I am indirectly learning how to handle the technology and incorporate into my teaching.”

“It teaches me not only the integration of technology into the teaching-learning process but how an online course can be designed and conducted effectively.”

Increased self-confidence as professionals

“The course develops my strength and confidence and gives me a sense of proudness among other teachers at my school.”

“Improves my self-esteem and confidence and I am getting more motivated.”

“I feel as I proceed the course, that I’m becoming more and more mature.”

Analysis of participants’ reflections made at the very beginning and after three months clearly indicate how this novel approach of learning has affected in making them confident and motivating to engage in online learning.

Reflections at the beginning:

“At the beginning...it was like in the middle of a dark, thick jungle.”

“During the first week I was in the mist finding my way ...’

‘Actually in the first week I did not have a clear idea about how to follow the course.’

Reflections after three months:

“I feel very much comfortable in handling the online learning activities now”.

“Now I am addicted to this course!”

“I am waiting in anticipation for the rest of the activities in my online journey.”

“I have a slight sadness because I know that the period of the course is reaching its latter part. I feel like hovering more on this subject.”

## **CONCLUSIONS**

The findings of the investigation revealed that online learning has been most beneficial to the teachers and teacher educators in their professional development, which was their main intention in joining this online course. Being practicing professionals in the field of education who are engaged in continuing education as distant learners, the online mode of delivery was well accepted by them, as it allowed flexibility in place, pace and time of learning as well as self-regulated learning.

Even though the participants faced certain challenges such as coping with the technology and time constraints, the strengths of the online learning environment such as access to adequate resources, quick communication and ability to collaborate with peers had made a great impact on them as professionals, mainly through self-regulated and reflective learning.

Online learning can be effectively used to enhance professional development of teachers, especially in an open and distance learning situation, through an appropriately designed learning environment with adequate tutor support.

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