Motivating learners in an online collaborative environment using a blended model for enhanced learning

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Information and Communications Technologies (ICT) play an important role in classroom environments in Singapore. With the roll-out of the IT Masterplan 2 by the Ministry of Education of Singapore in 2004, the thrust towards the use of IT in education has been boosted. Therefore, it is imperative that teachers be trained well and correctly so that they are able to appropriately implement IT with their students.
Four main thrusts of the IT Masterplan that are important in the training of teachers are :
a)working in teams to modify or create authentic interactive ICT-based learning resources for engaging learners
b)creating and facilitating online collaborative learning environments
c)managing ICT learning environments
d)professional development by independent self-learning of innovative technologies

This research project describes the efforts of a group of teachers at the National Institute of Education (Singapore) whilst attending a course that adopted the blended learning model comprising online learning and face-to-face sessions. During the online learning sessions, teachers had to complete an assignment comprising a group task. There were no face-to-face meetings during the group project. Instead, the teachers were encouraged to use an online forum within a learning management system to work as a team. This project was important to them as it counted towards the final requirements of the successful completion of a technology module within an in-service professional development programme. In our attempts to move away from traditional methods of teaching, the researchers encouraged the use of different types of learning strategies built upon the social constructivist theory to encourage active and engaged learning within a computer-mediated online learning environment. This paper documents the critical moments of the teachers that helped the researchers craft the design of an optimal blended learning module, tailored for in-service educators going through a professional development programme, using an e-coaching model to scaffold the online learning process.

Keywords online learning; blended model, collaborative learning

1. Introduction

In schools, the success of integrating information technology (IT) into the mainstream curriculum is highly dependent on teachers who play a pivotal role in perceiving IT as a tool that meets their curricular goals. One of the skills to be acquired by the new generation of teachers is computer-mediated communication. As a method to engage trainee teachers in sustained and substantive discussion, electronic discussion group via computer has shown promises in teacher education [1-4].

Online discussions have become a standard component of computer mediated communication. Many educators appreciate and acknowledge the added value of asynchronous, text-based discussions [5]. Online discussion are, in some ways, similar to face-to-face meetings except that with the former, knowledgeable use of strategies to focus and move a discussion forward are needed to keep learners sufficiently excited and motivated to deepen their dialogue with each other.
At the National Institute of Education (NIE) in Singapore, online learning is incorporated into teacher education programmes across the campus. This includes post-graduate courses and formal in-service

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professional development courses. Online learning allows teachers to learn independently, at their own time, without the burden of having to rush in to NIE for classes. The main tool used for online learning is the Blackboard®. This is a Learning Management System (LMS) which has features such as discussion boards and virtual classroom tools that enable dynamic collaboration and communication in the learning environment.

This research project was initiated to establish guidelines and help define strategies for future development of online learning initiatives for in-service teacher education programmes. This was to be achieved though investigating the experiences of learners who had participated in a collaborative online learning project. This study had 3 phases; a quick familiarisation session with the online Blackboard® discussion forum and the key concepts that learners would need to understand to participate in the this project, that is, self-direct learning, motivation and flow and computer-mediated communication.; an online activity to be done via the discussion forum; and an online evaluation of the experiences of the participants with regard to motivational and design issues.

2. Instructional Framework

The in-service teachers who participated in this study were part of a module, "Computers in Special Education" which is one of the compulsory core modules for teachers pursuing a two-year Diploma in Special Education programme. 23 inservice teachers in the Diploma programme took the module during their second year in the programme.

The main objectives of this module were to identify and evaluate existing IT educational resources; integrate IT educational resources for classroom based teaching; design and create an IT-based teaching resource; and conduct IT-based lessons. The module was delivered via two modes: face-to-face and online. Out of the twelve-week sessions, nine were face-to-face sessions and three were online sessions dedicated towards the completion of a group project to be done in pre-determined groups of four teachers from different schools. They were given instructions on the expectations of the task in class by the lecturer and they had to spend the next three weeks working with their online collaborative groups to complete their task. The online discussions were conducted through the use of the Blackboard®.

The teachers had to use the discussion board to work together on the design of a student-centred IT resource to be used by their students. In the first week, to get them started, resources, including teaching slides and online web resources, were provided by the lecturer. Their first task as a group was to negotiate and come to an agreement on an agreeable topic for the creation of the IT resource. Next, they had to come up with suitable resources to be used in the creation of the IT resource. These resources were to be shared via the online discussion board. In the third week, they had to design and create the IT resource, using any required software.

It was made clear from the very beginning that the teachers were expected to take responsibility for the development of their own learning process. A short seminar was given on what was meant by self-directed learning (SDL), which is a process in which a person acquires knowledge by his or her own efforts and develops the ability for inquiry and critical evaluation in which there is a freedom of choice in determining what and how to learn within the limits of a given project with or without the aid of an adviser or expert where the educational responsibility for the learning lies entirely on the person [6].

In light of this, each teacher was then expected to independently recognise the need for learning. This would help them discover the motivation for learning specific skills and or knowledge to complete the task ahead. They would have to negotiate amongst themselves on a practical strategy that would work best for them, with the given availability of resources and then apply this to wards the completion of the group task. The lecturer served as the expert or adviser, in the capacity of an online facilitator. This was important for facilitating constructive online discussions and to focus and deepen the teachers' growth and learning via online dialogue. Learning can be more effective through sharing and interacting with others and active participation in online discussions could enrich the teachers' learning experience. [7] notes that teachers working together provide greater opportunities for reflection and collegial interaction. [8] demonstrate how collaborative action research helped teachers improve instruction and achieve a greater sense of empowerment. Working in their pre-assigned groups of four, the teachers had to their

ideas (objectives, context of instruction, activities and tools) of the student-centred teaching resource that were to create online and each teacher was required to review and respond to these ideas. Typical feedback within groups included: whether the learning objectives were appropriate; and whether the learning activities suggested for their students were appropriate. Through such an exercise, the teachers negotiated the strategies and shared ideas in designing instructional activities.

3. Participants' Feedback

To obtain feedback, an evaluation survey, consisting of open ended questions, was conducted during the last face-to-face session. Using the Blackboard® online survey feature, trainees were asked to respond to the questions at the start of the lesson. A system-generated report was obtained. There were 100% valid returns from all the 23 teachers surveyed.

The feedback towards reactions and experiences of teachers pertaining to the online discussions in relation to group work was encouraging with more than 70% of the respondents giving positive feedback and sharing their learning experiences. More than 90% of respondents noted that the knowledge and skills learned were useful, and they had been sufficiently exposed to a different and useful approach to the use of IT for collaborative learning.

There were two open ended questions that measured the affective outcomes of the teachers' feeling about the online discussions. More than 70% of respondents enjoyed the exercise, and more importantly, they agreed that they were confident and motivated in using online discussion forums for collaborative work in the future. More than 60% of respondents felt that the workload was manageable and the online sessions helped them learn new ways of collaborating and communicating via online learning environments

Imparting the knowledge and skills of online collaborative skills in this module was important. Thus, respondents were asked to reflect on the extent of the use of these skills that they would use with their colleagues in school and between schools for collaborative projects. Almost half of them (59%) said that they would want to give it a try (Table 1).

After the online survey, interviews were conducted in focus groups of 5 teachers, lasting for about half an hour per group. Teachers were selected to join the focus groups based on their availability for the schedule provided. At these interviews, participants were asked to describe, in more detail, their experiences in relation to motivational or non-motivational issues, with regards to their participation in the online forum.

The most common things participants enjoyed most about the online forum were:

-Convenience to learn anytime, anywhere

-Flexibility in the approach towards communication with peers

-Self paced : "I felt that I was in control of my learning……"

-Promised content : "I knew I would be assured of gaining content knowledge just by logging in…"

-Having the lecturer as the online facilitator was a major issue in keeping the discussion moving as teachers feared that they would look "bad" if they did not participate in the discussions.

Table 1 Participants' feedback on their satisfaction of the online sessions.

Emergent Themes	% respondents
On the whole, the online sessions were enjoyable.	75
I feel confident using online discussion forums in my school for collaborative work.	59
I can handle the amount of work required for these online collaborative sessions.	68

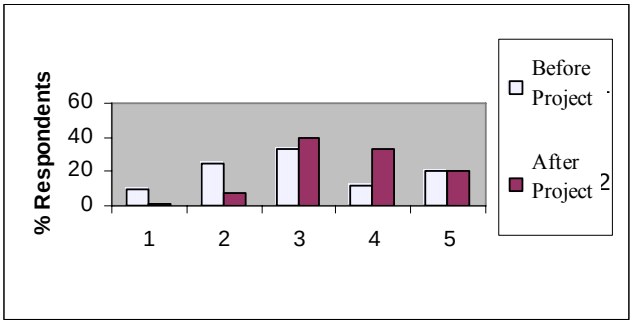

Figure 1 IT Confidence Levels.

A majority of teachers rated themselves with a perceived increase in their IT confidence skills after the project (Figure 1). Most respondents said that self discipline in sticking to the suggested work schedules with regard to the completion of the task was difficult because of the different paces at which each team member worked and the varied entry times into the online discussion board. Thus, co-ordination of tasks and coping with assigned responsibilities proved to be somewhat difficult to co-ordinate. In addition to this, technical problems strongly influenced the completion rates of the project, and no attempt was made to correlate responses from discussing a suggested idea or plan and with completion rates.

For a large number of respondents, "Workload" and "Personal commitments" was the most common response to why they did not participate actively or start sooner, in the online discussions. "Personal commitments" included other educational modules that they were currently attending in conjunction with this module and family and domestic matters.

About 70% of the respondents gave positive feedback regarding learning aims and instructions being clear enough for them to comfortably participate in the online discussions and to complete the task. Respondents were however concerned that they were not given enough feed back on how they were progressing. About 70% of the respondents said that they would have preferred more detailed feedback on how they were doing and what would be required to move on to the next step.

4. Implications of the findings

While many teachers genuinely wanted to take part in online discussions, they found it difficult to make time with competing priorities, such as lesson preparation and the completion of assignments. This was especially so, given the fact that these teachers were coping with their studies whilst attending classes. This concurs with the findings of Simmons [9] who says that "…people are drowning in a sea of learning opportunities but do not have time". It is almost impossible to take time away from other responsibilities., as noted by one teacher: "….with the online forum, you are always think you will do it later as it is accessible anytime, but you just keep putting it off and never get to it." Many teachers experienced technical problems and this perhaps had affected the number of times they might otherwise have logged in. Wilcock [10] advocates that for online learning to be successful, there must be a technically robust delivery platform. Problems related to technology can act as a barriers to online learning and logging into online learning environments should be made easy so that students' motivation do not evaporate quickly when they encounter logistical barriers [11]. Gray, Lindh and Hatzipangos [12] stress the importance of adequate training to support online training. Respondents in this survey felt that they were adequately prepared for the online task. However, the presence of an online facilitator was also another motivational factor. Online learning demands high levels of motivation which can be provided by constant input from online facilitators and learners themselves who are sufficiently motivated to interact and learn from each other as well as the learning materials themselves.

Online learning materials must be relevant to a learner's needs and so online facilitators need to find out what potential learners require for effective just-in-time learning that is relevant to current job needs.

In addition to this, content should be made available in “bite-size chunks” and should be intuitive and easy to use.

Appropriate initial training is important as adult learners are busy people and they cannot afford to wasted time learning how to negotiate an online learning environment. If things get too complicated, without suitable technical support, those with less IT experience will give up.

Providing feedback is essential as learners need reassurance that they are learning and that they are doing the activities correctly. This must be provided in the form of feedback, support of advice from both online facilitators and peers. Offering and encouraging fellow learners within online environments is important so that the learning experience does not become too impersonal. It should be enjoyable as self-directed learning requires a high level of motivation.

Learners need a reason to log in and join online groups and so that must be pre-determined time lines and activities with end targets set in place. Rewards of some form are necessary to increase the motivation of learners. This can be in the form of intrinsic or extrinsic rewards such as grades, or recognition from peers for a job well done.

5. Conclusion

In teacher education, the challenge now is not in how to motivate in-service teachers to engage actively in learning programmes but rather how to create learning environments that focus and attract their attention and keeping them actively engaged in learning. Motivation, in online collaborative learning environments is important as it acts as the impetus to create and sustain intentions and goal-seeking acts [13], and determines the extent of the learner's active involvement and attitude toward learning. However, participation in an online learning environment is very different from the conventional, face-to-face classroom format. Due to the use of communication technologies and different communication skills required, online learners are facing many changes that are essential to a successful learning experience. To many learners, these differences and changes from their prior experience are stressful and frightening. However, sometimes some changes are necessary for success. Understanding learner motivation can make this transition more comfortable and even more enjoyable.

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