ONLINE COLLABORATTIVE LEARNING FOR POST GRADUATE STUDENTS: AN EXPERIENTIAL CASE STUDY AT OPEN UNIVERSITY MALAYSIA.

By
Prof. Dr. Zakaria Ismail
Faculty of Business and Management
Open University Malaysia

Abstract

Open University Malaysia (OUM) has successfully and effectively used the Blended Learning approach in educating and imparting knowledge to its students. Although the approach has been refined and improved over the years, the main components of the multimode learning techniques still remained and being used till today. The three components of the multimode learning used at OUM are (i) self-managed learning (ii) face-to-face interaction, and (iii) collaborative online learning (COLL). The blended learning approach has been conducted for all the undergraduate programs at OUM. However the full-blended learning approach has not been used or little used in the postgraduate courses and programs. The major reason for the reluctance of most of the postgraduate-course facilitators to use the COLL component is their unfamiliarity with the technique and/ or perceived un-readiness of the postgraduate students to learn online. The present paper reports the result of the author's attempt to use the full blended learning approach in conducting the Organizational Behavior course for the combined MBA and MM students at OUM in the May 2006 semester. There were 23 students in the class and the general conclusion was that it was a positive learning experience and majority of the students participated actively in the online discussion. The paper also discussed the shortcomings faced and suggested improvements in the process and preparations to make the full blended learning approach more effective for the postgraduate students.

Key words: Blended learning, self-managed learning, face-to-face interaction, collaborative online learning, postgraduate course.

1.0 Introduction

Networked technologies have increasingly become an inseparable component of learning and delivering of educational material for both the "traditional" and open distance education (ODE), and of course more so for the ODE institutions. Internet-based learning allows students greater freedom and flexibility in terms of pace (learn at their own pace), time (access the information at a time that is convenient for them), and place (provides education to remote students that otherwise would not be able to travel to a classroom). Some open distance learning (ODL) courses available on the Internet are offered as a formal courses with regular meeting times and places. Others, according to Quintana (2007) are offered as a self-directed or student centered approach allowing students to learn at a time and pace that is convenient to them. In open learning the

teacher no longer acts as the "know all person" (or keeper of knowledge), but acts as a tutor, facilitator, and resource to assist in the student's learning process (Quintana, 2007) .

Agostinho et al. (2007) while discussing on this issue highlighted the central role of WWW in open learning methodology. WWW is a tool that can create and support open learning environment through the computer-mediated-communication (CMC). That is the use of computer networks will allow learners in different geographical locations to interact with one another either in synchronous (real time) or asynchronous (delayed) mode via text-based communication for the purpose of the discourse. The text-based communication via the CMC may not be as instantaneous as in the verbal, face-to-face communication, but it can aid the learners' ability to construct knowledge through the formulation of ideas into words and building on these based on the responses from others. This is the strength of the CMC which Harasim (1989, p. 52) called "the opportunity for reflective interaction", a feature not readily demanded in traditional university lecture settings, but a common learning feature in the open learning which can be encouraged and supported.

In the Open and Distance Learning (ODL) mode, the absence of the traditional classroom face-face interaction between the instructor and the students is replaced by the on-line CMC learning. Theoretically the more active and vibrant the students participate in the on-line interaction and discussion for the purpose of the academic discourse with their on-line tutors and course mates, the more learning that should take place. That is the basic foundation of the ODL networked learning. However, as lamented by Hung & Chen (2001) why, despite so many creative efforts at designing chat-rooms, discussion forums, bulletin boards and other similar applications, is the on-line learning tools still fail to attract and sustained dialogue amongst participants? Is it because the learners are not ready (lacking in the skill and/or equipment) to make full use of the rich and vibrant learning opportunities available on-line or the tutors that are not adequately trained to guide and motivate the on-line learners?

The problem highlighted above is a common issue faced by most of the ODL institutions. In fact Ryba and others (2002) while discussing on this issue raised a similar question- what is the best way to create viable on-line communities that are vibrant and highly interactive places where authentic learning can take place? Perhaps, the answers to the above questions may be found somewhere in what Salmon (2000) termed as "a new generation of teachers and trainers" that can work interactively with on-line learners to establish an on-line world that is a creative, happy, productive, and relevant place for successful learning. Therefore the role of teachers and trainers (or tutors) should be accorded same level of importance as the learning technologies for creating a learning environment that is conducive for authentic learning.

2.0 What Attributes Constitute Effective Learning Under ODL Mode?

ODL learners are geographically dispersed in spatial distribution. They can be very lonely in the physical learning environment. However, Jonassen et al. (1995) stressed that social interaction amongst learners is an important component in the learning

process, be it for the traditional classroom setting or the ODL environment. In fact, it can have a significant impact on learning outcomes. But how does one create social interaction among the ODL learners who are both physically and geographically dispersed?

ODL learners can create social interaction in the virtual space through collaborative on-line learning. In fact collaboration is an essential ingredient in the recipe to create an "effective learning environment" as it provides learners with the opportunity to discuss, argue, negotiate and reflect upon existing beliefs and knowledge in the virtual environment (Harasim, 1989). But the basic question which was raised earlier in this paper remains—how to make learners come and be active on-line? Agostinho et al. (2007) proposed, among others, the following ingredients for successful on-line collaborative learning:

a. The collaboration must be purposeful and the purpose needs to be meaningful to the learners.
b. An appropriate context must be set for the activity, eg. Assigning a "real world" task for learners or a problem to which all learners can relate to.
c. A vehicle must be available through which collaboration can take place. In traditional face-to-face educational settings, for example, collaboration takes place through conversation.

In order to encourage collaboration, Agostinho et al. (2007) further suggested that both sides (tutor and learners) need to be engaged in a common activity. Thus problem based learning (PBL) was designed as an instructional strategy to facilitate this collaboration. To be effective, the PBL used must fulfill the following four principles
(Camp, 1996):

1. Learning should be an active and engaging process.
2. Learning is a process of knowledge construction.
3. Learners should function at a meta cognitive level.
4. Learning should involve "social negotiation".

3.0 Participation Behaviour Of On-Line Learners.

As discussed earlier in this paper, learners have different levels of "activeness" in the on-line collaborative learning; some are very active participant, contributing useful ideas at frequent intervals, thus assisting other group members achieving meaningful learning experiences while they themselves also gain from the group. On the other extreme are inactive learners who are not motivated to participate in the discussion, and therefore not assisting other group members while themselves not gaining much from the on-line discussion. To ensure that collaborative on-line learning is conducted in an effective manner, Hung and Chen (2001) proposed some participation activity targets, as guides, to be achieved in a period of 16 weeks of academic semester:

i.   The "General Engagement Ratio" between teaching staff and students (a simple ratio of required participation in the Discussion Board)---approximately 1:8 with the teaching staff constituting 11.4% of total interactions with the website and students the remaining 88.6%.

ii.   The "Asynchronous Communication Engagement Ratio" (the ACE ratio) (an indicator of meaningful participation in the online teaching-learning environment)-- 1:4.

Based on the number of times learners accessed the Discussion Board (DB) and the number of times learners actually posted contributions to the forum, Taylor (2002) divided the learner group into three subgroups:

a. The Proactive Participation Group or Workers,
b. The Peripheral Participation Group or the Lurkers,
c.   The Parsimonious Participation Group or the Shirkers.

The Workers: contributed above average number of postings, visited site regularly. Continuously involved in discussion, among the first to post message and respond quickly to messages. Created "threads" of on-going dialogues among students.

The Lurkers: contributed less than the average number of postings, but participated regularly in the discussion in "the read only" mode.

The Shirkers: contributed only 1/3 of average number of postings or less, visited this part of the site on less than 50% of the group average.

Taylor (2002) went on to investigate the patterns of collaborative on-line participation and learners' academic performance, and the results are shown in the following table.

Student Sub-Groups	Average Number: Discussion Board	Average Number: Messages Posted	Average: GPA
The Workers (14)	193	38	5.43
The Lurkers (17)	129	13	5.41
The Shirkers (12)	36	4	4.30

The above Table brings out the following relationships:

i.   The patterns of learners' interaction seemed to be related to their academic performance.
ii. The Workers (the Proactive Participation subgroup) attained the highest average GPA (5.43), while the Shirkers (the Parsimonious subgroup) achieved the lowest average GPA (4.30). Significantly also, 7 out of 12 Shirkers did not complete their assessment.

iii. The academic performance of Lurkers was on average not much less than that of the Workers. Therefore, according to Taylor (2002) it seems reasonable to suggest that the notion of learning through legitimate peripheral participation is indeed efficacious.

iv.   This study also brings out an important finding, that is learners who take a parsimonious approach to on-line learning are at greater risk of failure, since 8 of the Shirkers did not achieve an acceptable level of academic performance during the semester.

4. Background to Open University Malaysia (OUM)

Malaysian workforce of 11.5 million in 2005 was comprised of 20% with tertiary education attainment, a significant increase as compared to only 13.9% in 2000. However this percentage of workers with tertiary education is still far short of the government target of 40% in year 2010.

Open University Malaysia was established on the 10th of August 2001 as a 7th private university to provide opportunities for the working people to further their education. OUM is a unique establishment. It is a private university but owned by a consortium of 11 public universities in Malaysia. It has grown tremendously in terms of student numbers in the last 6 years. Starting with the first batch of 753 students in 4 academic programs in August 2001, OUM now has a total enrolment of 63,000 students in 18 undergraduate programs and 2 diploma programs. To cope with this rapid growth in demand and enrolment of student numbers, OUM has established more than 50 learning centers in Peninsular Malaysia, Sabah and Sarawak (Refer to following Table).

Table of Statistics on OUM Since 2001

Items	August 2001	June 2007
Student enrolment	753	52,657 a) Undergraduate--5,0816 b) Postgraduate--1,841
Programmes	4	50
Learning centres	2	53
Support Staff Tutors (Part-time) Academics	87 100	452 2,984 (Active- semester) Professors: 17 Assoc. Prof.: 14 Senior Lecturers: 7 Lecturers: 31 Assist. Lecturers: 1 Total: 70

The growth in student enrolment is significant since OUM is only 6 years old. What makes OUM as an ODL institution attractive to existing and potential students? Random survey among OUM existing students revealed some common pointers such as:

- Flexibility—learning at OUM is flexible. That means learning takes place at students' own pace, time and place.
- Accessibility---students do not have to travel far from their place of work or residence to attend tutorial classes. Learning centres are established in every major cities and towns in Malaysia.
- Assured quality programs---all OUM programs are approved by the National Accreditation Board.
- Affordability---the cost of the educational programs are competitive and within the means of the working population to pay.

Flexible learning at OUM is based on the Blended Pedagogy Model. Blended pedagogy is a multimode learning but the main driver of learning is the self learning. The two other drivers are face-to-face learning and on-line learning.

In the self-learning mode, the students are supplied with the course modules and study guides developed by subject matter experts. Students' other resources to support the course modules include CDs, and i-tutorials.

The face-to-face learning takes place in the classroom setting. Tutors who conduct the tutorial sessions are either the internal academic or those appointed outside of OUM. Each tutorial session is a two-hour session for each course, and there will be 5 sessions or meetings for each semester. In other words, for each course there will be a 10-hour tutorial meeting per semester. Normally students will sign up three courses per each semester.

Personalized learning is for the students who cannot attend the tutorial classes for the whole semester due to work reasons or other personal or official reasons. In this situation, the students can request to study on personalized on-line learning mode. There are also situations where students are forced to study via personalized on-line learning mode, although they do not request for them. This happens when the number of students per tutorial class is less than the required number.

4.1 Collaborative On-Line Learning And Academic Performance: An experiential Case Study at OUM.

This case study was based on the experience of the author while conducting the Organisational Behaviour (BMOB 5103) course for the MBA students at OUM for the May semester 2006. BMOB 5103 is a core course for the MBA programme at OUM. All students from semester 1 in year 1, must take the course. Since intake of students is done every semester, this course is therefore offered in every semester.

The Blended pedagogy which combines face to face interaction, on-line learning and self-managed learning has been well established, accepted and practiced for the undergraduate programmes. Although the blended mode of learning has been well accepted and become the mode of learning and teaching for the undergraduate students at OUM, it has not been well accepted and practiced by the post-graduate programme tutors or facilitators. The post-graduate students at OUM therefore, have not been exposed to this mode of learning and teaching. Hence the on-line collaborative learning does not take place. Several reasons have been identified that could contribute to this state of affairs:

1. Most of the Post-graduate course facilitators at OUM are from the Malaysian public universities (traditional classroom learning) who are not familiar with the on-line teaching,
2. Most of the post-graduate students are the products of the traditional universities who have not been exposed to the on-line collaborative learning and therefore are more comfortable with the face-to-face interactions and learning.

The objective of the present experiential case study was to observe the effect of On-Line Collaborative Learning (which is an important component of the Blended Mode of Learning (BML)) on the on-line participation behaviour of post-graduate students (the MBA students) at OUM and its relationship with the students' academic performance. The course was offered in the May Semester of 2006. The study was organized as follows.

i. Pre-class preparation.

Two weeks before the class started, general information about the course, course assignments, facilitator's expectations of the students, and information about the blended mode of learning methodology were uploaded in the myLMS under the course code and the facilitator's name. Immediately after, the facilitator sent e-mail messages to every learner in the class by introducing himself and requested the students to access the myLMS and read the uploaded information. The e-mail message also briefly explained the required BML for the OB course. There were no feedbacks received from the students regarding the sent e-mail messages.

ii. Conduct of the Seminar Class

The seminar class consists of 5 hours of face-to-face meeting time. The following time budget was planned for the class:

- First 1 ½ hours:
    (a) Introduction about the course.
    (b) Required assignments—(i) Group assignment (4-5 people per group), and presentation of report to the class during the final class meeting. The topic for the group assignment was be given by the facilitator based on a short case, (ii) Individual assignment—the

topic was selected by the student but must related to his/her work or organization's OB problems or issues. .

(c) Collaborative on-line learning---each student was required to discuss the Group Assignment using the Collaborative On-Line Learning (COL) method between members of his/her group. Each learner was also asked to pose questions and seek opinions from other learners in the class.

(d) The facilitator would monitor the on-line discussion and intervened when necessary if it was found that the discussion concerning certain topics or issues was going astray or when the discussion seemed to be dominated by certain individuals only. In this case the facilitator would request other members to join in the discussion and gave their opinions.

(e) The carrot for on-line discussion—a maximum of 5 marks was allocated for the on-line discussion for each student, and the facilitator would use certain topics or issues discussed in the Individual Assignments as parts of the Final Examination questions.

- The Next 2 hours of the Seminar ---Lecture on main concepts covered for Seminar 1.
- The last 1 hour of the Seminar---Formation of Study Groups, assignment of topics for the Group Assignment, and class summary and question time.
- Class break---1/2 hour.

Subsequent seminar class meetings were modified to suit the requirements of each seminar class, but between 1-1 ½ hours were reserved for the discussions on individual and group assignments and on COL discussions.

4.2 Outcome Of COL

There were 23 learners in the class. However, only 20 learners completed the course requirements fully. Three learners did not participate in the COL, did not complete Group Assignment and/or the Individual Assignment. It was observed that all students participated in the on-line discussion for the Groups and Individual assignments tasks, but there were student variations in terms of frequency of entering into the forum discussion, length of the discussions and quality of ideas contributed into the discussions. From the focus group interview during the face-to-face seminar classes, it could be concluded that COL was accepted by majority of students, but only a small proportion was really enthusiastic about it. Those who were not really active in the participation were because of access difficulty and unfamiliarity with on-line learning and not at ease while using the learning technology.

Based on the frequency and quality of the discussion each student was given a score or mark for his/her COL participation from 1 (low participation and low quality discussion)

to 5 (high participation and high quality discussion). Overall the learners were classified into three groups as follows:

1-2 marks—low participation (frequency) and low quality idea contribution.
3   marks---medium participation (more frequently and/ or better quality idea
                contribution
4-5 marks---high participation and better quality idea contribution.

What were the outcomes of students' participation in COL? Did COL enhance students learning of the OB course?

Jonassen et al. (1995) discussed the requirements for effectiveness of on-line learning and the environments needed for the learning to take place. Taylor (2002) on the other hand divided learners' participation in on-line learning into three subgroups, such as the Workers, the Lurkers and the Shirkers, and found a trend that described the relationship between the levels of participation and their academic performance. The hypothesis for COL is that students would learn more if they discuss their course contents (and/or assignments) collaboratively between their peers and with their facilitator/instructor. The evidence of learning should be shown by their grades or GPA (Grade Point Average) achieved in the course.

The results of the present case study is shown in the following table which indicates the levels of students' participation in COL and the learners' marks obtained from the various components of the course.

Table of Levels of Learners' Participation in COL and The Course Marks

Level of participation (from 1 to 5 marks)	Average Individual Assignment m=25; n=20	Average Group Assignment m=20; n=20	Average Final Examination m=50;n=21	Average Total Marks m=100;n=20
1-2 (low)	19.3	17.2	29	67.7
3 (medium)	20.2	16.3	36.2	76.6
4-5 (high)	21.4	17.5	37	79.4

 The above Table indicates the following observed trends:

1. i. The relationship between levels of COL participation and average score for the individual assignment is not very pronounced although there is a slight positive trend indicating a slight increase in marks when the level of COL participation increases.
2. ii. The relationship between levels of COL participation and average score for the Group Assignment is mixed, although average score is highest for the high participation group.
3. iii. The relationship between levels of COL participation and average score for the final examination results is positive where the average final exam result increases with the increase in the level of students' participation in the COL discussion. The low participation learners scored lowest average marks in the final examination (29

marks out of 50 possible marks) compared to the high participation group which scored the highest average marks (37 marks out of the 50 possible marks). Although the average final examination marks obtained by the high participation subgroup was higher than the medium participation subgroup, the difference was only very slight (37 marks and 36.2 marks respectively).

4. 4. The relationship between levels of COL participation and average score for the Total Marks for the course is positive where the average total Marks increase with the increase in the level of students' participation in the COL discussion.

5.0 Discussion

The myth prevailing among the facilitators who conduct the post-graduate seminar classes at OUM that post-graduate students cannot or do not like to learn on-line is not true. The present report indicates that not only the learners did accept the COL as a component of their blended mode of learning, but COL can be used as a learning community among the learners which can assist and enhance their learning experience. The result indicates that high participation learners obtained better final examination results than the low participation learners. This result is similar to the result reported by Taylor (2002) who measured the academic performance in terms of average GPA, and the Workers (the proactive or the high participation subgroup) scored the highest average GPA while the Shirkers (the parsimonious or the low participation subgroup) scored the lowest average GPA.

The author did the right thing by providing appropriate motivation for the learners to actively participate in the COL by providing the right "carrot" as incentives for participation. Following the suggestion made by Agostinho et al. (2007) to encourage participation, there needs to be (i) a purpose for the collaboration and the purpose needs to be meaningful, and (ii) a "real world" task for learners or a problem which the learners can relate to.

In this case the author encouraged learners participation by (i) linking some parts of the COL discussion to some components of the final examination questions, and (ii) asking the learners to write individual assignments based on their real work experience or problems. Both (i) and (ii) give meaningful purpose to learners as well as the right context for their tasks or assignments as suggested by Agostinho et al. (2007). (iii) learners' participation was given marks that contributed to a maximum of 5% to their final total course marks. These steps were the real "carrots" or incentives that gave motivations for the learners to participate in the COL discussions.

The following general conclusion can be made, based on the present case study and other studies reported earlier about the behaviour of ODL students:

i. Lack of motivation can lead students to drop out. Hence it is very important that ODL instructors/ tutors are adequately trained to conduct the ODL pedagogy.
ii. The internet methods of communication (e-mail, newsgroup, lisrservers) may be intimidating or awkward to use for some students. Hence ODL students must be given

adequate study skills and training in the use of learning technologies before they embark on the ODL journey.

iii. Learners may not be able to express themselves as well using the computer based communication methods as they would in either direct conversation with their professor or in classroom discussions. Hence the right "carrots" or incentives must be built in the course structure that would encourage students participation in the COL discussions and interactions.

iv. Learners must have technical support in their homes to use the software tools needed in the course. Hence the education institutions should have support facilities to assist learners to acquire the learning equipments, such as computers and the internet access.

6.0 References

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