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Adaptation of Google group for online teaching and learning

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The traditional education system in Malaysia has emphasised reading, listening and writing which has produced many students who adopt a more passive approach to involvement in their formal learning processes. Thinking and presentation skills are seldom taught which has compounded students' attitudes towards active learning in classrooms. In the Malaysian context, most university undergraduates lack the ability to think critically and present persuasive argument. The objective of this study was to examine an alternative teaching and learning method which would create a learning environment for students to be actively engaged in critical thinking. A Google group was implemented into the unit Strategic Management 313, which is offered in School of Business, Curtin University of Technology, Miri campus, as an approach to improved students' engagement in learning. Through the Google group, there was the avenue to post all notices to students, share some interesting files with them, introduce some interesting Web sites related to strategic management, and conduct a student online discussion forum. Through the online discussion, students were able to foster their self-learning and peer-learning processes.

Keywords: teaching and learning, Google group, Self-learning, Peer-learning

Introduction

Curtin University of Technology Sarawak is the first offshore campus of Curtin University of Technology Perth. The role of the lecturers between the two campuses is different. Each unit is controlled and monitored by a lecturer, the unit controller, from the home campus. The lecturer from the Miri campus, the local lecturer, follows the course materials and the unit outline provided by the unit controller. Usually, the local lecturer does not have the opportunity to contribute significantly towards the development of the curriculum. The main role of the local lecturer is to deliver what has been already prepared and assess students' performance according to provided marking criteria. At the end of semester, the local lecturer will be given an opportunity to evaluate the unit according to observation and experiences of the students at the Miri campus. Not all

aspects of the curriculum are well accepted by students at either campuses and some aspects in the deliver of the curriculum may receive more attention at a particular campus.

Background of study

To be eligible to enrol in the Strategic Management 313 unit, students are required to study and pass Management 100 which serves as fundamental for all management topics. Strategic Management is a final year unit where most of the students taking the unit are soon to graduate. The learning outcomes for and expectation of students enrolled in Management 100 and Strategic Management are somewhat different. In Management 100, students are expected to develop information literacy skills and be involved in team working experiences. In contrast, students taking Strategic Management 313 are expected to have high level thinking skills so that they can analyse and synthesise information and produce solutions or recommendations for a business situation. The traditional education system in Malaysia has emphasised reading, listening and writing, and as the majority of the students at the Miri campus are Malaysian, most of the students have well acquired these three skills. However, two of the learning outcomes for Strategic Management 313 pose a big challenge for students in Malaysia. These are:

- Identify strategic issues, evaluate a company's competitive position, and synthesise recommendations for future based on the analysis.
- Present and defend arguments to an audience.

Based on past observations made during lectures and tutorials, the majority of the students are not able to fulfil the above expectations. Whenever there are discussion questions given in lectures or tutorials, the first thing students do is to look through lecture notes and the textbook searching for answers. Very few of the students start by putting on "a thinking hat" to examine the questions or analyse situations. The majority of the students just hope to get an answer from the textbook, notes, or friends. During individual student presentations or group discussion, less than 10% of the class actually ask questions or try to present new arguments and ideas. Question and answer type approaches to learning usually result in silence with most of the "heads" looking down even though there is a 10% tutorial preparation and participation mark embedded into the unit.

Objective of the study

Because the traditional education system in Malaysia has produced many students who adopt a more passive approach to involvement in the learning process, in lectures few students think ahead or try to present alternative solutions or ideas. Based on this problem identified in students' learning, the objective of this study was to identify an alternative teaching and learning approach which would improve students' creative and critical thinking skills, promote self and peer learning and increase their active participation in the unit.

Literature review

The greatest advantage of traditional face-to-face education is the opportunity for the lecturer's personal interaction with students and the opportunity for both students and teachers to take advantage of paralinguistic cues to make points and to verify that a point or a question has been understood. But, traditional education has various limitations that restrict its applicability in the current global environment (Rea et al, 2000; Kinshuk and Yang 2003). These limitations are:

- Lack of convenience: The traditional face-to-face education limits students in that they must be present locally, travel to campus, and utilise office hours. Dependency on time and location may eliminate certain students from the opportunity to study at the university and might also force students to progress through the course at a pace that is not comfortable for them.
- Loss of interpersonal interaction: As enrolments increase, it is becoming difficult for universities to meet the demands of the growing population in the short run. This has driven administrations to implement larger class sizes and thereby promote less personal interaction among the students and staff.
- Failure to develop real world skills: Students may fail to develop skills that they need in the real world. As larger numbers of corporations embrace technological solutions to management, students need to develop skills for survival in the technological workforce.

Based on Lewinson's (2005) review, most education institutions share similar institutional structures and goals but across institutions, three different instructional models shape the online learning framework of institutions. These models are characterized by the primary method of delivery, content resources, and learning activities. The three models are illustrated in Table 1.

Table 1: Instructional Models

Corporate model Primary delivery method Content resources Learning activities	CD-ROM/DVD Multimedia presentations Automated question/answer case-based assignments Automated objective tests and exams
Academic model Primary delivery method Content resources Learning activities	Local platform (Blackboard, webCT) Asynchronous text-based lecture; text-books; web-based readings Written assignments; team projects; participation in asynchronous discussions
Independent model Primary delivery method Content resources Learning activities	CD-ROM, internet Asynchronous video and text-based lecture; web-based readings Written assignments; team projects; participation in asynchronous discussions

Source: Lewinson (2005)

Anderson and Kanuka (1997) gave further details about online forums as being a method that satisfies institutional needs in a cost effective manner. Specifically, online forums

provide freedom from time, time for reflection, opportunities for research, and support for global communication. Furthermore, such forums emphasise the collective memory by their multiple embedded value, which related to social, informational, intellectual, political and technological inherent in democratic networked lives (Davis 2000; Bernier and Bowen 2004). The growth in flexible learning options enabled by electronic media has promulgated the concept of 'learning anywhere, anytime' associated with distance learning (Sevelj 2006). Mejias (2005) believed that this has reinforced the prioritisation of the individual over the social; the individual's time, goals and interests are considered the most important.

Methodology

As a first pilot testing on online teaching and learning method, it was proposed that a Google group be introduced into Strategic Management 313. A Google group is a free service where groups of people have discussions about common interests. Internet users can find discussion groups related to their interests and participate in threaded conversations, either through the Google group web interface or by email. A Google group also includes an archive of Usenet newsgroup and supports reading and posting to Usenet groups (Wikipedia, n.d). Through a Google group, a lecturer is able to upload all the notices related to the teaching of a unit, share some interesting files with students, introduce some interesting Web sites related to strategic management, and conduct surveys. The purpose of the pilot testing was to evaluate the effectiveness of this online teaching and learning method as an improved approach to promote self-learning and peer-learning processes. The data in the study were gathered through observation of student involvement in the Google group, the students' participation in classroom activities, and the quantitative and qualitative information derived from the University online survey system, eVALUate (<http://evaluate.curtin.edu.au/>), which gains student feedback on teaching and learning conducted each semester.

A Google group at <http://groups.google.com.my/group/strategicmanagement313> was set up in the second week of Semester 2, 2007. The lecturer requested all students to sign up as members in the discussion group with a specific deadline to meet. For security purposes, the discussion group was limited to members who were students of Strategic Management 313 at the Miri campus. A two-week time frame was given to students to sign up as members. Those who failed to sign up during the time frame then needed to write an email to the lecturer to request group membership. To build a sense of responsibility and accountability in these graduating students, late membership was only allowed if they could provide valid reasons explaining why they failed to sign up before the given deadline. Students were informed during the online discussion briefing that 4% of their participation marks would be based on the online discussion. The remaining 6% would be based on their classroom participation and attendance. In the end, there were 71 members in the Google group; all students taking Strategic Management 313 had signed up as members.

The lecturer posted six discussion questions in the Google group and there was no time limit for each discussion. Students posted their recommendations or solutions for every discussion anytime they liked. To comply with the internal marks submission, all Google

group activities were closed on 31st October 2007. The students gave a rating on every post. The lecturer provided comments when students had not answered with a right approach or had not been clear with the concepts used.

All six questions were developed based on the learning outcome for this unit where students were required to *identify strategic issues, evaluate a company's competitive position, and synthesise recommendations for future based on the analysis*. The lecturer referred to Bloom's taxonomy to structure questions that required concepts learned in Strategic Management 313 to be demonstrated as learning. The six questions were organised around the following scheme.

1. **Describe** resources, capabilities and competitive advantage of Amazon.com or Sony Corporation or Singapore Airlines. Please provide answer for one corporation only.
2. Based on Porter's diamond model of national competitive advantage, **discuss** the success of Brazil Football team or Malaysia Badminton team in their respective arena.
3. By **applying** the prior strategic management processes (mission, objective, internal and external analysis), which business level strategy would you **recommend** Curtin University of Technology, Sarawak Campus to implement? Please support your recommendation based on the processes.
4. You are on the executive board of an information technology firm that provides bar coding system to the manufacturing industry in Malaysia. In recent years, many manufacturing companies have expanded or shifted the operations to China or Vietnam. One of the firm's managers feels that the company should grow globally and has suggested expanding geographically to China. Please **analyse** the mode of entry to China market (mergers, acquisition or strategic alliance) and support your suggestion with good reasons.
5. Do you agree with the expression "Playing with the industry leader's rules is competitive suicide"? If so, why? Or why not? You may use some industry examples to support your argument.
6. Select one of the following industries: PC industry, automobiles industry or hotel industry. For this industry, **evaluate** the strength (high, medium, low) of each of Porter's 5 Forces as well as complementors. For each evaluation, you are requiring to give at least one reason to support your option.

Discussion of results

Table 2 show the number of postings for the six questions. The postings were provided at different dates on monthly basis. From Table 2, it can be seen that the Google group was very effective in encouraging students' participation in responding to the online discussions. The availability of broadband access in the Miri campus helped to facilitate the online learning approach. Students were provided with the freedom to learn and to share at anytime and at any place they wanted.

Table 2: Number of Posts for Discussion Questions

	August	September	October
Question 1 (posted 5th August)	36	2	34
Question 2 (posted 20th August)	5	8	40
Question 3 (posted 6th September)	-	16	43
Question 4 (posted 28th September)	-	3	45
Question 5 (posted 2nd October)	-	-	46
Question 6 (posted 16th October)	-	-	53

Figure 1 shows the welcome page of Strategic Management 313 Google Groups (administrator view). Besides participating in discussions, students were able to download lecture slides and journal articles used in the unit. Notices and announcements also were posted in the Google group.

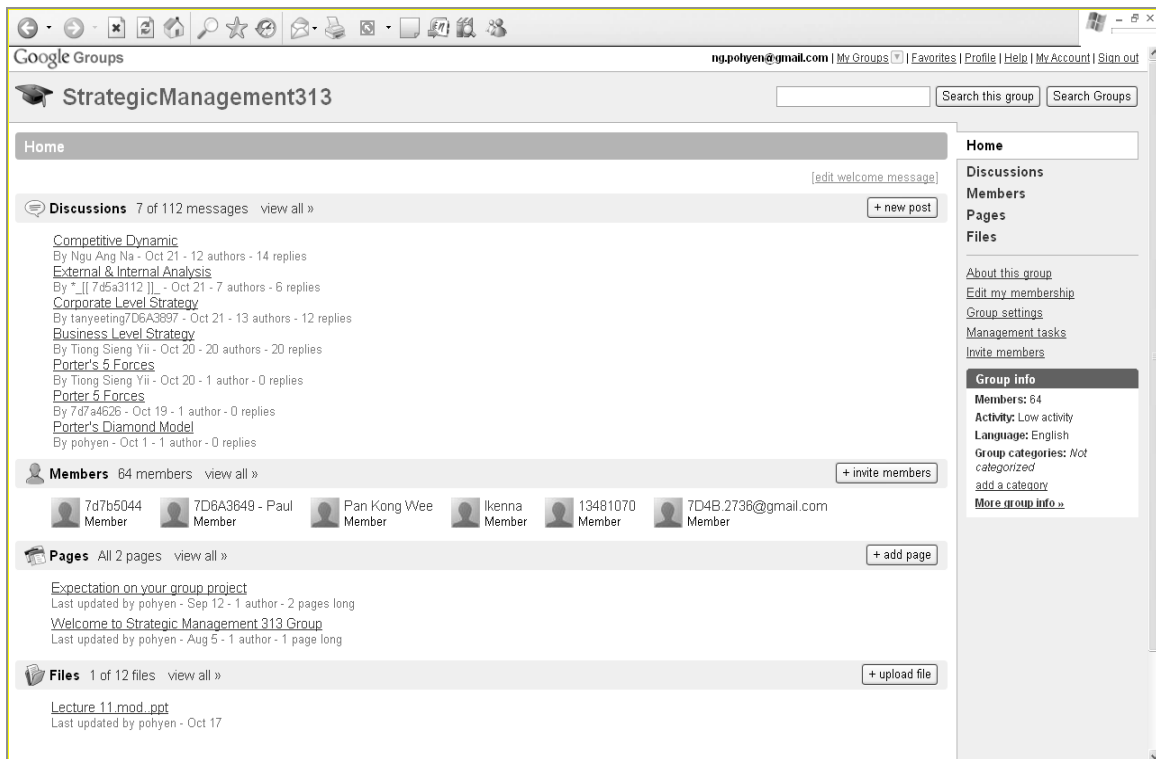


Figure 1: Google Groups Welcome Page

One student commented in eVALUate, the online unit evaluation, that:

*I thank you for having **all of the students to participate in your class for the participation marks**. And yes, although we look like we don't care but truthfully we appreciate your hard work for us and YES your class is interesting as I see a lot of them laughing and attending class.*

Another student wrote:

*[The lecturer] is a lecturer that is very committed to her task. She is well prepared for every class and makes tutorials fun by making all the students participate. This is the way to generate discussion in class. **And the Google group discussion is so convenient!***

Figure 2 shows the prints screen for one of the discussions questions. It is can be noticed that students could write as much as they wanted to support their arguments. Ratings on a 5-star scale were given to acknowledge their ideas and discussions.

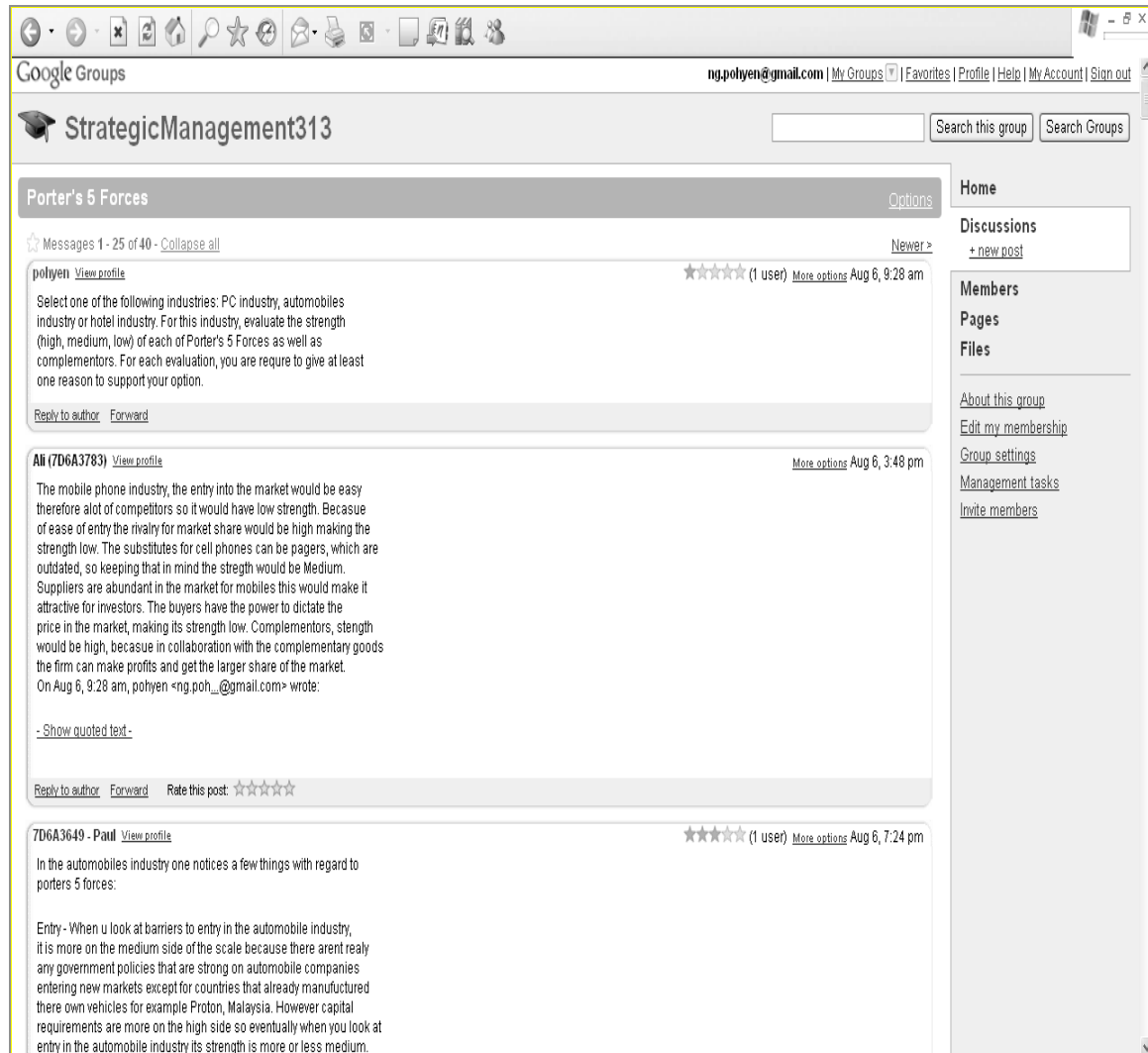


Figure 2: Porter's 5 Forces Discussion

From the students' discussion, the Google group approach seemingly enhanced students' knowledge in realistic situations. It prompted the students to think and apply the concepts they had learned. Through the online discussion, students were improving their going self-learning and peer-learning processes. For each discussion question posted, they needed to study the concepts and try to apply to the situation given. Besides that, they

read about the ideas posted by their course mates. They could choose to support the earlier arguments with stronger reasons or disagree with the ideas. In this open learning environment, students had no restrictions on absorbing every learning opportunity. As the facilitator, the lecturer tried to ensure there was no irrelevant discussion and positive discussion directions were promoted. The online discussion successfully fostered a motivating learning experience for students. Students' comments attested to the discussion group approach.

[The lecturer] encouraged us to read the article as well as participate in the class. She also created a Google group for this unit for the students who are very shy to participate in the class.

The Google group discussion was very helpful, introduce more programs like this.

In the eVALUate Full Unit Report (FUR) on Strategic Management 313 there was a 37% student response to the online survey. Based on the FUR, students reported an 86% agreement that the learning outcomes were clearly identified, an 84% agreement that they made the best use of the learning experiences in the unit, an 83% agreement that they were motivated to achieve the learning outcomes, an 82% agreement that the learning experiences helped to achieve the learning outcomes, and an 81% agreement that the learning resources helped to achieve the learning outcomes. The 81% of the responding group of students were overall satisfied with the unit. One student commended the unit by saying

SM313 is a unit where I gain knowledge that is applicable for future use and how to become a good manager.

Conclusion

The Internet is playing a vital role in our daily lives. It is not only for communication and entertainment; it can also be an interesting teaching and learning tools. With the use of the Internet, teachers, instructors and lecturers can create many wonderful teaching and learning experiences. Therefore, many universities and institutions of learning have adopted online learning in course delivery. Online learning method helps to promote learners engagement where interactive tools such as forum, discussion and files sharing can be used.

This pilot study showed that an online approach improved students' participation through a Google group in the Strategic Management 313 unit. Using critical thinking skills, students were able to provide arguments and analysis when answering questions in online discussion which assisted in improving students' self-learning and peer-learning processes. In the face of the coming new information technology era of 21st century, web-based learning should be used far more widely in future teaching and learning of students who are more used to passive learning in their schooling prior to tertiary studies.

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