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'A discussion forum': a blended learning assessment tool to enhance students' learning

Hela Miniaoui

University of Wollongong, hela@uow.edu.au

Avneet Kaur

University of Wollongong in Dubai, Avneetkaur@uowdubai.ac.ae

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"Discussion forum": A blended learning assessment tool to enhance students' learning

**Hela Miniaoui* and
Avneet Kaur**

University of Wollongong in Dubai
Knowledge Village, Block15, Dubai PoBox 20183, UAE

E-mail: helaminioui@uowdubai.ac.ae

E-mail: Avneetkaur@uowdubai.ac.ae

*Corresponding author

Abstract

The term “blended learning” has gained considerable interest in recent years as a description of particular forms of teaching combined with technology. This project reports in some detail the experiences of a small group of undergraduate learners as they progress through their Bachelor course at University of Wollongong in Dubai (UOWD) in the United Arab Emirates. In particular, this study looks at discussion forum approach as a blended learning initiative and what that entails to the learners in terms of making the subject more interactive and enhances students analytical and research skills. From the findings, conclusion has been drawn regarding the role of Blackboard tool in learning by helping students to obtain a deep sense of understanding of how to operate in a virtual team despite the challenges.

Keywords: Blended Learning, e-learning, Innovation, Discussion Forum, Learning, UAE

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Biographical notes: Hela Miniaoui is an Assistant Professor in the Faculty of Finance and Accounting at the University of Wollongong in Dubai (UOWD), UAE. She holds a PhD and a MA. Her research interests are related to Money & Banking, Islamic Finance and e-Learning.

Avneet Kaur is an Adjunct Instructor with the Faculty of Finance and Accounting at the University of Wollongong in Dubai (UOWD), UAE. She holds a Master in Commerce and a Bachelor in Education. Her research interests are related to macroeconomics, International finance and e-Learning.

1 Introduction

In psychology and education, a common definition of learning is a process that brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one's knowledge, skills, values, and world views. (Illeris, 2000; Ormorod, 1995)

Learning theories are mainly based on the transfer paradigm summarized by “the information is passed from the teacher to the student”.

Many other theories consider that the Human learning is a social process. In fact, learning is not an isolated activity (Hung and Nichani, 2001) and interaction and collaboration between learners is a major enabler of the knowledge construction paradigm. (Duffy and Jonassen, 1992)

A combination of traditional learning within the classroom and web-based learning is called blended learning. It is the mix of face-to-face instructions and online interactions between the students and teacher to optimize the learning outcome. It is considered more effective than only face to face learning or fully online learning as it makes the teaching learning process more interactive and allows regular feedback.

This case study examines how undergraduate students pursuing Bachelor of Business Administration and Bachelor of Commerce, majors Finance and Accountancy, enrolled in International Trade Theory and Policy subject, worked collaboratively in small work groups on assignments over a period of thirteen weeks. Particular focus in this paper is given on how to make the subject more interactive and inculcate analytical and research skills in students by using discussion forum approach of blended learning.

The rest of the chapter is organized as follows: Section 2 reviews relevant research on blended learning and its impact on students' learning. Section 3 presents the research

methodology wherein the experimental approach and the research objectives are described. Section 4 presents the accomplishment of the approach including the achievements made by the students and the survey analysis. Section 5 suggests certain future research directions. The final section concludes the paper.

2 Literature Review

Blended learning is facilitated by the effective combination of different modes of delivery, models of teaching and styles of learning, and founded on transparent communication amongst all parties involved with a course (Heinze and Procter 2004).

According to Hisham *et al.* (2006), the definition of blended learning is varied and contrasting. Some studies (Whitelock and Jefts (2003), Alavi and Gallupe (2003), Arbaugh (2005) and Peterson (2003)) referred to blended learning as the integrated combination of traditional learning with web-based online approaches. Singh (2003) defined blended learning as models that combine various delivery modes.

Many works have focused on the definition of the main functions of blended learning systems and we choose here to mention the classification of (Simens, 2004):

- Different levels of permissions for users (students, teachers, tutors, administrator, visitor);
- Search functions (simple search and advanced search);
- Multimedia application for digital material;
- Collaborative workspace;
- Knowledge share and reuse.

Blended learning can combine the positive aspects of the two learning environments; classroom based learning and e-learning (Bonk and Graham, 2006). Shaw and Chen

(2012), mentioned that e-learning transactional space can be a starting point for exploring e-learning as an ecological system with interconnected and interactive digital elements, using tools of system science for its development and analysis.

According to Rastegarpour (2010), blending learning provides various benefits over using any single learning delivery medium alone. Learners not only learn more, their interaction and satisfaction improve. In fact, learning styles affect individual learning and thus personal knowledge creation in practice (Jacob and Lauridsen, 2012).

On the other hand, several linked options for learners; in addition to classroom training increases learning. According to Citera (1988), shy students are more likely to participate in an online discussion because it is less intimidating than speaking up in class.

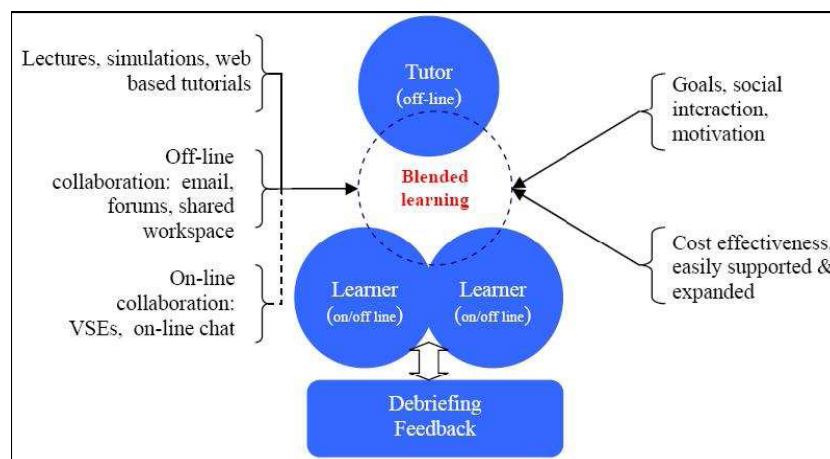
According to Doiron (2006), blended learning approach was successful in encouraging individual participation. Statistically significant high correlations were found between performance and posting frequency. For Karayan and Crowe (1997), and Smith and Hardaker (2000), the advantage of a discussion forum, as opposed to the traditional face-to-face class discussion session lies in its asynchronous nature, which allows for wider student participation and offers them more time to process their thoughts.

According to Oliver (2002), through technology-facilitated approaches, contemporary learning settings now encourage students to take responsibility for their own learning. In addition, according to Laxman (2012), problem-based learning encourages students to develop critical thinking and self-directed learning skills by actively solving a repertoire of different problems that function as the organizing context for building up content knowledge bases.

Teaching process requires continuous innovation to facilitate an effective learning. This is evident from few recent literature that implemented several approaches in order to enhance innovation in learning. Some interesting approaches are “eating your own dog food” implemented by Bregman (2012) and an appreciative inquiry method applied by Phoewhawm (2012).

Blended learning approach can be summarized in Figure 1 below:

Figure 1. The Blended Learning Model



3 Research methodology

3.1 The experimental approach: Discussion forum as a blended learning initiative

Blackboard Learning System or Web Course Tools (WebCT) is an online virtual learning environment system that is available to all faculty members at UOWD, from University of Wollongong in Australia via Staff Intranet for e-learning.

Initiated by Dr. Payyazhi Jayashree, Head of Centre for Academic Staff Professional Development (CASPD), this program was launched in Spring 2011 where many faculty members volunteered to try and use Blackboard and help understand the benefits and problems of using the new system as opposed to “MyUOWD”.

CASPD was instrumental in organizing three training sessions to introduce the Blackboard system to self-nominated volunteers. These training sessions were specifically focused on the functionality of the learning interface. The participants were then advised to think about an effective use of pedagogy, with the sole objective of achieving an improvement in teaching and learning.

The target was to develop skills in the usage of the E-learning platform (Blackboard/WebCT) to enhance the teaching and learning experiences of students. At a later stage, after having experimented with the use of Blackboard for a semester, the volunteers were asked to follow a cascading process and mentor other faculty members to embed the usage of Blackboard at an institutional level.

In autumn 2011, we experimented with implementing the system with second-year student cohort to understand how a range of Blackboard functionalities can be incorporated as part of assessments and as a learning enhancement tool, to improve teaching and learning.

3.1.1 The outcomes

At the start of this experiment we broadly listed out the main outcomes that we would like to achieve.

On completion of this project, we will have:

- 1- Designed and implemented an online assessment tool (Discussion forum) in the International Trade Theory and Policy (ECON216) subject;
- 2- Evaluated the impact of this assessment tool on students' learning and engagement.

With the help of this tool it is expected that students will be able to:

1. Have a strong hold on the concepts being taught in the subject;
2. Develop their reading, writing and communication skills;
3. Develop research and analytical skills;
4. Learn how various variables of the economy are interrelated and impact each other.

3.1.2 Rationale

The major objectives behind adoption of Blackboard were first to increase students' involvement with the subject by engaging students in discussion forums and hence make the subject as interactive and dynamic as possible, which would further help students to develop their communication skills. The second objective for using Blackboard, was to cover most of the program objectives and to catch-up with the significant learning outcomes of the subject. Thirdly to enable collaborative learning among the students by involving them in various discussions on the topics posted on the discussion forum. Finally, to extend students learning experience beyond the classroom and the textbook reading.

3.1.3 Description of the assessment

The discussion forum assessment was worth 10% of the total marks of the subject. In the beginning of the semester, the whole class was divided into groups with a maximum size of 5 students per group. Students were asked to discuss the topics posted on Blackboard within their respective groups using the student forum (also hosted on Blackboard) before posting their final answers on the discussion forum. These postings were then evaluated

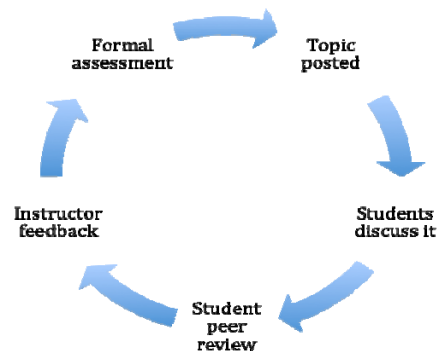
to provide regular feedbacks to the students. Few interesting postings were also brought to the classroom to motivate students to be active participants on the discussion forum.

The topics and case studies posted, motivated the students to participate in the initiative during the 13 week-semester. In fact, the topics were guided by couple of questions that the students could refer to before starting their research on the given topics.

During the 4th week of the semester, the first topic, with case studies was posted on Blackboard for one week. Basically, this topic, among the 5 topics posted, was to give the students a basic idea of how to adopt this tool, how to use it and to increase their confidence. This topic was informally assessed and feedback was given to the students regarding what was expected from them for the rest of topics. The remaining four topics were posted for discussion on the forum at equal intervals during the rest of the semester. Regular feedbacks were provided on the discussion forum for the postings made by the students after getting responses for each of the topic. The postings made by the students were then formally assessed. The five topics that were discussed through the WebCT/Blackboard system are Trade Restrictions, Political Economy of Protectionism, Economic Integration, The Foreign Exchange Market and Exchange Rates and Macroeconomic Policy Coordination. The topics accompanied with guiding questions were framed in a manner such that they provided students with an opportunity to carry out research and apply the concepts learnt in the classroom to the real world situation.

Once introducing and explaining to students the use of Blackboard system, different phases were adopted to implement Discussion forum as a blended learning tool to assess the students. Figure 2 describes the strategy of students' assessment through Discussion forum" tool.

Figure 2: Strategy of use of “Discussion forum” to assess students



3.2 Research objectives

The main objective of this research is to implement blended learning using discussion forum, as an assessment tool to enhance students’ learning.

A blended learning experience that combines traditional practices and e-learning was implemented to discuss key concepts, clear up misconceptions and factual errors related to the topics. The major purpose to adopt Blackboard tool was to cover the four following significant learning outcomes of the subject:

- Understand the microeconomic underpinnings of trade theory and explain the basis of trade and the gains and losses from free trade.
- Understand the working of the foreign exchange market and how it facilitates or impedes international trade.
- Explain the different forms of economic integration and the reasons for closer economic ties particularly with reference to the Gulf Cooperation Council countries.
- Evaluate open-economy macroeconomic policies and performance under the various international monetary systems.

A further aim was to help students acquire the intellectual skills necessary for this subject by means of interactive discussions via online forums. In addition, we encouraged the

students to be active respondents to the postings for the discussion forum by uploading the subject outline, lecture slides, tutorials including multiple choice questions and problem solving problems on Blackboard itself. This was done to make students familiar with the system as most of the students were using Blackboard for the first time. Apart from this, all the announcements during the semester were made through Blackboard in the form of notices.

3.2.1 The sample

Seventy-four students, pursuing Bachelor of Business Administration and Bachelor of Commerce during the autumn 2011 semester were administered for this case study. These undergraduate students with different background and different nationalities were enrolled for the core subject International Trade Theory and Policy (ECON216).

3.2.2 The survey

In order to get a feedback from students about their experience with Blackboard, a questionnaire (see appendix) with four sections was used. First section had questions based on students' attitudes towards technology (questions 1 and 2), following this was the section about students' attitudes towards using WebCT/Blackboard as a tool of blended learning (questions 3 to 7). Section 3 had questions related to students' attitudes towards learning through WebCT/Blackboard system (questions 8 to 15). The final section (questions 16 and 17) was asking students suggestions about how this platform might be improved in order to help their learning process.

4 Accomplishment of the approach

4.1 The achievements made by the students

This kind of assessment motivated the students to engage in discussions related to economic concepts, interpretation of international economic situations, and to interact among themselves on their point of view.

Indeed, topics covered important concepts and different economic situations and their impact on international trade that were also part of the midterm and final examinations. The discussion forum provided students an opportunity to analyse the economic situations and express their viewpoints about these situations by applying the concepts learned within the classroom in real world situation.

Throughout the semester the students posted a total of 250 messages on the 5 topics. The discussions made by the students were well supported with evidences. The postings included statistical data's, tables, graphs etc. to support their view points, the explanations were also supported with several figures showing relationship between various economic variables. The students were encouraged to participate in the discussions by providing regular feedbacks for their postings; apart from this the most appropriate postings were included in the discussions done in the classroom while reviewing the same topics during the tutorial sessions. Another motivation for students to participate in discussions was the assessment marks worth 10% of the total marks for the subject.

Most of the students were quite regular and posted their discussions for all the topics. While, there were a few students who did not make any post to the discussions at all. This indicates a resistance to change from the traditional "MyUOWD" system.

At the completion of the semester when the results were finalized, it was noticed that students' performance improved, as evident from their grades. In fact, 82.43% passed the subject. The top performers' achievements with HD (High Distinction, 85% to 100%) and D (Distinction 75% to 84%) as 22% demonstrated motivation in using this new tool and the quality of their postings was good. This was also reflected in the final examination answers to the topics covered in the Blackboard that helped these students getting good grades. On the other hand, the middle range performers with C (Credit 65% to 74%) and P (Pass 50% to 64%) stood at 60% that seems to reflect improvement in students' Performance. Only 1.35% stood at PC (Pass conceded 45% to 49%). The overall result reflected the achievement of significant learning outcomes of the subject. Eight students out of twelve who failed to post their discussions on the topics also failed the subject (66.66%).

This Discussion forum offered opportunity for appreciation of students' work, hence reinforcing their positive learning experience.

Blackboard was a useful resource for discussion and analysis. It was a fun and exciting experience for me and for my tutor. In fact, we enjoyed the opportunity to respond to the students' remarks, queries and reflections and it was a fruitful experience for students as it enhanced their independent learning at their own pace and in their own time.

4.2 Analysis of the survey

On the basis of the survey distributed to the whole class it can be said that the student valued the experience indicating that this new tool has strengthened the class discussion and came up with other ideas and it has answered any question that was not asked in the class. Moreover, the survey indicated that students have coped with this platform but

there are still some technical challenges that demotivate them from using the system. Seventy-three out of seventy-four students have responded to the questionnaires. 41% stated that they were quite regular and using the Blackboard few times a week. Moreover, the use of this system is more convenient and encompasses the teaching-learning process beyond the boundaries of classrooms as 74% of the total students were using the system from home.

On the basis on the survey, it was found that most of the students enhance their learning because of the Blackboard. Around 60% of the students felt more connected to the subject.

The average of the class considered that Blackboard improved their communication not only with the instructor but also with other students. Around 70% of the students agreed that this platform gave them more access to resources and learning materials that also helped the students in their examinations. Moreover, around 70% agreed that updates given by the instructor were regular and frequent which also made their learning easier.

Below are some selected comments made by the students via the survey.

Question 16: Do you have any suggestions about how the WebCT /BlackBoard is used in this class and how it might be improved to help your learning process?

"I suggest the WebCT to be used frequently in class that will help the students learning process, in addition greater success will be attained."

"It has improved the communication between the students & instructors."

"It's used very well where we can post discussion & answer without any paper or hard copy."

"In my opinion if the assignments are for more than 20 % it will be better."

"I prefer to have more assessments on WebCT."

Question 17: Additional comments on WebCT/BlackBoard and how you would feel about using in other classes in the future:

“Yes I would strongly recommend using the WebCT because it enhances the students learning and it’s very crucial to use it in other classes.”

“Web CT/ Blackboard is a good tool and I recommend that each class should utilize it, as it will strengthen the class discussion and come up with other ideas and it will always answer any questions that was not asked in the class. This will always make the student efficient to think and perform well in his education.”

“It is good & should be used in other subjects as well.”

“Very helpful, easy to use understand.”

“Yes, please use it other classes also.”

“Yes i would strongly recommend using the WebCT because it enhances the students learning & it’s very crucial to use it in other classes.”

During this project, some barriers and challenges that learners had encountered were noticed. In fact, based on the survey administered on students, most of the students were comfortable using Blackboard but some of them resisted this change. In fact, 18 students representing 24.32% did not make discussion on any of the topics and got zero out of this 10% assignment. This can be because students were busy with other subjects and they were not excited to do it and they did not have the motivation as well.

Some technical challenges were faced. The biggest challenge was how to familiarize students with the new system. In fact, students kept comparing WebCT to “MyUOWD”. According to some students “MyUOWD” is more than enough and it is accessible from almost anywhere including Blackberry. For them, it is very confusing to have so many systems and technically challenging to access materials through these different systems. Moreover, some students have suggested a separate login bar at the main website instead of going through Student online services (SOLS). Few of them reported that it takes too long to open and download the files posted on Blackboard.

Below are some selected comments made by the students via the survey.

“Change the color of the background.”

“It should be used for more subjects but it should not replace MyUOWD.”

“Sometimes I have a problem of connection.”

“I would prefer sticking to the conviction in simplicity of MyUOWD.”

“Our uowddubai website is much better & easy to use & it's very useful.”

The major findings of the survey are consistent with those reported in the literature in terms of developing critical thinking and self-directed learning skills, making the classes more participative and interactive and thus improving communication between the instructor and the students.

A strong relationship between students' performance and posting frequency is evident from the improvement in their grades, which is also aligned with the literature.

5 Future research directions

Blended learning approach is considered as a bridge between sole classrooms based learning and fully online learning. It acts as a platform wherein these two mediums of teaching can be combined to enhance the teaching-learning process. Discussion forum as a tool of blended learning is used to provide an opportunity for students to discuss and debate academic ideas through which they can improve on their writing and communication skills. Apart from this, they also improve on their research and analytical skills.

The need for blended learning will continue for academic institutions to support teaching and learning. In fact, in order to implement blended learning process successfully, attention has to focus on innovating new ways of teaching and learning and also designing different educational web-technologies (for instance, mobile blended learning, web-blogs, online Labs...).

The advancement in technology will create exciting opportunities for blended learning as a tool of teaching and encourage students' responsibility for learning. Indeed, online environment will enable learners to have their voices heard and will foster independent

learning. On the other hand, instructors will be able to comprehend the practical implications of the topics covered on the class.

In future research, discussion forum can be used for testing larger groups and can also be implemented in courses that are based on different pedagogical models with varied students' attitudes and proficiency levels.

Continued research on blended learning, as a tool of teaching and learning is required to design advanced pedagogical and visual models that encourage students' learning and make teaching learning process more efficient.

6 Conclusion

By using Blackboard, students accept more responsibility for their learning, within a clearly structured framework. As students reflect on their learning, they become aware of what they know and where their weaknesses lie. Moreover, students develop the capacity to evaluate their own work. Apart from this, discussion forum also helped the students who are shy and resist making contributions to the classroom discussions and gave them the opportunity to express their viewpoints on the topics posted on discussion forum. The use of Blackboard in the subject also helped students to learn the application of the subject concepts in real world situations and hence developed their research and analytical skills.

Overall, this experience was very interesting for us, lecturer and tutor, as it helped us to strengthen our teaching. Indeed, because of this tool of learning, the coordination between the lecturer and the tutor has improved as now we are meeting more often to monitor the discussions as compared to the previous time, (during Spring 2010), where we together taught the same subject but without using Blackboard.

At the end, most of the students have expressed an appreciation for having had the opportunity of using a discussion forum as it enhanced their learning experience. What was most rewarding is the fact that they have obtained a deep sense of understanding of how to operate in a virtual team despite the challenges. We would definitely encourage this blended learning tool to be continued when we get the chance to teach the subject again and use it in other subjects as well.

Based on the survey conducted, more than half of the students were ready to move to the new system believing that this process enhanced their learning and took them outside the boundaries of the classroom. However, they suggested that if all grades are also posted on Blackboard then the system might be used more often. While, there were a few students who did not post their discussions at all this is an evidence of resistance to change from the traditional system.

Based on the final results of the students, it was identified that the performance of the students who were regular and committed to making posts on the discussion form on Blackboard was far better than those who failed to discuss the topic on the forum.

As improving teaching could be achieved by paying attention to voice, gestures and physical movements during lectures, we reckon that incorporating many of Blackboard's tools into subjects, will make students' learning experience more interactive and will invariably enhance students' learning process and encourage students to be more engaged with the lecturer and the tutor and the subject as well. In fact, our teaching philosophy joins theory 3 of Ramsden (2003) "Teaching as making learning possible", insofar as it includes blended methods to help students learning. Moreover, we are improving learning during discussions as theories of learning of Race and Brown (1998) stating that by

allowing our students to interact through discussion forums to analyze and evaluate different economic situations, we enabled students' learning as per the concepts of 'learning by doing' and 'learning through feedback'.

In addition, our learning approach joins the theory of experiential learning of Stewart (2004). Indeed, student's experience is important in the role of education since no two individuals share the same past experience. Indeed, students have shared their experiences especially through case studies discussed on the forums.

Finally, as volunteers using Blackboard, we think that this experience contributed to improve our teaching approach and it allowed us (the lecturer and the tutor) to make contact and interact with all the students especially through discussion forums. Interactions between the lecturer and the tutor also improved drastically.

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Appendix

UOWD WebCT/BlackBoard Questionnaire

Dear Student,

This short survey is intended to measure your satisfaction with the WebCT/Blackboard component of this class. Your responses are confidential and will be used solely for the purpose of improving our development of this system at UOWD. Thank you for your responses.

1. How often do you use WebCT/ BlackBoard? (Choose one)

- ☐ Daily
- ☐ A few times a week
- ☐ Once a week
- ☐ Once or twice per month
- ☐ Never (have not yet used the system)

2. From where do you access WebCT? (Choose as many as apply)

- ☐ Home
- ☐ Workplace
- ☐ UOWD Library
- ☐ UOWD computer labs
- ☐ My own laptop while at UOWD
- ☐ Internet cafe
- ☐ Mobile device
- ☐ Other (specify) _____

Getting Started

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3.	I am comfortable with using computers					
4.	It is convenient for me to use the system (for example, at home, work, or at UOWD)					
5.	There was enough introduction to the system by the instructor in the classroom					
6.	It was easy to get started on the WebCT/Black Board system					

7. Is there anything that could have been done differently to make it easier for you to start using the WebCT/Black Board system? For example, instructor guidance, printed materials, instructions, etc.

WebCT/BlackBoard and Learning

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
8.	Using WebCT/Black Board improves my communication with the instructor					
9.	Using WebCT /BlackBoard improves my communication with other students					
10.	Using WebCT /BlackBoard gives me more access to resources and learning materials					
11.	Using WebCT /BlackBoard makes me feel more connected to the subject					
12.	The instructor makes enough					

	references in class to the system and the expectations for use by the students					
13.	Using WebCT /BlackBoard makes it easier for me to learn					
14.	There is enough material on the system from this class to make it worthwhile					
15.	Updates by the instructor are frequent enough to maximize the experience					

16. Do you have any suggestions about how the WebCT /BlackBoard is used in this class and how it might be improved to help your learning process?

17. Additional comments on WebCT /BlackBoard and how you would feel about using in other classes in the future:
