

Computer Mediated Communication – Email Group to Facilitate Student Learning

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Abstract

This paper looks at the introduction of a simple mean of computer mediated communication medium, the setup of an email group to improve on direct interaction of teacher-student and indirect interaction of student-student in first year business statistics course in traditional lecture-tutorial setting. It was seen a need in this situation where direct interaction of teacher-student was limited to lectures, and the number of students was moderately large. Moreover over half of the students were transition from secondary education to tertiary study where they were brought up in an environment of rote learning in which active enquiry was not a norm, thus a period of adjustment was needed before they were accustomed to active and self-directed learning, and this mode of communication was used to support the transition.

Weekly email messages for a period of five weeks were sent whereby some responses were made compulsory. Compulsion responses were required to keep track of students' progress and for the teacher to better understand students' needs and problems, thus advice could be given accordingly and improvement on lecture materials could be made as ways to address problems. The effectiveness of this form of quality conversations to improve on teaching and students' learning was evaluated from questionnaires, email and face-to-face enquiries, and performance in terms of end of semester's results were compared with previous semesters.

Keywords

Computer mediated communication, email group, compulsion responses.

Introduction

As a teacher, the main concerns are generally low level of active participation in lectures and tutorials by students and lack of teacher-student interaction to improve students' understanding on subject matters. These could be due to the time constraint and also the education system where they brought up. Often when they do not understand a certain concept, they do not dare to ask or do not know where to begin the process of enquiry or they could not care much.

As to improve the interaction of teacher-student, indirect interaction of student-student and to encourage more active learning, an email group was set up for students of a first level business statistics subject in a traditional lecture-tutorial system. This provides an avenue for students to communicate their needs related to the subject matters with the lecturer and to be involved in the decision making process by responding to the issues related to their peers who may be in a different tutorial group.

Background

The advance of information technology has changed the way teaching and learning are traditionally conducted. Increasingly more subjects are offered online to provide students with choices of where they want to obtain their learning from. Teachers could also exercise flexibility where by teaching materials could be disseminated online, with the online discussion room and email group to function as classroom tutorials to serve as platforms to communicate and interact with students. For lessons which are conducted in a traditionally classroom setting, the purpose of setting up email groups is no different from the online courses, which is to enhance communication between teacher and students and student-student. Articles which deal with the setting up of email groups in traditional classroom teaching are relatively rare, whereas research on the impact of discussion room and email groups from online courses is generally of interest as this is the only form of interaction in these situations. The difference of the two is that the students in the traditional classroom system know the lecturer and students as they are meeting regularly face-to-face through classes but due to various reasons, this form of interaction is set up to improve the communication. Nevertheless the purpose of the two different settings should be rather similar.

Literature review

Apart from the flexibility of time and location it offers, one of the reasons for the increased usage of web for communication also partly due to the insufficient funding of the traditional classroom teaching (Edward and Clear (2001)). As the resources are overstretched, the ratio of number of students to a teacher has increased in recent years, students are no longer getting the type of personal attention they received years ago. A way of coping with this shortcoming is by means of email group and discussion room to increase interaction level of teacher-student and student-student. Students are thus given more opportunity to question and clear their doubts regarding a certain issue whenever they face difficulties in their study. For online courses, there is a general concern regarding passive learning from the prepackaged learning material if the model does not include communication and interaction components for participants. The paper of Edward and Clear (2001) also stressed on the contribution of computer mediated communication (CMC) to collaboration and the barriers to its use were discussed. The authors conducted a study on the students on web site construction. Due to the complexity of the subject matter and time constraints in the lab sessions, CMC was intended to foster collaboration. The study finding indicated that to ensure greater success in implementation of CMC, certain assigned tasks or learning activities needed to be made compulsory to motivate students to participate. Similar findings applied in the case of distance learning (Morris, D. et. al. (1999)) whereby the advantages of CMC were further emphasized if the course was designed to include some

additional incentive or possible compulsion. The study of (Edward and Clear (2001)) found that asynchronous CMC technology did not meet the need for collaboration due to the unavailability of computing resources at home and students were seeing each other face-to-face, thus direct communication was preferred. Other studies related to CMC mentioned that in order for it to serve its purpose, it has to provide added value to learning experience, and to help to achieve the fundamental educational objectives such as active learning. For traditional campus-based classes, CMC is increasingly being used to provide greater interaction between tutors and students, and between students themselves because it encourages discussion due to the ability to quote and comment on the statements of others (McAteer et al. (1997)). Interaction is a key factor to successful teaching online and crucial to this effective model. In fact, studies have indicated that online instruction gives students unprecedented access to their instructor - far beyond that of the traditional classroom (Marsha L.B (2001)).

Morris, R. et. al (1999) detailed a study on the introduction of CMC to the first level course in an online environment to monitor the proportion, patterns of this usage, which concentrated on the aspect of online discussion of course content. The reaction of students were favorable which rated the motivational aspects of CMC highly. Nevertheless non-compulsory nature of the CMC might be regarded as low importance by the students, thus limited their time in the participation in the activity. Thus the general opinion is that for CMC to serve as an effective medium for active learning, compulsion is vital to ensure participation. The other aspect of concern was the appropriate timing to post answers to responses on the part of the academic staff for different timing in responding from students. The study indicated the readiness of students in the first level to accept CMC suggests that it is certainly possible and may be desirable to incorporate CMC as a medium for social interaction and course-related activity. The reliability and accessibility of the medium was high as all students had computer access for the online course.

The centre for higher education and learning's number two flexible learning guide (Murphy et. al. (1999)) which states that the newsgroups provide a platform for students to answer to each other's questions and discuss specific issues. The case study provided for the advantages of going online with first year Marketing subjects particularly the method offers the ability to provide time to reflect, thus students and staff are more likely to make reflective and better thought through comments in discussion.

Conducting the project

The activities involved five weekly emails to the group, on course updates, reminders and encouraging quotes. Questions posed were put to the group anonymously to obtain feedback. Summary of responses were compiled and given in the following email. For the first two weeks a short progress report based on a certain issue from students was to be submitted through email. Overall summary of report findings was given for further suggestions or comments. Students with problems were followed-up to determine changes where confidentiality was strictly kept. During the fifth week, questionnaires were given to serve as a mean to determine the final outcome.

The setting up of the email group is a project for my graduate certificate in higher education. Initially it was intended for students of second level's business statistics subject. After some thoughts and discussion with the project teacher, I decided to change to the first level subject for a few reasons. One reason is the size of the class for second level subject is only seven, which I feel is too small to be effective as they have a lot of opportunities to ask questions in a small class setting, furthermore I am taking their tutorial and I can get to know them fact-to-face. In addition this subject is no longer a core subject, usually students who are taking have rather strong foundation of statistics and are interested in the subject, which unlike the first level core subject and the number of students taking is 100.

There is a mixture of students mainly from first two semesters. The passing rate for this subject was not high especially the last semester which I was not in charged. As I only lecture them and a tutor is responsible for all their tutorials, thus the only time I interact with them is during lectures. As it is a big class, it is not possible to know them personally, thus in this case it would be more beneficial to set up such a group for them. During the second week of the semester, I announced to them the purpose of my project and then email addresses of the students were obtained.

During the third week, I sent out the first email message which expressed my great pleasure in communicating with them this way as it was flexible of time and location. I encouraged them to feel free to raise any issues which were related to the course. A reminder was given to them to enroll for a tutorial group as some new students might not had adapted to the tutorial system. An announcement was made regarding relative smaller class size of a new tutorial group, I encouraged those who found this subject new to join in so that they had more opportunity to ask if they were able to fit in the schedule. To keep track of their progress, I asked them to write a progress report of not more than 50 words during the first 10 minutes of their computing tutorial on what they felt they were getting on so far. I ended the email with quotes for thought for the week to inspire them, which was given in every week's email message.

There were around 70 students responded with the report. Some did not get the email as they were bounded back for around 10 students. They were told to check on their email system, otherwise they would have to read the weekly update from any classmate who had received the email. I came to know them better after reading their progress report and be more aware of their problems. The mixed responses were really encouraging. They were from quite diverse background, as they sat for different pre-university entrance exams. About 15% are from overseas countries such as China, Indonesia, Korea, Singapore and India. For those from China and Korea, they could write well but they were not able to communicate well verbally and having problem of getting use to the spoken English. Indonesian students generally are poor in English and local students were a mixture in expressing language difficulty. Apart from the language, the strength of the arithmetic skill is also a determining factor for coping well in this subject. Many were concerned with the low passing rate of last semester. Their responses regarding a particular issue could be categorized and summarized as below:

Email group – beneficial, fun, good ice breaker, brilliant idea.

Subject – challenging, interesting, tough, hard work, enjoy, coping well, new.

Lecture – good teaching style, interesting and easy to understand, clear, student centre, too fast.

lecturer – express gratitude and appreciation (not all lecturers will do this), kind, great, concern, wish well for this project.

Tutorial – fine, request model answers.

Computer – new with computer/Microsoft Excel, problem with installing statistical add-in at home, dislike computing.

General – concern for low pass rate in the previous semester.

I responded to their first message as to encourage them to be able to open up to me, it was worth to spend the time just to address to their problem/concern individually. For a few who felt that I had been too fast, I advised them to read through the notes and asked questions when they encountered any problems. With a class size of 100, it was hardly possible to slow down just for a few students. Those with computer skill problem, my advice to them was to practice the steps given in constructing graphs/charts to get familiarize with. Those with problems of statistical add-in in different Window settings, I suggested they seek help from computer helpdesk available in the lab. Concerning low pass rate in previous semester, they would have to attend all lectures and tutorials and to ask questions when they encountered problems.

From the feedback of the first email message, I was quite clear of my students' background, which I used the gathered information to write the second email message. Many first semester students were facing the transition to self-directed learning, which is common to new students adjusting to the university environment. Furthermore many of the m did not equip with the computer skill, thus the challenge they faced was quite substantial. For those non first semester students, they adjusted rather well to the surrounding, thus they faced less problems.

I acknowledged that English language was another problem that students needed to overcome, thus I encouraged them to read some articles from newspapers/magazines every week to improve on their language skill. Also a new Language and Learning Support Unit(LLSU) at Monash University Malaysia(MUM) to provide a comprehensive language and learning support service was made known to them to make full use of the service.

For those students with problems, my advice was to seek ways to overcome them as what I had suggested. It was on their part to take the initiative to solve the problems. As far as possible, I did change the lecture notes to enhance their level of understanding. Thus in the second week's progress report was regarding sharing with everyone how to tackle their problems if they had or for those students who were coping well to share their study tips. Also for non first semester's students, to share their experience in adapting to the university system. Thus this week's theme was on sharing experiences so that we could learn from each other. I encouraged them to ask when they encountered problems. I also reminded them that there was no computing work required for this week's tutorial.

Around 70 of them responded to my second email message. During my third email message, I thanked them for sharing their valuable experience and was very glad that most of them could open up and express their opinion, this was really important as we should be able to voice out how we felt, as this was the first step to overcome problems. International students had to face further challenges in adapting to a new culture of a foreign country.

I summed up the responses that I received concerning self-directed learning, generally it could be tough yet providing more challenge with independent and more responsibility and freedom. The reward for this usually resulted in better understanding and learning more. Nevertheless consistency in work was important. Generally students were positive about self-directed learning rather than rote learning system, nevertheless they found it difficult to adapt at the beginning. Most students responded had adapted quite well to the system. I further compared the education systems in eastern and western countries by stating that most secondary schools in Asia still exercise passive and rote learning, whereby students are told to memorize what is taught and there is little room for thinking, whereas most western schools pay more importance to self-expression, students are encouraged to develop their creative mind, which is important part of problem solving skill.

I summarized the responses that I received by stating that feedback from students who had adapted well to the university system showed that it is important to study smart by going through the lecture notes and tutorial exercises, to form study group and make new friends, seek lecturer's or tutor's help when encounter problems. One must establish support network so that one does not need to spend too much time on a certain subject/topic.

The other concern for their study was regarding time management. I suggested to them to put their priority right and work towards their goal. In a lot of time they have to sacrifice for what they want. I advised them to strike a balance between play and study. I reminded them regarding the various steps they had to follow for their first assignment and consulted me or the tutor if encountered difficulties. I did not request any responses from them unless they had something to share or would like to ask for help.

In the fourth email message, I reminded them for assignment due date, where to hand in the assignments and regarding this week's tutorial exercises. I also announced to them regarding a replacement class. I mentioned about the turnout for the lecture sessions which was so far had been very encouraging with around 90% and I would like to see those consistently did not turnout to make an effort to attend as there was no easy way out to just copy from friends and expect to do well in the course.

I stressed on for those who faced difficulties in English language that I could recommend them to the LLSU, whereby it will be able to diagnose their areas of weakness and tailor a program of activities to assist them. This week's progress report was not compulsory, only those were facing problems were encouraged to seek help so that some advice might be given to improve on.

In my fifth email I wanted to get their feedback on this form of communication. I told them that initially I wanted to email them for five weekly update only but now I will continue to keep up with them whenever was needed as the responses seemed very positive. Again I mentioned about what was expected for this week's tutorial. For those who could not make it for the replacement class because of a clash with other class, I would like them to ask questions if they found difficulty in understanding.

As to gauge the usefulness of this form of communication, I needed their responses on the following questions:

- (1) How do you like the idea of email group?
- (2) What are the benefits you get from this type of communication?
- (3) Do you feel that you have more opportunities to ask questions compare to other subjects?
- (4) Do you feel comfortable to express your opinion or ask questions when you have problems?
- (5) If you had asked questions, are the suggestions helpful to you?

Their responses on the above questions was greatly appreciated. About 30 of them responded to the questionnaires. Their general responses on the five questions are summarize below:

- (1) – good, interesting, fun, useful, practical, efficient, innovative, helpful, convenient, a few would still prefer face- to-face contact.
- (2) – update of course useful, lot of support, save time in class to get message through email, know each other 's problems from feedback from lecturer, know own weakness by discussing them, get advice from lecturer.
- (3) – most communicative and student- friendly subject, flexibility of location and time, definitely more opportunity.
- (4) – feel comfortable as encourage to express opinion, one-to-one conversation thus do not feel shy to ask, can't speak English well, feel more comfortable this way, quite embarrassing if opinions/problems are brought up in class.
- (5) – very helpful.

Discussion and Conclusion

From the outcomes of this project, I learnt that the introduction of this mean of communication by making some activities such as responding to a certain issue compulsory is effective in improving the direct interaction of student-teacher and indirect interaction of student-student. I found that the compulsory response on the first two emails was very critical for the direction of the following week's email messages. Only after feedback from students on certain issues that I could really relate to their problems and be able to suggest ways of overcoming them, at times I also modified my lecture notes to cater for their needs. I did not require them to respond to the next two email messages as I gathered from their feedback on the second email message that they had more or less adapted to the subject and there would not be much added information I could obtain. Thus there were only a few responses obtained when the activities were not meant to be compulsory. The weekly email on course updates and reminders gave students a better picture of their pace in learning, thus to help them plan better for their learning. The encouraging quotes given with the email served to motivate and guide the students in their study. There is really a need for this form of communication as time is limited during lectures, there is very little opportunity to interact with everyone. I would not have known their problems and find ways to overcome them if they do not interact with me in this way. It is feasible to set up as only the email group needs to be created. There is certainly time need to be invested to improve the communication process. Before utilizing this form of interaction, the number of times the students came forward to ask for help face-to-face was on average $\frac{1}{2}$ and now on average 1, i.e. around 100 enquiries so far, an increase of 100%. Before I rarely received any email from students asking questions regarding the subject, about 0.01 on average, now I have received on

average ½ , which translate to around 50 enquiries. A summary of end of semester’s results for the last four semesters is given in the table below:

	Mean	Standard Deviation	Number of Students Sat	Number of Students Passed	Pass Rate(%)
2000 semester 1	55.97	10.88	86	113	76
2000 semester 2	53.47	13.28	35	59	59
*2001 semester 1	47.58	12.08	19	43	44
2001 semester 2	71.85	14.23	91	98	93

Note that I did not take the class for the semester with an *. When statistical tests were conducted with previous semester’s results, the difference of pass rate was found to be statistical significance. I also noticed that the attendance rate of my classes in previous semesters of about 70% had increased to about 90%. This was the only semester where the passing rate of students here exceeded students from the other Monash campus teaching the same subject.

Further improvement which can be made for this form of communication is to create a discussion room to promote more direct student-student interaction for students who would like to interact with their peers to do so. Furthermore an introductory to computer skill will be conducted in the future in the first week of semester to bridge the gap for those in need. Overall this form of quality conversations does in fact play an important role to facilitate learning and teaching effectively.

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