

ELECTRONIC MESSAGE BOARDS TO ENHANCE STUDENT PARTICIPATION & LEARNING

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ABSTRACT

The use of electronic message boards as a means of increasing student participation and learning in a Principles of Marketing class is investigated in this exploratory study. Electronic message boards offer a means to foster a learner-focused approach in class. Preliminary findings suggest that students enjoy the process and find it helpful in facilitating learning. Furthermore, students who participated heavily in the process earned higher grades in the course.

INTRODUCTION

Instructors often find themselves challenged to develop and implement new approaches to increase student involvement in courses. This is particularly true in an environment of larger class sizes. The challenge of handling increased class sizes while offering a high-quality, interactive, "learner-centered" experience to students presents a dilemma that marketing educators have struggled with and are likely to continue to struggle with for some time.

While many would argue that there is no substitute for direct student-faculty contact, some have found that a liberal interpretation of "direct" may allow for contact even when faced with the challenge of rising student/faculty ratios. A technology such as electronic mail, for example, has increased faculty accessibility for most students. Furthermore, electronic mail has encouraged "direct" faculty contact from students who might never have visited or called a professor during office hours.

The use of technology in a classroom has benefits beyond its ability to increase faculty – student interaction. Technology can increase students' ability to talk to each other as well as the teacher hence providing

an increased opportunity to develop interpersonal skills. In an era where business schools have been accused of over-focusing on quantitative skills at the expense of interpersonal skills (Louis, 1990; O'Reilly, 1994), such opportunities seem particularly valuable. Additionally, even in a small class, students required to use tools such as e-mail and the internet are being forced to increase their comfort level with such technologies. While many instructors today correctly assume that their students are familiar with the myriad of technologies available, continued reinforcement through use has benefits. Furthermore, there are always a few students who do need to be introduced to technologies that many take for granted.

Is the use of technology the solution to enhancing student interpersonal, as well as technological skills, and reducing the challenge of keeping in contact with our growing number of students? While arguably not the only solution, it may well contribute to producing students and ultimately graduates who are skilled in these areas and who have had an education resplendent in contact with each other and with their faculty. The purpose of this paper is to explore the value of using technology, specifically internet message boards, to increase student participation and learning in a Principles of Marketing course.

BACKGROUND

In a 1987 study commissioned by the American Association of Higher Education, The Education Commission of the States, and The Johnson Foundation, Chickering and Gamson called for the creation of a learner-centered environment in higher education. The study suggested that classes in a learner-centered environment are developed around seven principles. The principles are:

- Encourage student-faculty contact.
- Encourage cooperation among students.
- Encourage active learning.
- Give prompt feedback.
- Emphasize time on task.
- Communicate high expectations.
- Respect diverse talents and ways of learning.

In a recent *Journal of Marketing Education* article, Gremler, Hoffman, Keaveney, and Wright (2000) interpret these principles in the following way.

- *Encourage student-faculty contact* – The most critical factor in keeping student motivated and involved. Contact both in and outside of class is very beneficial. Knowing a few faculty members helps students be more intellectually committed to their academic work and future goals.
- *Encourage cooperation among students* – Learning is most effective when it is a team effort—collaborative and social rather than competitive and isolated. Students can develop both listening and critical thinking skills when they share their ideas and listen to those of others.
- *Encourage active learning* – Students must actively experience the class material and make it a part of themselves. This does not occur when students simply listen to lectures, memorize information, and take objective exams. Students need to process what they are learning by writing or talking about it and relating it to their other academic and life experiences.
- *Give prompt feedback* – Students need timely, constructive feedback on what they are doing well and what they can improve. Class activities and assignments should provide ample opportunities for them to perform and receive suggestions for improvement.
- *Emphasize time on task* – There is no substitute for spending an appropriate amount of quality time learning course material. Students

need help with setting priorities and developing effective time management skills.

- *Communicate high expectations* – Expecting more from students will motivate them to do better work. Instructors should be clear about the course expectations, give prompt feedback, and reward good performance.
- *Respect diverse talents and ways of learning* – Students come to college with different learning styles. What works for one student may not be effective for another. Students need the opportunity to learn in diverse ways and to succeed in demonstrating their skills so they will be more receptive to learning skills that do not come as easily for them.

All seven of the principles that comprise a learner-centered classroom can be incorporated into a course through the use of electronic message boards. Electronic message boards allow individuals to post messages to a web site. Others then view these posted messages and may decide to reply to the original message or to post a new message. Hence, the process allows the participants to carry on “conversations” without the restriction of being in the same place at the same time. The message board facilitator (a course instructor in this case) posts questions or discussion issues to get the ball rolling. The facilitator may, in turn, reply to posted messages on the board. Credit may be given for participation.

This type of class participation offers a direct opportunity to address all seven principles described above as the basis of learning-centered education. It provides contact with faculty outside class; it allows students to share their ideas and listen to those of others; and it requires students to process what they are learning by writing/talking about it. Regular instructor replies to messages provide prompt feedback. Time spent on the message board is quality time spent on course material. Good performance is rewarded by credit for participation. Finally, the approach provides a unique way of learning which may better accommodate some students.

ELECTRONIC MESSAGE BOARD AS A PEDAGOGICAL TOOL

The electronic message board approach was used in a Principles of Marketing course with 50 students. There are a variety of such message board services available free on the internet. The specific one used in this application was *InsideTheWeb.com*. The class was randomly divided into two groups of 25 and each group was assigned a separate message board. Both boards carried the same questions and discussion issues. The smaller groups allowed for a manageable number of postings per board and a greater opportunity for the students in a "discussion group" to get to know each other.

The course met four days per week for three weeks (it was a condensed format summer offering). A new set of questions and discussion issues was posted each morning prior to class. Those questions and issues remained on the board until the following morning. Responses to the previous day's questions and issues were deleted when new questions and issues were posted. Students received participation credit for posting messages or for replying to the messages of others. Postings were counted for quantity and also evaluated for quality.

The board was also used as an electronic study group. On the day and evening prior to an exam, students were encouraged to consider the board a remote study group. Students posted sample essay and multiple-choice questions and invited their classmates to respond to them. Additionally, students posted messages asking each other for help in understanding different concepts.

RESEARCH QUESTIONS

This study is an exploratory research design. Because the efficacy of electronic message boards as a pedagogical tool was being investigated, though not formally tested, the outcome of this research is clearly exploratory. The following research questions, however, were investigated:

- Did students with higher levels of message board participation earn higher grades in the course?
- Did students with higher levels of message board participation in pre-exam study groups earn higher grades on the subsequent exams?
- Did students with higher levels of message board participation believe that the process contributed more to their learning in the course than students with lower levels?
- Did students who regularly read classmates messages believe that the process contributed more to their learning than students who did not read posted messages regularly?
- Was there a relationship between the level of on-line participation and the level of in-class participation?

DATA COLLECTION AND MEASURES

Information to address the research questions and provide additional feedback on the process was collected through a survey that was distributed on the last day of the course. The survey was distributed to 49 students. Forty-six responses were obtained (93.8%). The students were not required to put their names on the survey; however, it was possible to match students and their responses as they were submitted. This provided the opportunity to use student performance in the course and on individual exams as dependent variables.

Two measures of student participation were used. First, students were asked to estimate their level of participation on the message board. Second, the instructor kept a record of daily student participation throughout the term. Comparison of these two measures found that students overestimated their level of participation, as compared to the instructor's measure of participation. While the instructor's measure indicated that 2.2% of the students participated on a daily basis, 8.7% of the students estimated that they had participated daily. Furthermore, the instructor's measure of participation identified a mode level of participation of 4-6 times (over a ten day period), while the

students estimated their level of participation at 7-9 times. As a result of what is likely perceptual bias on the part of the students, the instructor's measure of participation level was used in all analyses reported.

RESULTS

Students who indicated that they did not participate daily were asked why this was the case (Table One). Their responses indicated that access to the internet was the primary deterrent to daily usage. Lack of time was also frequently cited. Given the compressed delivery mode of the course, lack of time is likely to have been a bigger deterrent for this group than it would be in a regular semester. Furthermore, the lack of time issue may have also exacerbated the access to the internet issue. Students have access to the internet on campus however may not have had the time to take advantage of this accessibility in a three-week class that met daily. This likelihood is supported by respondent comments such as the following,

"In a semester class I suppose it won't pose as much of a problem because students have more time and are at school more to use school resources."

"I had difficulty accessing the web so I was not able to participate as much, but if it were a regular semester and posts were left on for a few days there would be a greater chance of reaching the web through on-campus computers."

TABLE ONE

"If you participated less than every day, what was the primary reason that you didn't participate every day?"

Access to internet was difficult	46.3%
Lack of time	41.5%
Questions didn't always interest me	2.4%
Didn't find the process helpful	0.0%
Other*	9.8%

- Other responses appeared primarily to be versions of "Lack of Time"

Table Two illustrates that students generally did take the time to read the postings of others rather than just posting their own message in an attempt to obtain participation points.

TABLE TWO

"When you logged on to post a message, how often did you read the messages others had posted to the message board?"

Always	46.5%
Usually	34.9%
Sometimes	14.0%
Rarely	4.7%
Never	0.0%

Overall, students found the use of electronic message boards to be beneficial to their learning experience (see Table Three).

TABLE THREE

Student Evaluation of Electronic Message Boards

Item	Mean
How helpful to your personal understanding of the material and overall learning did you find the messages and replies to messages of other students?	3.82
How helpful to your personal understanding of the material and overall learning did you find the instructor's replies to the messages of students?	3.95
How helpful did you find the pre-exam night electronic study groups?	3.65

Scale was 1-5 with 1=Not helpful at all and 5=Extremely helpful

Student comments further support the finding that the message boards aided the learning experience.

"I think that the message board is a great idea. When people would give examples or answers to the questions it helped me understand the material in more ways than expected."

"This was a very good idea. It forced me to apply material and think of real-life examples and that's how I learn things best."

Students were also asked to assess the impact that the message board process had on their enjoyment of the course and the extent to which they believed the process added to their learning in the class. As shown below, students felt that the electronic discussions were a valuable addition to their learning experience.

What impact did the electronic discussions have on your enjoyment of the class?	4.08
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Scale was 1-5 with 1=Lessened a great deal and 5=Enhanced a great deal
 Student comments:

"I loved it and like to see other points of view."

"I feel that the message boards were a refreshing addition to class. It's not only another way to participate, but easy to do and something that we aren't monotonously doing in all our classes. It was fun."

Overall, how much do you believe the electronic discussions added to your learning in the class?	3.68
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Scale was 1-5 with 1=Not at all and 5=A great deal

In order to further explore the value of the electronic message board as a pedagogical tool, the relationships between student participation and performance and between student participation and student learning were assessed. As shown in Table Four, students' performance was measured by three components: final course grades, mid-term exam scores, and final exam scores. In all cases, students who participated more often by using the electronic message board performed better. It should be noted that since participation in the electronic discussions contributed only 10% to a student's overall grade in the course, it cannot be assumed that the higher level of participation in itself would explain the higher course grade.

Results as to the effect of students' message board participation on students'

learning were mixed. It was found that students perceive the message boards in general to contribute to their overall learning in the course; however, students did not feel that reading classmates' messages necessarily contributed to enhanced learning.

TABLE FOUR
 Effects of Student Participation Via
 Electronic Message Boards

	R ²	Correlation	Significance Level
Did students with higher levels of message board participation earn higher grades in the course?	.293	.541	<.000
Did students with higher levels of message board participation in pre-exam study groups earn higher mid-term exam grades?	.101	.317	<.05
Did students with higher levels of message board participation in pre-exam study groups earn higher final exam grades?	.134	.365	<.05
Did students with higher levels of	.072	.268	<.10

message board participation believe that the process contributed more to their learning in the course than students with lower levels?			
Did student who read classmates messages regularly believe that the process contributed more to their learning than students who did not read posted messages regularly?	.068	.260	>.10

The final research question asked if there was a relationship between the level of on-line participation and the level of in-class participation. In-class participation was measured by a daily, subjective assessment by the instructor. The correlation between the two was .315 ($p < .05$), supporting the finding that students who participate may tend to do so regardless of the means available to them.

LIMITATIONS

It is important to acknowledge the limitations of this research. First, as this is an exploratory investigation, the sample is

limited to one course section. In addition, the intensive nature of the course schedule (3 week, daily meetings) may have affected students' willingness and accessibility to participate. Further examination of the use of electronic message boards in traditional course terms (10-18 weeks), across a larger cross-section of students and among additional course types would enhance these findings.

CONCLUSIONS

Electronic message boards represent a way to increase the learner-centered focus of a course. Furthermore, based on this small, exploratory study, it appears that students enjoy them and perform better when they use them.

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