How Instructor Immediacy Behaviors Affect Student Satisfaction and Learning in Web-Based Courses

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In this study I investigated whether instructor classroom behaviors, called "immediacy behaviors," are significantly associated with student learning and satisfaction in Web-based MBA courses. Immediacy behaviors represent instructors' attempts to reduce the social distance between themselves and their students. While my study found that immediacy behaviors were positive predictors of student learning and course satisfaction, such other factors as student attitudes toward course software, the length of a course, and prior student and instructor experience with Web-based courses were also significant predictors. These findings suggest that both structural characteristics of MBA programs and instructor behavior merit attention for Web-based courses to successfully deliver graduate management education.

Keywords: Immediacy behaviors, Web-based courses

WHILE MOST US COLLEGES and universities now deliver at least some courses via the Internet (Clarke, 1999), the medium has also brought competition from corporations, prompting concern about a potential shakeout of providers of business education (Moore, 1997; Symonds, 2000). This potentially hostile future environment raises a fundamental question for business schools: Do faculty add value to education in the online environment, and if so, how? Some initial studies on virtual classroom characteristics suggest that time and place flexibility, patience with students adopting a new technology, and an emphasis on interaction increase student satisfaction with Web-based courses (Arbaugh, 2000a; 2000b; Berger, 1999; Dumont, 1996; Ellram & Easton, 1999; Harasim, 1990). But these characteristics are largely endemic to the medium, thereby making them easily replicable by

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both academic and non-academic institutions. By identifying and understanding ways in which faculty uniquely add value to the online education process, business schools could gain an advantage that can be leveraged against emerging corporate competitors and other business schools seeking to use the Internet to broaden their traditional service regions (Kedia & Harveston, 1998; Moore, 1997). This article reports findings from a six-semester study conducted at the University of Wisconsin Oshkosh to identify the added value of faculty in Web-based MBA courses.

"Virtual" Immediacy Behaviors

Educational communication scholars (Christophel, 1990; Gorham, 1988; Menzel & Carrell, 1999) have thoroughly studied immediacy behaviors and their relationship to student attitudes and learning in traditional classrooms. But only recently have researchers extended these findings to distance education. *Immediacy* refers to communication behaviors that reduce social and psychological distance between people (Mehrabian, 1971; Myers, Zhong, & Guan, 1998); it includes both nonverbal and verbal behaviors. In a classroom, nonverbal immediacy behaviors are those associated with physical conduct such as eye contact, smiling, movement (or lack thereof) around the classroom, and body position (Andersen, 1979; Richmond, Gorham, & McCroskey, 1987). Verbal immediacy focuses on speaking behaviors such as including personal examples, using humor, providing and inviting feedback, and addressing and being addressed by students by name (Gorham, 1988). Both nonverbal and verbal immediacy behaviors are associated with student motivation and learning (Christophel, 1990; Menzel & Carrell, 1999; Myers et al., 1998).

In distance education, researchers are finding that students have lower expectations concerning nonverbal behavior than in the traditional classroom (Frietas, Myers & Avtgis, 1998; Witt & Wheeless, 1999). Compressed video course delivery, which has less impact on immediacy behaviors, is indeed positively associated with student learning and satisfaction (Comeaux, 1995; Frietas et al., 1998; Hackman & Walker, 1990). This suggests that

immediacy behaviors could also be associated with student learning and satisfaction in Web-based courses. However, the question remains: how can an instructor demonstrate immediacy behaviors in a virtual environment? While some efforts have been made to develop full motion video for the Internet, technical difficulties keep it from being widespread, and thus the demonstration of nonverbal immediacy behaviors is severely limited. However, behaviors associated with verbal immediacy (Gorham, 1988; Mehrabian, 1967) are possible in the virtual environment. An instructor could still use humor, encourage discussion and feedback, or address students by name through the use of text-based "discussion," emoticons, and/or audio clips. Therefore, I focused on those items traditionally characterized as verbal immediacy behaviors for this study.

Method

To examine the effect of these behaviors on student satisfaction and learning, I surveyed 25 of the 28 Web-based class sections offered by the MBA program at the University of Wisconsin Oshkosh from Summer 1999 through Spring 2001. The class sections were taught by fourteen different instructors and were conducted using either Lotus LearningSpace or Blackboard course software packages. Students completed a questionnaire either in class or as an e-mail attachment. Any remaining non-responding students were sent a copy of the survey that they could complete at their convenience. The student response rate was 77.7 percent (390 of 502).

Alavi's (1994) six-item scale was used to measure student learning. To measure student satisfaction, I generated another instrument that asked about their perception of the course's quality and their likelihood of taking future courses via the Internet. A factor analysis produced two factors: (1) satisfaction with the delivery medium and (2) satisfaction with the course.

I measured immediacy behaviors using the fourteen items from Gorham's (1988) verbal immediacy scale. A factor analysis produced two factors: (1) "classroom" demeanor, which reflected the

instructor's use of personal examples, humor, and openness toward and encouragement of student ideas and discussion; and (2) name recognition, referring to the extent to which the instructor was addressed by name by students and vice versa.

The control variables I used in the study were student age, gender, number of international students, number of prior Web-based courses taken by a student, student attitude toward the delivery technology, class section size, number of prior Web-based courses taught by an instructor, the course's number of credit hours, and the use of audio clips. Student attitude toward the delivery technology was measured using a two-item scale adapted from Thompson, Higgins, and Howell's (1991) study. I also included a control variable that reflected the interaction between number of credits in a course and the number of prior courses taught by an instructor.

Results

The results of this study are summarized in Tables 1 and 2. The regressions show that both of the immediacy behaviors and student attitude toward the course software were significant predictors of student learning. Attitude toward the course software was also a significant predictor of satisfaction with the delivery medium, as were several other control variables. Prior student experience was positively associated with satisfaction with the delivery medium. While both prior instructor experience and number of course credits were negatively associated with delivery medium satisfaction, the interaction of these variables was positively associated with delivery medium satisfaction.

Both immediacy variables and student attitude toward the course software were also positively associated with course satisfaction. However, other control variables were also significant predictors of course satisfaction. While prior instructor experience was positively associated with course satisfaction, the interaction of instructor experience and course credits was negatively associated with course satisfaction. Prior student experience was also negatively associated with course satisfaction.

Table 1. Descriptive Statistics and Scale Reliabilities Among Study Variables (n = 390)

Variables	Mean	S.D.	Coefficient Alpha
1. Student Learning	5.24	1.29	.94
2. Satisfaction—Medium	4.60	1.64	.91
3. Satisfaction—Course	4.86	1.72	.92
4. Classroom Demeanor	4.91	1.65	.91
5. Name Recognition	5.32	1.69	.85
6. Student Age	31.73	6.19	NA
7. Student Gender	0.43	0.50	NA
8. International Students	0.05	0.21	NA
9. Prior Courses Taken	1.43	1.54	NA
10. Prior Courses Taught	2.24	2.96	NA
11. Class Section Size	22.31	5.13	NA
12. Attitude Toward Course Software	4.75	1.65	.91
13. Use of Audio Clips	0.45	0.50	NA

Student gender was dummy coded with male = 0, female = 1.

Discussion

These findings have several implications for business school faculty and MBA programs.

They support earlier studies that appropriate immediacy behaviors enhance student learning and course satisfaction (Comeaux, 1995; Frietas et al., 1998; Gorham, 1988; Menzel & Carrell, 1999). This suggests that findings related to the construct of immediacy behaviors may be generalizable to online courses (Arbaugh, 2000b). While generating questions for class discussion is important, instructors who rely merely upon asking students questions to generate interaction will be severely disappointed. Instructors can influence student interaction by providing personal examples of the class material, demonstrating a sense of humor about the course material and/or the Web-based course experience, and inviting students to seek feedback from them and from each other.

Although some researchers see online learning as a detached and impersonal learning environment (Flaherty, Pearce & Rubin,

Table 2. Results of Hierarchical Regression Analyses on Student Learning and Satisfaction (n = 390)

	Student Learning		Satisfaction—Delivery Medium		Satisfaction—Course	
Variables	M 1	M 2	M 1	M 2	M 1	M 2
Age	.00	–.00	.00	–.00	.00	–.00
Gender	–.03	–.06	.11	.11	–.07	–.11
International Students	–.05	.03	–.25	–.26	.12	.21
No. of Prior Internet Courses Taken	.03	.02	.13***	.13***	–.05	–.07**
No. of Prior Internet Courses Taught	.03	.04	–.12*	–.12*	.09	.09+
Class Size	–.00	.01	.01	.01*	.00	–.01
Use of Audio Clips	.59***	.16	.09	.12	.51***	.13
Attitude Toward Course Software	.12***	.07**	.26***	.26***	.15***	.10***
No. of Course Credits	–.08	–.07	–.14+	–.14+	.02	.02
No. of Internet Courses	–.02	–.02	.06**	.06**	–.04+	–.05+
Instructor Demeanor		.40***		–.02		.52***
Name Recognition		.31***		–.04		.29***
F	6.15***	16.35***	14.49***	12.09***	5.54***	21.17***
D.F.	10,379	12,377	10,379	12,377	10,379	12,377
Adj. R-square	0.14?	0.34?	0.28?	0.28?	0.13?	0.40?
Change in R-squared		0.15***		0.00		0.14***

Note. Standardized regression coefficients reported.
+p < .1. *p <.05. **p <.01. ***p <.001.

1998; Noble, 1998), this study seems to indicate the opposite. The online learning environment can in fact reduce the traditional social distance between instructor and student (Ahearn, Peck, & Laycock, 1992; Berger, 1999; Brandon & Hollingshead, 1999; Chidamabaram, 1996) because the online environment may be more dependent upon the collective effort of all class participants rather than primarily the instructor to assure a successful course (Bailey & Cotlar, 1994; Leidner & Jarvenpaa, 1995). By engaging in such behaviors as asking the class how things are going in the course and encouraging people to talk about non-course related issues, the instructor may well be setting the stage for a more collective classroom effort. The fact that instructor online experience was not a predictor of learning also suggests that not only are immediacy behaviors more directly transferable from traditional classroom practice to Web-based courses than first thought, but they may be even more critical than technological acumen in predicting success in online. This implies that given reasonable technical support, those instructors who have strong classroom skills may be more effective online instructors than those more technologically savvy faculty who are not as strong in the classroom.

At first examination, the negative relationship between delivery medium satisfaction and both instructor experience and number of course credits combined with a positive relationship between delivery medium satisfaction and the interaction seems rather puzzling. However, there are some reasonable explanations for this finding. Newer online instructors may not have the command of the delivery medium that more experienced instructors have, and longer courses may make that inexperience more apparent. The negative relationship between course credits and medium satisfaction may also reflect a burnout factor often associated with online courses (Berger, 1999; Ellram & Easton, 1999; Hiltz & Wellman, 1997). Conversely, experienced online instructors may have a much greater command of the delivery medium than do many students, thereby placing some students in the position of feeling as though they are having to catch up to the

instructor's technological expertise in addition to mastering the course material. This feeling may well be exacerbated by comparatively short course durations. This explanation is further supported by the fact that increased student experience with online courses is positively associated with delivery medium satisfaction. However, increased instructor experience with online courses may be valuable in that the instructor could be refining already existing online course material rather than posting it for the first time during the course and/or have more thorough knowledge of how to pace a class over a longer time period.

The fact that instructor experience and immediacy behaviors were both positively associated with course satisfaction suggests that more experienced online instructors either learn or bring from their classroom experience the importance of immediacy behaviors in the online setting. This may explain in part the negative relationship between student experience and course satisfaction. More experienced students have likely been exposed to a greater variety of instructors (both good and bad) and will therefore have higher expectations of their instructors. For them, the novelty effect of Internet-based courses has likely worn off (Gibson & Gibson, 1995) and as a result they may be less tolerant of bad course experiences regardless of instructor experience level.

However, in spite of the benefits of instructor experience in online courses, the interaction of course length and instructor experience was negatively associated with course satisfaction. There are several possible explanations for this finding. First, eighty percent of the full semester courses in the study were required courses, whereas nearly seventy percent of the half semester courses were either foundation (pre-core) courses or electives. Typically, students will be more satisfied with a course they choose to take than one they are required to take. Second, this relationship may also suggest the possibility of the previously mentioned burnout factor for Web-based courses. Lastly, there could have been course-specific factors that reduced student satisfaction such as interest in the course topic or material, classroom dynamics, or interpersonal conflicts.

This study had several limitations that should be mentioned. It was conducted at a single institution; that institution has a relatively small international student population; students there also take courses on site. Thus, these findings may not be widely generalizable. Also, the study extended over six semesters; that may have created a maturation effect for both students and instructors. This could be a reason why prior student experience was a significant predictor of satisfaction with the delivery medium. However, this concern was considered a trade-off for increasing the sample size, and thereby the statistical power, of the study. Lastly, since there were no classroom-based control groups, it can't be said with certainty that these findings are unique to the Web-based environment. These limitations should certainly be addressed in future studies.

Recommendations

These findings lead to three recommendations for faculty and business school administrators who seek to develop effective Web-based courses. One concerns faculty experience. Students may react negatively when MBA faculty gain online course experience at differing rates. Those who have less experience than their students may frustrate them by seeming to be disorganized and lacking in online classroom skills. Those who have more experience than their students may overwhelm them with technological sophistication or advanced online pedagogies. Thus neither of the approaches common today for developing an online MBA program—requiring most or all faculty to teach online or entrusting online course development to one or two early adopters—may be effective. Instead, MBA programs may wish to develop a cadre of faculty from several disciplines who will be committed to teaching Web-based courses for an extended period of time so that they might be able to both learn and share their knowledge with each other at a similar pace.

Second, the significance of student attitudes toward course software suggest that an instructor's skill and experience in conducting Web-based courses could go for naught if students don't like the course software package. This suggests that business schools

seeking to develop online degree programs should not immediately commit to a single software package, but rather experiment with at least two and maybe several. Instructors should be consistently asking for student feedback about what they like and dislike about particular packages, and the business school should not be afraid of using this feedback to adopt a different software package that may better suit instructor and student needs.

Third, developers need to take steps to overcome burnout (Dumont, 1996; Dyrud, 2000; Taylor, 1996; Hiltz & Wellman, 1997). As noted, this can be caused by the volume of electronic communication among class participants, disparity of online experience between the instructor and students, course duration, and the expectations of required vs. elective courses. Earlier, I discussed ways to overcome disparity in experience. To address problems with course duration, school may chuck course materials into smaller modules for delivery online. One approach is the creation of a separate online MBA program like Ohio University's "MBA Without Boundaries" program. Another approach is for faculty to run courses using compressed schedules, thereby reducing the likelihood that a course merely drags on. Faculty could also incorporate a "mid-course break" to help students and the instructor recover from the volume of messages they receive and then return refreshed for the remainder of the course. Instructors may also wish to control message volume by limiting the number of comments a student can make to a single discussion, or by closing discussion topics once a certain number of quality comments have been posted. This could provide sufficient incentive for students to resist the temptation to "pile on" comments in order to meet course participation requirements.

To address the problem of student resistance to required courses, business schools could increase the number of elective credits in their MBA programs. They could also provide some flexibility by identifying a group of required courses from which students could choose to take a predetermined number. The cadre approach to online MBA program development could yield great benefits here. By learning about teaching online courses at a simi-

lar pace, instructors could work with each other to minimize the pedagogical and non-content related aspects of these courses. While students will probably always prefer elective courses, schools can take steps to minimize the satisfaction gap between them and required courses.

Implications for the Future of Web-based MBA Courses

This study suggests some interesting directions for future research on Web-based delivery of MBA courses. Immediacy behaviors in the online environment certainly merit additional attention. In the near future, the immediacy construct may be broadened to include nonverbal behaviors for Web-based courses as full motion/streaming video becomes more technologically feasible. The multi-dimensionality of immediacy behaviors found in this study could serve as a starting point for re-examining the verbal immediacy construct. Previous studies of verbal immediacy have tended to view it as a one-dimensional construct (Frietas et al., 1998; Gorham, 1988; Myers et al. 1998). Given recent concerns about the validity of Gorham's (1988) verbal immediacy scale (Robinson & Richmond, 1995) further study of the dimensionality of the construct appears to be warranted.

The emerging virtual environment for management education presents great opportunity and risk. New students, new pedagogies and technological enhancements, and the blurring traditional competitive barriers certainly promise an exciting time for all involved. The findings of this study suggest that to be successful in delivering Web-based graduate courses and programs, business schools will need to provide skilled, experienced instructors and use delivery software platforms that elicit a positive reaction from students. If they do this, rather than running depersonalized, commercialized classes (Dyrud, 2000; Noble, 1998), Web-based courses can be an environment where engaged, active learning takes place.

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