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Send out your light and your truth! Let them guide me. Psalm 43:3

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Perceptions of Immediacy, Cohesiveness, and Learning in Online Courses

Despite the stereotype of distance education delivering easy degrees to gullible individuals who provide an institution with easy money, there are numerous genuine benefits to distance education. The biggest benefit to the student is that distance education removes traditional barriers to learning – namely geography and time. Without distance opportunities, students must either relocate to an institution that offers a particular program or they must settle for whatever programs are available at their local institution. Distance makes it possible for students to take classes from anywhere, opening up the possibility of pursuing an otherwise unattainable degree or supplementing traditional learning with individual courses not available locally. Furthermore, distance education offers students the flexibility to learn when it's convenient. The typical 6pm – 9pm graduate class doesn't work for everyone and is often most unreachable for those who could benefit the most. However, distance education lets a student to fit learning around his or her schedule. Such programs enable students to take classes or work on a degree without sacrificing job or family commitments.

It appears that a critical misperception regarding learning is the belief that communication conducted in the online classroom isn't significantly relational (which is one reason that some Christians reject online learning outright). In particular, the relationship between the instructor and learner and the cohesiveness among classmates are questioned. Therefore, a study of online graduate students was conducted to examine the perceptions of instructor immediacy, student group cohesiveness, and affective and cognitive learning.

One hundred forty five students enrolled in online graduate courses, with approximately half representing from Christian college and seminary students, completed an online survey based on their most recent course experience. The results revealed that instructor immediacy

was significantly correlated with affective and cognitive learning while student cohesiveness demonstrated significant curvilinear relationships with affective learning and immediacy. In the overall causal model, however, instructor immediacy was the singular predictor of affective and cognitive learning and reinforce the influential role of the instructor in the online learning experience.

Methodology

Students enrolled in online graduate courses completed a survey during the final month of their coursework developed from the following instruments: the Gorham (1988) verbal immediacy scale, the Bollen and Hoyle (1990) perceived cohesion scale, McCroskey, Richmond, Plax and Kearney's (1985) affective learning scale, and Richmond, Gorham, and McCroskey's (1987) cognitive learning scale. Students were asked to provide answers based on their experiences in their currently enrolled course.

Mehrabian (1967) defined immediacy as the extent to which selected communicative behaviors enhance physical or psychological closeness in interpersonal communication. To view immediacy in a framework more appropriate to this study, immediacy is understood as "those communication behaviors that reduce perceived distance between people" (Thweatt & McCroskey, 1996, p. 198). Although the immediacy construct consists of both verbal and nonverbal components, the lack of consistent nonverbal cues in a textual asynchronous learning environment hinder the traditional measure of nonverbal immediacy. Verbal immediacy measures, however, aren't as dependent upon accepted face-to-face nonverbal cues. A typical item in the Gorham (1988) verbal immediacy scale reads, "Uses person examples or talks about experiences she/he has had outside of class" (p. 44). Such items translate well to online

communication. In addition, the textual nature of much online instructional communication often results in verbal techniques to be used in lieu of nonverbal cues.

Group cohesiveness is a measure of the sense of belonging that individuals have toward others in a group. A cohesive group is, “one that ‘sticks together’—one whose members are ‘bonded’ to one another and the group as a whole” (Mudrack, 1989, p. 39). Unlike some group cohesiveness approaches, Bollen and Hoyle (1990) proposed measuring the perceived cohesion of individuals, rather than a group rating based on the combination of such results into a collective whole. Since this study attempts to correlate individual perceptions of immediacy and cohesion with individual affective and cognitive learning, rather than examining total class performance, this understanding of cohesiveness is a better conceptual match with the objectives of the study.

McCroskey, Richmond, Plax, and Kearney (1985) defined affective learning as “positive attitudes toward the course, its content and the instructor as well as increased likelihood of engaging in behaviors taught in the class and taking additional classes in the subject matter” (p. 218). They used four, seven-step bipolar scales—good/bad, worthless/valuable, fair/unfair, positive/negative—to measure student attitudes toward the course content, recommended behaviors, and the instructor. Similarly, they used four, seven-step bipolar scales—likely/unlikely, impossible/possible, probable/improbable, would/would not—to measure behavioral intention through inquiries about the likelihood of the student to engage in the behaviors recommended in the course and to enroll in a course of related content. The total affective score was computed by summing the scores on the five scales.

The Richmond, Gorham, and McCroskey (1987) cognitive learning scale is predicated upon the assumption that a subjective measure of cognitive learning is as valid as an objective

one. They stated that college students are in a position to accurately comment on their cognitive learning, independent of any affect for the course. “Although a student may generate positive or negative affect for a course for many reasons, one very important basis for a student’s affective response is whether or not the student perceives he or she ‘got anything out of the course’” (p. 581). They argued that student perceptions of cognitive learning were at least as valid as the subjective grades provided by instructors or course examinations that lack clear behavioral objectives. Therefore, they developed a measure of “learning loss.” Students were asked to measure, on a scale of 0-9, how much they learned in the class and how much they could have learned with an ideal instructor. The difference between their ideal and actual learning was classified as learning loss, with smaller numbers indicating greater learning. Learning loss is conceptualized such that it can be employed across disciplines and class types and is therefore a good fit for a study such as this.

Results

The data analyzed for this study were drawn from 145 uniquely completed surveys submitted online. One hundred and fifty surveys were submitted electronically; but 3 responses were duplicates and 2 were empty, so they were removed before beginning the analysis. Demographically, the respondents were fairly evenly divided with 52% female and 47% male (1% didn’t specify gender). Of 16 possible course subjects, 9 were selected with education being the most common (32%), followed by other (19%) and business/economics (15%). When asked about this course in comparison to other online courses, 39% indicated that it was more enjoyable than others, 16% said that it was less enjoyable, and 22% indicated that this was their first online course.

Immediacy, Cohesiveness, and Learning

The guiding research question is the relationship between instructor immediacy, student cohesiveness, cognitive learning, and affective learning as perceived by online learners. Simple correlation analysis will provide initial insight into these relationships. Table 1 presents the results of a Pearson correlation matrix for the four variables.

Table 1

Pearson Correlations of Immediacy, Cohesiveness, Cognitive and Affective Learning

	Immediacy	Cohesiveness	Affective Learning	Cognitive Learning
Immediacy	1.00*			
Cohesiveness	.03*	1.00*		
Affective Learning	.73*	.12*	1.00*	
Cognitive Learning	.54*	.04*	.64*	1.00*

* Correlation is significant at the 0.01 level

Based on the Pearson correlation coefficients, the strongest relationship is between instructor immediacy and affective learning ($r=.73, p<.01$). The second strongest instructional relationship is between instructor immediacy and cognitive learning ($r=.54, p<.01$) while affective and cognitive learning are in the middle with $r(143)=.64, p<.01$. Student cohesiveness was not significantly correlated with any of the other three variables.

Although a positive linear correlation was not found with student cohesiveness, the complexity of the cohesiveness influence suggests that a curvilinear relationship should also be considered. Therefore, such relationship was first examined between cohesiveness and community with the resulting regression analysis revealing a significant relationship with $F(140)=3.40, p<.05$. The resulting predictive quadratic equation based on these data is:

$$\text{Cohesiveness} = 1.58(\text{Immediacy}) - .02(\text{Immediacy})^2 - 4.30$$

The second order quadratic produces a shallow inverted U-shaped curve where cohesiveness initially increases with immediacy and then turns downward at a sufficiently high level of instructor immediacy. The correlation coefficient for this model is .21 with a corresponding R^2 of .05, meaning that 5% of the variance in cohesiveness can be explained by instructor immediacy.

A curvilinear relationship was also considered between student cohesiveness and perceived learning. The curvilinear regression analysis between cohesiveness and affective revealed a significant relationship with $F(125)=5.03$, $p<.01$ and a correlation value of .27. The resulting curve was a shallow U-shape with a predictive second order quadratic equation of:

$$\text{Affective Learning} = 164.71 - 1.49(\text{Cohesiveness}) + .03(\text{Cohesiveness})^2$$

The R^2 for this model is .07, meaning that 7% of the variance in affective learning can be explained by perceived student cohesiveness. When curvilinear regression analysis was conducted between cohesiveness and cognitive learning, however, the results were not found to be significant with $F(126)=.90$, $p=.41$.

More interesting than linear or curvilinear bivariate relationships is the question of whether there's a causal relationship among the four variables. In other words, can a model be developed which accounts for the interaction between instructor immediacy, student cohesiveness, cognitive learning, and affective learning? Based on the previous results, it is anticipated that instructor immediacy will exert greater influence than student cohesiveness on both affective and cognitive learning.

To examine the overall relationships, multiple regression analysis was first performed that considered the linear effects of immediacy and the curvilinear effects of cohesiveness (i.e., the independent variables were immediacy, cohesiveness, and cohesiveness squared). The

overall regression model was found to be significant with $F(3,124)=49.43$, $p<.01$. According to the multiple regression analysis, however, neither of the two cohesiveness variables had a meaningful effect size compared to immediacy, regardless of entry order. Therefore, the practical resulting regression equation would be:

$$\text{Affective Learning} = 79.92 + .71(\text{Immediacy})$$

In other words, based on these data, instructor immediacy is the sole significant predictor of affective learning. Fifty five percent of the variation in student affective learning can be predicted on the basis of instructor immediacy.

Similarly, multiple regression analysis involving immediacy, cohesiveness, and cognitive learning was conducted. The overall regression model was significant with $F(3,125)=16.92$, $p<.01$. As with the previous regression analysis, however, neither cohesiveness nor cohesiveness² had significant effect size compared to immediacy, therefore the resulting practical regression equation was:

$$\text{Cognitive Learning} = 4.71 + .54(\text{Immediacy})$$

In other words, based on these data, instructor immediacy is also the sole significant predictor of cognitive learning. Since $R^2 = .29$, 29% of the variation in perceived cognitive learning can be predicted on the basis of instructor immediacy.

In seeking a casual model, a path analysis was conducted. The correlations calculated previously cast doubt on any path diagram involving student cohesiveness. Although curvilinear relationships were found between student cohesiveness and affective learning, as well as immediacy and cohesiveness, it has already been seen that student cohesiveness failed to demonstrate significant influence when considered alongside immediacy in a regression analysis.

Regardless, a path analysis was run on a four-variable model, and the results were fraught with problems. The hypothesized path analysis was unsupported by the data.

Since cohesiveness failed to correlate with any of the other variables under consideration, a modified path structure without the cohesiveness variable was then examined. After multiple iterations of path analysis, the best fit was a path structure reflecting instructor immediacy to affective learning to cognitive learning, rather than immediacy independently affecting each of the learning dimensions, as seen in Figure 1.

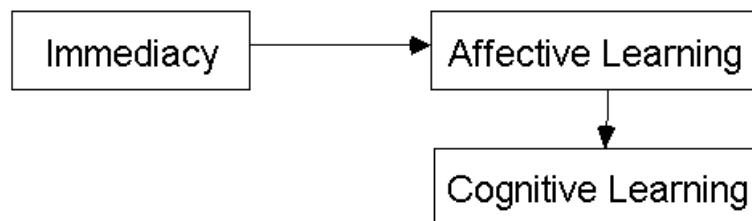


Figure 1. Immediacy and Learning Path Analysis

This path analysis is limited to significant coefficients and demonstrates viable results in the various goodness-of-fit calculations (e.g., χ^2 , adjusted goodness-of-fit index, Tucker-Lewis Index). The R^2 values were low enough to suggest that other variables play a significant role in determining affective and cognitive learning and must be considered when developing a more complete path construct, but this resulting model fits within the theoretical and observed constructs.

Associated Variables

Three additional areas of observation are worth notation—potential differences in results based on gender, potential differences based on course enjoyment, and the responses to the open-ended question.

A one-way analysis of variance was calculated to see whether any of the four variables under consideration differed based on the gender of the student. With the exception of perceived cohesion where $F(2,141)=4.44$, $p<.05$, instructor immediacy, affective learning, and cognitive learning scores didn't differ based on gender.

One hundred thirty-eight of the survey participants completed the optional enjoyment question. Thirty-nine percent responded that this course was more enjoyable than other online courses they had taken, 16% said that it was less enjoyable, and 22% indicated that this was their first online course. One-way analysis of variance was obtained to determine whether immediacy, cohesiveness, affective learning, or cognitive learning differed based on student comparative enjoyment of the class. Instructor immediacy, affective learning, and cognitive learning scores differed depending on whether the student enjoyed the class more, less, or the same as other online courses or if this was their first online course. Perceived cohesion was the only variable that didn't differ based on these categories.

Ninety students submitted responses to the open-ended question, "What made this course more or less enjoyable or effective than other online courses you've taken in the past?" Roughly half of the comments made mention of the instructor, approximately one-third of the comments referred to the course subject, content, or structure, and one-fifth of the comments referred to other students in the class.

Implications

The primary implication drawn from the results of this study is that the instructor significantly influences the online learning process. Although there are those that stereotype online learning as a high-tech correspondence course with little interaction between the instructor and learner, the results of this study can be used to argue that the instructor is singularly

important to the effectiveness of the online learning experience. This has value for those instructors teaching online courses since it validates the significance of their role in the online learning process.

Building upon the foundation of previous instructional communication studies, the results of this study can serve as a reminder that instructors should seek ways to exhibit immediacy-producing behaviors. The mediated nature of online courses doesn't prevent instructors from prosocial communication although such efforts may take longer to produce results than similar face-to-face behaviors. Even so, such efforts may be foreign to many within higher education. After all, there are traditional instructors who show up for class, deliver their lecture to a sea of note-taking students, and then leave. Unlike traditional courses where students often deal with a nonimmediate instructor within a campus environment, online students are often geographically isolated from the academic community. The burden on the instructor to use immediacy behaviors to promote a collegial environment is thus even greater in the online classroom.

This researcher's experience has been that many of the same dynamics used to develop immediacy in the traditional classroom can effectively serve the same function when teaching at a distance. For example, the use of humor, self-disclosing comments, and inclusive words such as "we" can increase a student's sense of immediacy. The results of both the quantitative analysis and the open-ended responses indicate that students appreciate those efforts which help to improve the quality and effectiveness of the learning experience. As one of the study participants said, "The professor in this class was flexible, understanding and positive. It was a difficult course but it was bearable since she was positive and offered relevant feedback."

The implications of the student cohesiveness aspect of this study are less clear. Based on the analysis and background theories, it would be inappropriate to declare that student

cohesiveness has little bearing on the overall learning experience, at least in comparison to instructor immediacy. Rather the relationship appears to be more complex than simply a strong linear or curvilinear one and therefore additional moderating factors should be considered in both theory and practice. Learning styles, student motivation, commitment to task, group norms, preparedness, expectations, communication apprehension, and time on task are all variables that could have significant moderating influences on the effects of cohesiveness. Furthermore, the social expectations of distance learners should be considered when examining cohesiveness. Since many online learners may already have established social networks, they may not be interested in cohesiveness-building efforts, and might consider them counterproductive to the learning process.

Based on the results of this study, it would be an inappropriate pedagogical strategy to incorporate cohesiveness-building exercises into the online course in the hope of significantly improving affective and cognitive learning. It is possible, and even likely according to the practitioner literature, that learning effectiveness would indeed increase due to a strong learning community being developed. However, this study suggests that instructors consider cohesiveness within a larger pedagogical framework and develop instructional strategies accordingly. Although it sounds cliché, every student is different. To presume that one particular instructional strategy would affect every student the same way is at best naïve and at worst harmful.

In contrast to a one-style-fits-all approach, educational psychology research has found that field-dependent learners prefer social, interpersonal, cooperative learning experiences while field-independent learners prefer individualistic, impersonal, lecture-style courses (Jonassen & Grabowski, 1993, p. 88). The interesting tension concerning cognitive styles is that an early

study in the discipline found that distance education programs are generally suited for field-independent learners (Thompson, 1984); however, much of the current practitioner literature in online education argues for an instructional style that fits the biases of field-dependent learners. The shift from independent study correspondence courses to interactive online learning demonstrates that courses can be designed for either type of student, although both remain present in online learning.

With the aforementioned caveats noted, a starter list of instructional strategies can be developed based on the significance of verbal immediacy-producing behaviors that were found to be singularly influential in the online learning process. Accordingly, effective online instructors:

- Share personal experiences with students
- Encourage students to freely participate in the course
- Promote collective ownership of the course
- Provide constructive feedback on student work
- Demonstrate a personal interest in each student

In short, the more that instructors incorporate relationally-supportive language in the online classroom, the more that students will enjoy and benefit from the online learning experience. Such interactions are not difficult to create, but faculty should take the initiative. After all, while most learners and instructors have had years of experience in the face-to-face classroom, few have had comparable online experience. Therefore, the primary responsibility for creating a relationally rich learning environment falls on the instructor.

Conclusion

This study served to validate and confirm the application of selected traditional instructional strategies to the online classroom. The emergence of the online instructor as the singular predictor of student affective and cognitive learning was a significant finding. Such a finding, while being somewhat of an outlier from much of the classroom community literature, affirms the significant role played by teachers in the educational process consistent with the admonitions found in Scripture. As James 3:1 says, “Not many of you should presume to be teachers, my brothers, because you know that we who teach will be judged more strictly.”

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