



Investigating Relationships among Elements of Interaction, Presence, and Student Learning in a Graduate Online Course

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INTRODUCTION

Purpose of this Study

- Explore the elements students perceive to be most important to their learning in an online course
- The results will help determine the elements that need to be maximized to ensure significant learning experiences in the online course.

Theoretical Framework

Distance education theories:

1. Transactional Distance (Moore, 1993;2007; Moore & Kearsley, 1996)
 - Online learning is most effective when the perceived pedagogical distance between the instructor and students in the course is minimized with increased interaction
 - Three types of interaction:
 - Learner-instructor interaction - The two-way communication between the learner and the instructor for content clarification, student feedback and to minimize the impact of distance between the learner and the instructor.
 - Learner-learner Interaction - The two-way communication between or among learners via e-mail, phone, group discussions, or chats for collaboration or clarification.
 - Learner-content interaction - Interaction the student has with the subject matter by way of the course content, learning activities, assignments, and web links.
2. Community of Inquiry (Garrison, Anderson, & Archer, 2000).
 - The degree of presence in the online learning environment. Presence is vital to student success in online courses (Yuen, Deng, & Fox, 2009).
 - Three types of presence :
 - Social presence -To increase learners' sense of community in the online environment
 - Cognitive presence -To enable learners to construct meaning from the online experience
 - Teaching presence -To increase learner perception of the instructor's ability to provide structure and direction in the online environment

Methods

- A survey research design-Likert scale and open-ended survey items developed based on the literature
- Data analyzed using Excel and Statistical Package for Social Sciences (SPSS)- Descriptive/correlation/Regression Analyses
- Student responses to the open-ended questions were analyzed for themes.

RESULTS

- 96 percent of the students indicated the online learning approach was important to their learning
- 88 percent rated their overall experience in the course as being good to excellent.
- Student ratings suggest Learner-Instructor Interaction (Table 1) and Teaching Presence (Table 2) are most important to learning.
- The results show correlation values among the elements of interaction and presence are positive and mostly moderate to strong in magnitude; students who rated their learning experience higher also tended to rate the elements of interaction and presence consistently higher (Table 3)
- Predictors with the most influence on learning are Teaching Presence, followed by Learner-instructor interaction, and Social Presence (Table 4)

Strategies for Improvement

- More face time with the instructor for questions and understanding. More details about how to find things on ReggieNet for first time users.
- Consider one or two actual class sessions to increase teaching presence and Learner-Instructor Interactions

Table 1. Student Ratings and Means for Elements of Interaction

Area of Interaction	Percent Ratings			Mean	SD
	Most Essential	Somewhat Essential	Least Essential		
Learner-Instructor	53%	29%	18%	3.64	.58
Learner-Learner	35%	29%	36%	3.42	.50
Learner-Content	53%	18%	29%	3.53	.54
Overall				3.53	.37

Table 2. Student Ratings and Means for Elements of Presence

Area of Interaction	Percent Ratings			Mean	SD
	Most Essential	Somewhat Essential	Least Essential		
Social Presence	35%	29%	36%	3.37	.57
Cognitive Presence	47%	24%	29%	3.37	.66
Teaching Presence	59%	29%	12%	3.55	.56
Overall				3.45	.46

Table 3. Intercorrelations of Elements of Interaction and Presence

Elements	Learner-Instructor	Learner-Learner	Learner-Content	Social Presence	Cognitive Presence	Teaching Presence
Learner-Instructor	-					
Learner-Learner	.74	-				
Learner-Content	.80	.71	-			
Social Presence	.80	.90	.74	-		
Cognitive Presence	.81	.79	.88	.81	-	
Teaching Presence	.88	.70	.97	.75	.87	-
Learning Experience	.77	.64	.58	.70	.70	.77

Table 4. Beta Coefficients for Interaction and Presence Elements

Elements	β
Learner_Instructor_Interaction	2.04**
Learner_Learner_Interaction	.19
Learner_Content_Interaction	.22
Social_Presence	.69*
Cognitive_Presence	.49
Teaching_Presence	2.06**

*p<0.05, **p<0.01

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