

# Community of Inquiry: The Role of Time

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## AGENDA

- Research Question
- Theoretical Background
- Methodology
- Results
- Discussion
- Conclusion

## RESEARCH QUESTIONS

- The purpose of this study was to explore the dynamics of an online educational experience through the lens of the Community of Inquiry (CoI) framework.
- More specifically, the goal was to understand the internal dynamics of the presences as well as the progression and integration of each of the constituting elements (social, cognitive and teaching presence).
- The relationships among the three CoI presences and student perceived learning and satisfaction were also explored.

## BACKGROUND

- Recent studies emphasize the importance of community as a key factor in successful online/blended learning.
- Sense of community is found significantly associated with perceived learning (Rovai, 2002; Ertmer & Stepich, 2004; Shea, 2006; Shea, Li, & Pickett, 2006).
- Community of Inquiry Framework provides a well structured guideline to create an effective community by a meaningful combination of social, cognitive and teaching presence

# BACKGROUND

- Why time?

“Community grows; it is not made or given”

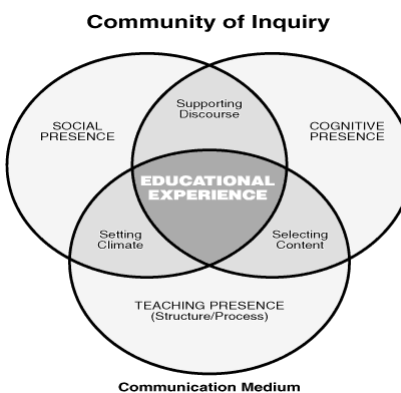
(Conrad, 2005)

Time is an important variable to understand how community of inquiry develops and progress in a certain learning environment

(Garrison, Cleveland-Innes, 2004)

## Community of Inquiry Framework

**Social Presence**  
The ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities.



**Cognitive Presence**  
The extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry.

**Teaching Presence**  
The design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes.

## Internal Dynamics

- With the exception of cognitive presence, the internal dynamics of the presences have not been explicitly addressed or explored.
- The dynamics among the three presences have not been explored either.

### Col Categories/Indicators

ELEMENTS	CATEGORIES	INDICATORS (examples only)
<b>Social Presence</b>	Open Communication Group Cohesion Personal/Affective	Learning climate/risk-free expression Group identity/collaboration Self projection/expressing emotions
<b>Cognitive Presence</b>	Triggering Event Exploration Integration Resolution	Sense of puzzlement Information exchange Connecting ideas Applying new ideas
<b>Teaching Presence</b>	Design & Organization Facilitating Discourse Direct Instruction	Setting curriculum & methods Shaping constructive exchange Focusing and resolving issues

## Among the Presences

- What is the relationship between teaching presence and cognitive presence as students progress through their course of studies?
- Similarly, what is the relationship between social presence and cognitive presence as students move through the phases of inquiry?
- And finally, what effect does each of the presences have on perceived learning and satisfaction?

## METHODOLOGY

- Online graduate course with 16 students
- Asynchronous (Blackboard) and synchronous (Elluminate) formats
- Nine weeks of discussion divided into three week segments
- Transcript analysis was used to investigate how elements of the community of inquiry changes over time
- Transcript analysis was applied in order to code and explore posting patterns of social presence, teaching presence and cognitive presence based on category indicators
- The CoI survey instrument was administered at the end of the class to assess the relationships among the three CoI presences and student perceived learning and satisfaction

# RESULTS

## ■ Internal dynamics

### ■ Social Presence

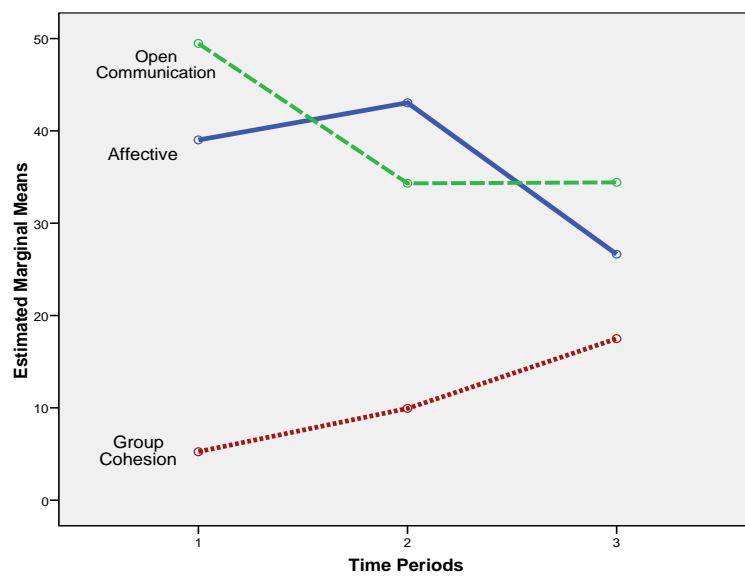
- Decrease in affective communication
- Increase in Group cohesion

### ■ Teaching Presence

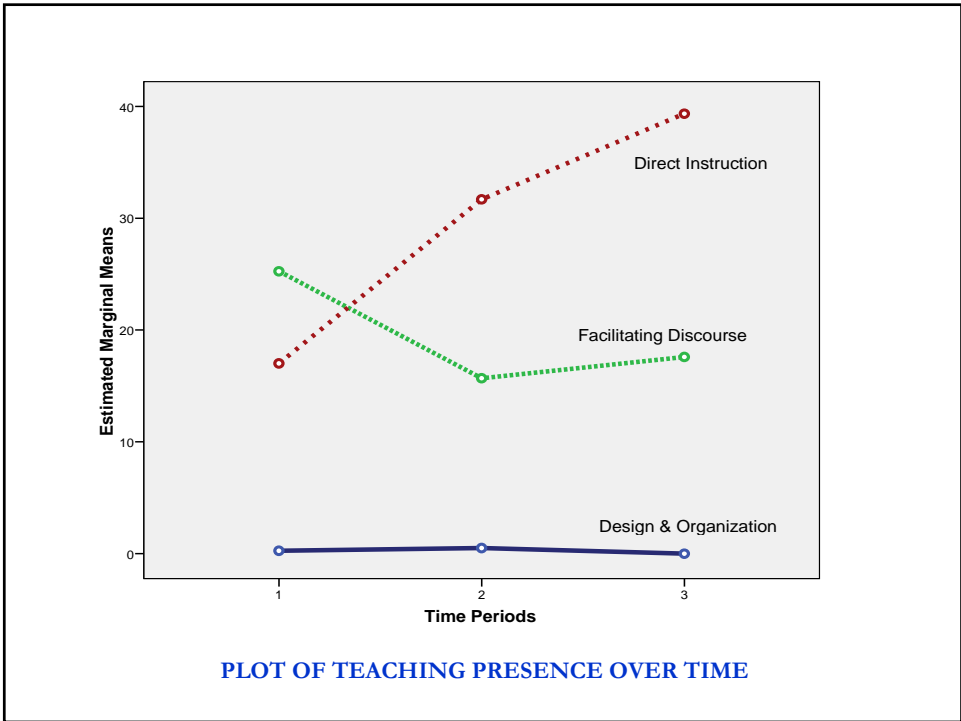
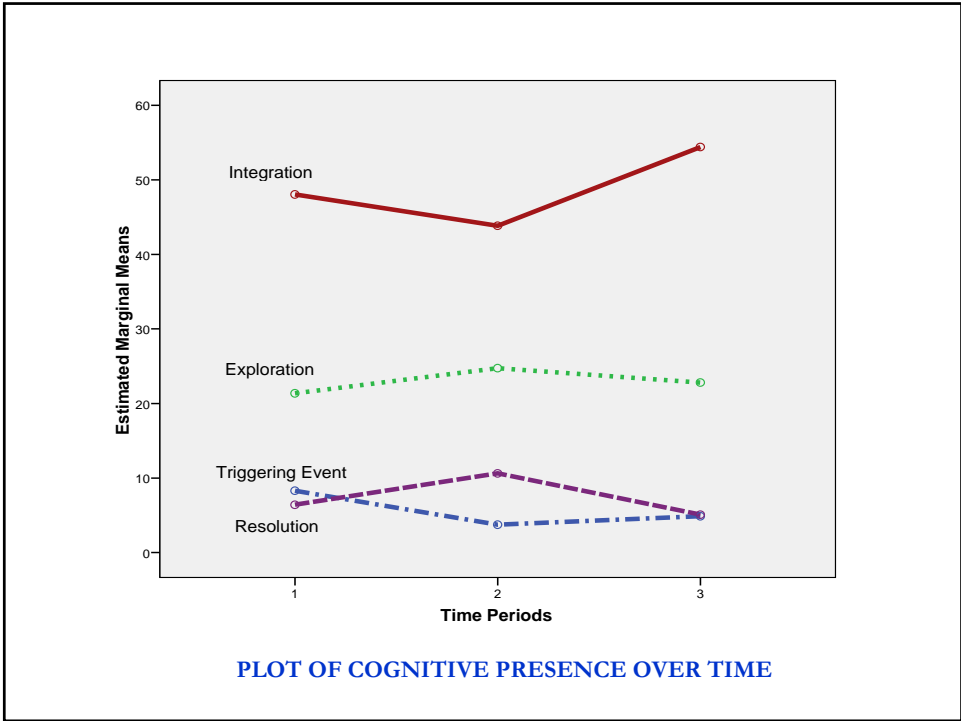
- Increase in Direct Instruction

### ■ Cognitive Presence

- No significant change over time

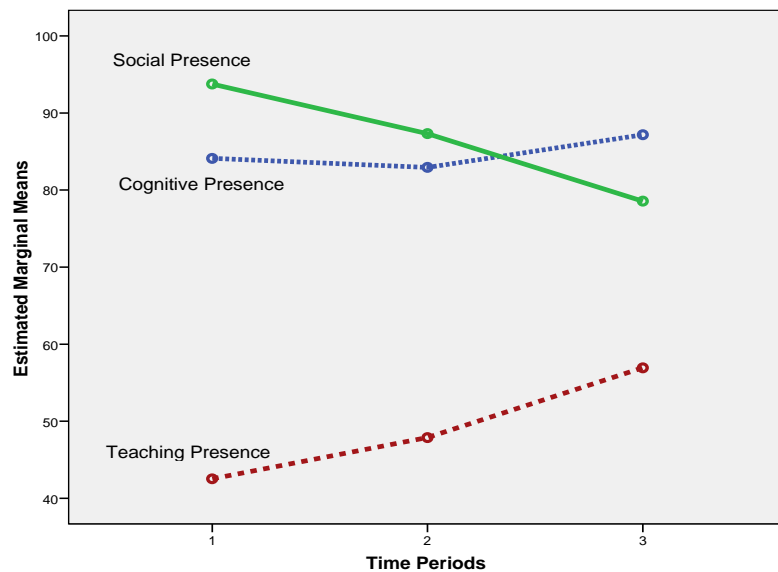


PLOT OF SOCIAL PRESENCE OVER TIME



# The Three Presences

- The dynamics among the three presences
  - The Community of Inquiry developed in the online course is found more stable than its elements over time.
  - Not significant but slightly decrease on Social Presence and increase on Cognitive Presence and Teaching Presence.



**PLOT OF ELEMENTS OF CoI OVER TIME**



## Presence Relationships

		Correlations				
		Teaching Presence	Social Presence	Cognitive Presence	I learned much in this course	Overall, I was satisfied with this course
Teaching Presence	Correlation Coefficient		.182	.779**	.548*	.634*
	Sig. (2-tailed)		.517	.001	.034	.011
Social Presence	Correlation Coefficient	.182		.490	.463	.539*
	Sig. (2-tailed)	.517		.064	.082	.038
Cognitive Presence	Correlation Coefficient	.779**	.490		.666**	.650**
	Sig. (2-tailed)	.001	.064		.007	.009
I learned much in this course	Correlation Coefficient	.548*	.463	.666**		.504
	Sig. (2-tailed)	.034	.082	.007		.055
Overall, I was satisfied with this course	Correlation Coefficient	.634*	.539*	.650**	.504	
	Sig. (2-tailed)	.011	.038	.009	.055	

\*\* . Correlation is significant at the 0.01 level (2-tailed).  
 \* . Correlation is significant at the 0.05 level (2-tailed).

## Survey Analysis

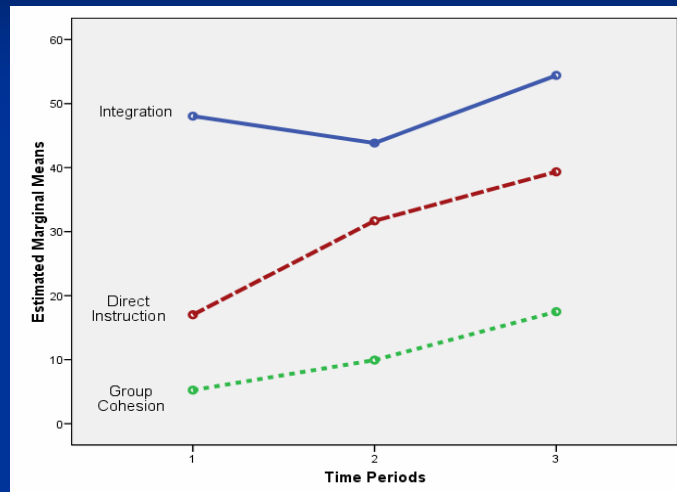
- The students agreed that they learned much in this course (M=4.21) and that they were satisfied with the course overall (M=4.42)

## DISCUSSION

- Affective expression and cohesion?
- Productive collaboration is dependent upon identity with a group and its purposes and less on individuals?
- Why were there no statistically significant changes in the frequencies of the four phases of practical inquiry (i.e., cognitive presence)?
- Why did direct instruction contributions rise over the three time segments?

- Although not significant, why did the scatter plot show a continual decrease in social presence and a continual increase on teaching presence?
- Why was there not a significant relationship between social presence and perceived learning?
- Why was there a corresponding rise of three particular categories in each of the three presences – group cohesion, integration and direct instruction.

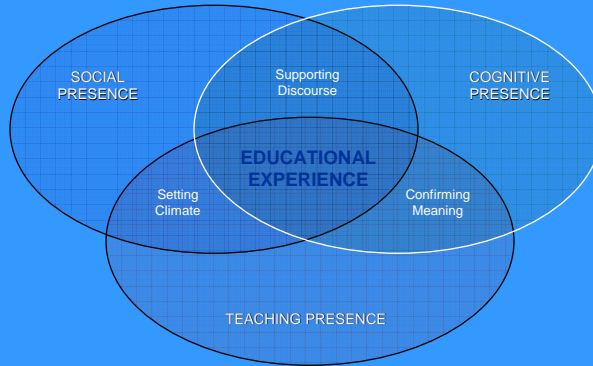
## DISCUSSION



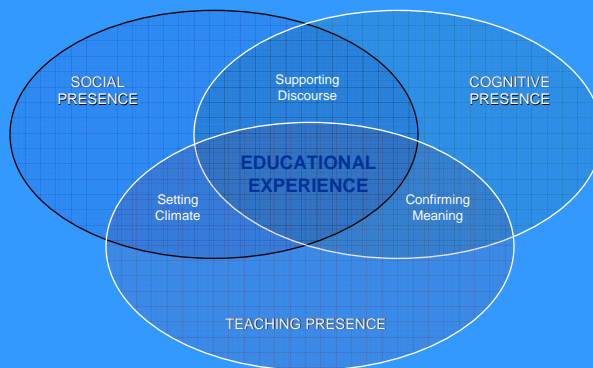
## CONCLUSION

- Only when we have a good understanding of the developmental progression of the presences and each of their categories will we be able to optimally integrate these elements in creating and sustaining a collaborative community of inquiry.

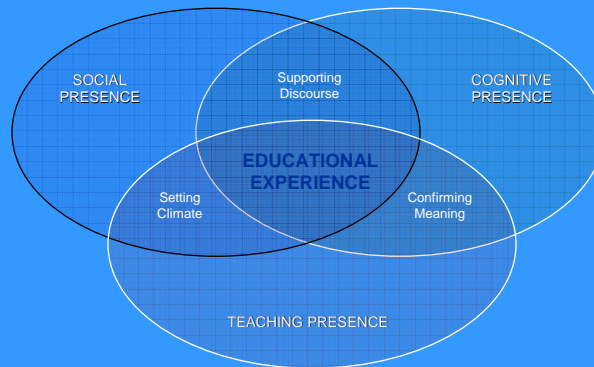
## Beginning of Course



## Middle of Course



## End of Course



## Rogers and Lea (2005)

- If the intended result of social presence is to confer on the group greater capacity to communicate and collaborate, then the group will work more productively to the extent that group members identify with the group, ... [p. 153]