

Community of Inquiry in Online and Blended Learning Environments

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AGENDA

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

RESEARCH QUESTIONS

- The purpose of this study was to explore how Community of Inquiry (CoI) framework develops in an online and blended course context.
- More specifically, the aim is to illuminate the differences on teaching, social and cognitive presence posting patterns and student perceptions between online and blended course contexts?
- The relationships among the three CoI presences and student perceived learning and satisfaction were also explored in both learning environments

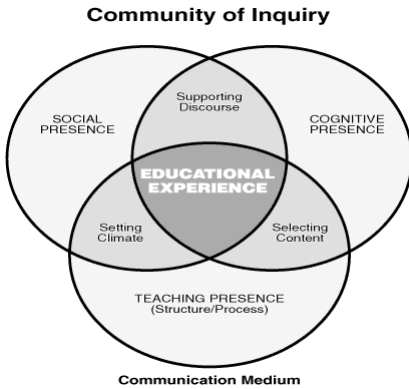
BACKGROUND

- ***Online Learning*** is a method of learning delivered by using asynchronous and synchronous communication technologies.
- ***Blended learning*** is the thoughtful fusion of face-to-face and online learning experiences to enhance engagement and extend access to internet-based learning opportunities (Garrison and Vaughan, 2008).

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.

CoI Categories/Indicators

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

COURSE CONTEXT

- Graduate educational technology course in blended learning – 12 week semester
 - Course objectives
 - investigating the nature of blended learning
 - examining how face-to-face and online environments can be integrated to support deep approaches to learning
 - discussing course redesign principles for blended learning
 - developing course redesign scenarios
 - Course assignments
 - peer reviewed article critique
 - student moderated online discussion and wiki summary
 - course redesign prototype project

METHODOLOGY

Online Course	Blended Course
Asynchronous (Blackboard) Synchronous (Elluminate) formats	Asynchronous (Blackboard) Synchronous (Elluminate) formats Weekly Face-to-Face meetings
Nine weeks of discussion	Nine weeks of discussion
16 Students (Mosly from different cities and states)	12 Students (All in Calgary)

METHODOLOGY

- Sources of Data
 - Transcript Analysis of Weekly Discussion with Negotiated Approach
 - Community of Inquiry Survey

RESULTS

- Participation Rates

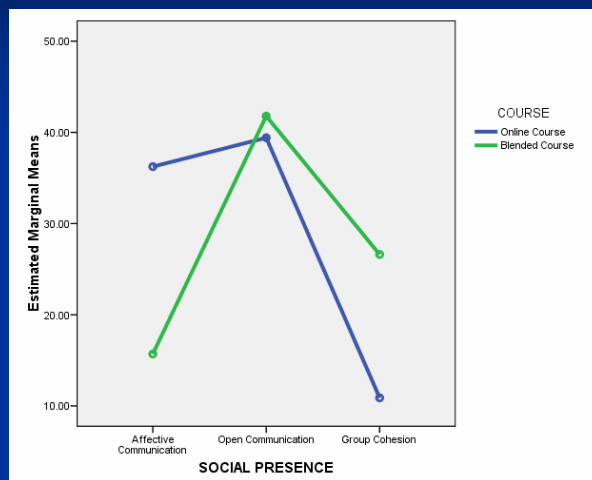
	Number of Students	Attendance Rate	Average # of postings per week	Average # of postings per student
Online Course	16	92	63	4.3
Blended Course	12	98	49	4.1

Posting Patterns of CoI Elements

■ Social Presence

Social Presence	First 3 weeks of Discussion		Second 3 weeks of discussion		Last 3 weeks of discussion		TOTAL	
	Online (%)	Blended (%)	Online (%)	Blended (%)	Online (%)	Blended (%)	Online (%)	Blended (%)
Affective	34	17	39	14	25	6	33	12
Open Communication	58	36	43	49	43	38	48	41
Group Cohesion	7	23	16	22	20	28	14	24
No category detected	0	25	4	16	12	29	5	23

Statistical Differences



$p = .000$

Difference on

AF $p = .001$

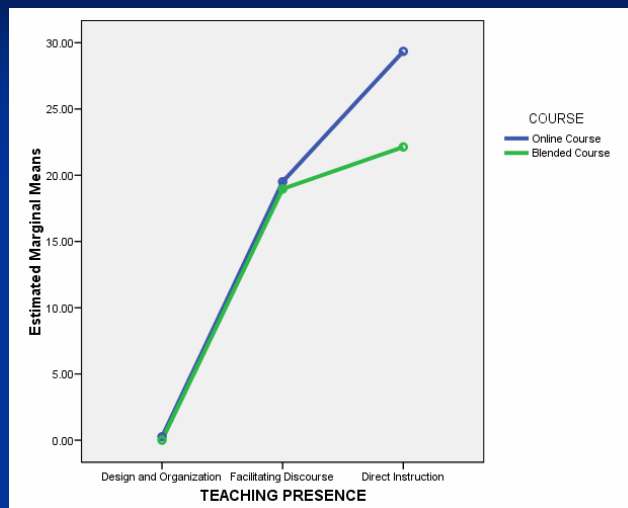
GC $p = .001$

Posting Patterns of CoI Elements

■ Teaching Presence

Teaching Presence	First 3 weeks of Discussion		Second 3 weeks of discussion		Last 3 weeks of discussion		TOTAL	
	Online (%)	Blended (%)	Online (%)	Blended (%)	Online (%)	Blended (%)	Online (%)	Blended (%)
Design and Organization	1	0	1	0	0	0	1	0
Facilitating Discourse	28	18	23	23	25	23	25	21
Direct Instruction	19	19	33	24	38	21	30	21
No category detected	53	63	44	53	38	56	45	57

Statistical Differences



$p = .390$

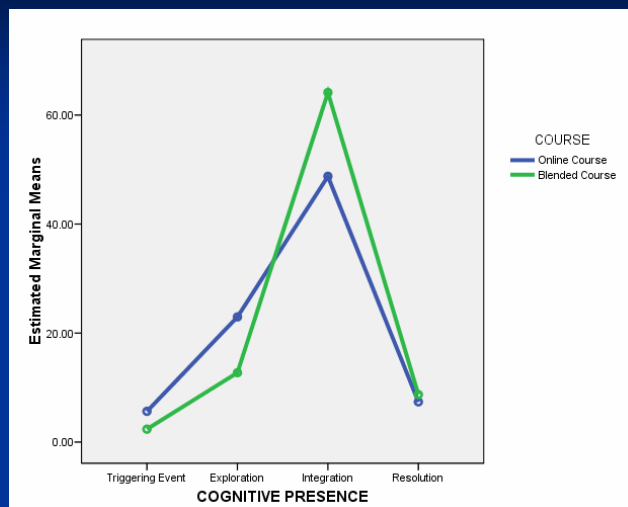
No statistical difference

Posting Patterns of CoI Elements

■ Cognitive Presence

Cognitive Presence	First 3 weeks of Discussion		Second 3 weeks of discussion		Last 3 weeks of discussion		TOTAL	
	Online (%)	Blended (%)	Online (%)	Blended (%)	Online (%)	Blended (%)	Online (%)	Blended (%)
Triggering Event	15	3	7	5	8	5	10	4
Exploration	18	20	30	16	27	10	25	18
Integration	47	69	45	43	52	57	48	56
Resolution	7	8	10	8	6	4	7	8
No category detected	14	26	9	28	8	23	10	27

Statistical Differences



p=.000

Difference on

EX p=.000

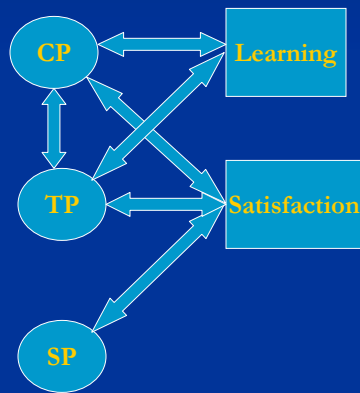
INT p=.000

CoI Survey Results

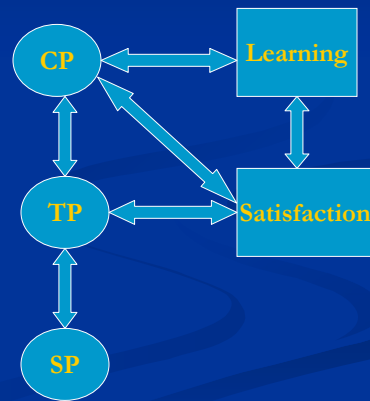
	Teaching Presence	Social Presence	Cognitive Presence	Perceived Learning	Satisfaction
Online Course	4.15	3.94	4.07	4.2	4.47
Blended Course	4.51	4.3	4.31	4.58	4.75
Significance	$p=.043$	$p=.090$	$p=.209$	$p=.154$	$p=.207$

Significant Correlations

Online Course



Blended Course



DISCUSSION

- Why is there a difference on Affective Communication and Group Cohesion?
- Although not statistically different – why are there fewer Direct Instruction responses in the blended course?
- Conversely, why is Integration responses higher in Blended Course?

DISCUSSION

- What is the impact of Cognitive Presence on learning and satisfaction in online and blended educational environments?
- Why does Teaching Presence have no apparent impact on learning in a blended environment?
- Why does Social Presence have no apparent impact on learning and satisfaction in a blended environment?

CONCLUSION

- Course Design is an important factor influencing the development and integration of the elements of the Community of Inquiry framework.
- Cognitive Presence is the most stable element of the Community of Inquiry framework, regardless of course design. It is also the key element for learning and satisfaction.
- The blended format increases the perceptions of presences, satisfaction and learning.

THANK YOU 😊