ATHABASCA UNIVERSITY

SOCIAL PRESENCE IMPACTING COGNITIVE LEARNING OF ADULTS IN

DISTANCE EDUCATION (DE)

By

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE

DEGREE OF MASTER OF DISTANCE EDUCATION

CENTRE FOR DISTANCE EDUCATION

ATHABASCA, ALBERTA

APRIL 2011

Approval of Master's Thesis

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In partial fulfillment of the requirements for the degree of

Masters of Distance Education

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Dedication

This thesis is dedicated to my late brother, David Lane. He was always supportive and encouraging to me throughout my education and life. I also dedicate this thesis to my loving parents, Mom, Teresa Lane and Dad, Matthew Lane. To my Mom for her unfailing patience and loving support she has given to me throughout my life. To my Dad for his love to encourage me to pursue higher education.

Acknowledgements

Abstract

This study examines evidence that supports the assertion of social presence (sp) theory impacting the community of inquiry for cognitive learning in distance education (DE). This study tested the validity of social presence assertions with respect to developing deep meaningful learning (dml) from the perspective of students engaged in distance education Master's studies. This study employed a convenient sample of students enrolled at the graduate level; due to limited participation generalizations cannot be made to any population. The mixed method study involved both a quantitative online survey with 36 questions and qualitative follow-up telephone interviews conducted with 4 participants. A target population of 290 participants was obtained resulting in 25 returned surveys.   Findings concluded no significant relationship exists between social presence and deep meaningful learning, cognitive learning and building a community of inquiry for deep meaningful learning. Findings strongly suggest social presence acts as a hindrance to deep meaningful learning. The results of the study justify further investigation and future studies are strongly recommended.

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Chapter I - Introduction

Part I

This study examines and explores the claims that support the assertion of social presence theory impacting the community of inquiry as a central model for cognitive learning of adults in distance education (DE) which facilitates an outcome of deep meaningful learning. The use of the term cognitive learning and cognitive presence in this study relates to an element within the community of inquiry model as identified by Garrison, Anderson, and Archer (2000). They argue the "community of inquiry assumes that learning occurs within the community through the interaction of three core elements…cognitive presence, social presence, and teaching presence" (p. 88). Cognitive learning is based on active mental processes to construct meaning, explore ideas and develop and understand concepts. Within this study, the process of cognitive learning is a mental "triggering event" (Garrison et al., 2000, p. 88) for cognitive presence as learners become actively engaged within a community of inquiry. They postulate "the element in this model that is most basic to success in higher education is cognitive presence…extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication" (p. 89). They argue the community of inquiry (made possible through electronic media conferencing) involving learning transactions between teachers and learners is an environment which can cultivate cognitive presence leading to the cultivation of deep meaningful learning through sustained social presence. Cognitive presence occurs in the very essence of a community of inquiry as participants interact in a sustained manner as

they construct meaning, explore and discover ideas and develop critical thinking. The aspect of critical thinking relates to deep meaningful learning. Valid to this study is the notion of the sustained interaction of participants (learners and teachers) which is achieved by social presence.

Garrison et al. (2000) define social presence as:

The ability of participants in the community of inquiry to project their personal characterics into the community, thereby presenting themselves to the other participants as 'real people'. The primary importance of this element is its function as a support for cognitive presence indirectly facilitating the process of critical thinking carried on by the community of learners" (p. 89).

This emerging paradigm is transforming the view of adult education. The purpose of this study is to test the validity of social presence assertions with respect to developing deep meaningful learning from the perspective of students engaged in distance education Master's studies. This was a study which employed a convenient sample of students enrolled at the graduate level; due to limited participation generalizations cannot be made to any population.

The study investigates existing epistemology to understand the definition and application of social presence to determine validity and impact on deep meaningful learning. Deep meaningful learning is associated with mental processes to stimulate understanding such as observation, analysis and discovery through questions. Students learn in an active rather than passive mode by breaking down components of the theory

to enhance the active steps in cognitive learning and develop a deeper understanding. The study seeks to understand whether empirical studies have been conducted to validate adoption of social learning theory for adult distance education. What type of research has been conducted in relation to post-graduate learning? Are the results of these studies adequate to support the assertion that social presence can impact active mental processes in cognitive learning facilitate deep meaningful learning?

Part II. The problem

A. Rationale, significance, or need for the study.

This study discovers the purpose of social presence as a comprehensive set of guiding principles for adult education. The rationale for preparing this research is primarily based on a need to understand how the idea of social presence (a term which is frequently used in distance education) could contribute to deep meaningful learning. It seeks to understand, investigate and challenge assertions derived from empirical studies as determining factors for social presence theory creating a cognitive learning experience which leads to development of deep meaningful learning. An emerging paradigm in the early 1990s reveals a transformation in roles of the teacher and learner. As discovered by Scott, Spencer, and Thomas (1998), "educators must shift their focus from teaching content to responding to the individual's learning process…Learners, too, must shift their positions from consumers of knowledge to producers of information and knowledge (Barchechath, 1988; Lesourne, 1988; Rose, 1996, as cited in Scott et al., 1998)" (p. 69). This study provides the opportunity to discover how social presence applies to a distance Master's program where physical presence is non-existent except through means of

synchronous chat or video conference. Scott et al. (1998) argue "DE calls for recognition by adult educators of the possibilities for dialogical, social learning now offered by new technologies" (p. 352). In addition, as a single element how does social presence contribute to mental behavioural learning processes (construct meaning and critical thinking) in cognitive learning in order to facilitate deep meaningful learning outcomes? How can a student depend on social interaction to construct logical formation of ideas found in cognitive learning to facilitate deep meaningful learning? This study challenges the concept rooted in arguments made by Garrison, Anderson, and Archer (2000):

> As cognitive presence is in an educational transaction, individuals must feel comfortable in relating to each other. Cognitive presence by itself is not sufficient to sustain a critical community of learners. Such an educational community is nurtured within the broader social-emotional environment of the communicative transaction. We hypothesize that high levels of social presence with accompanying high degrees of commitment and participation are necessary for the development of higher-order thinking skills and collaborative work. (p.94)

To build on the existing research, the foundation of the study is also related to the work by Rourke, Anderson, Garrison, and Archer (1999).

B. Theoretical Framework for the proposed Study

To understand and explore this form of inquiry, the researcher engaged in a critical review of social presence theory to verify what, if any, support exists as a guiding principle to developing learning experiences in adult education. Over decades many

theories evolved for adult learning in a distance education (DE) setting. Rhode (2009) discovered "the higher education establishment has recognized the value of interaction as new distance education programs emerge that embrace a socially constructed paradigm and foster various levels and types of interaction (Brown & Long, 2006, as cited in Rhode, 2009)" (p. 2). One aspect of self-directed learning, social presence, was postulated as a potential solution. In an effort to support cognitive learning for adult learners a growing consensus exists among many educators that social presence stimulates deep meaningful learning. Aragon (2003) found social presence theory is regarded as having benefits for learning within the online environment. Aragon (2003) indicates "it is important to acknowledge the fact that recent thinking views social presence as one variable among many that contributes to building a sense of community among learners at a distance" (p. 57). Aragon (2003) further discovered research conducted by:

> Hackman and Walker (1990) reporting a positive relationship between social
> presence and degree of perceived learning outcome as well as satisfaction...a body
> of literature is beginning to grow that suggests an influence on learning outcomes
> as well. Therefore, it is important for course designers, instructors, and
> participants to know how to create this social connection. (p. 61)

This study challenges this interpretation as minimal empirical support exists for this assertion. In fact, studies conducted by Osman and Herring (2007), Maurino (2006) and Wheeler (2007), indicate no significant relationship exists between social presence and cognitive presence in order to foster deep meaningful learning. Further detail of these studies is provided in chapter two of the literature review.

In preparing this study, one difficulty existed in locating a clear definition of social presence. Rourke et al. (1999) postulated:

> Social presence as the ability of learners to project themselves socially and affectively/emotionally into a community of inquiry…The function of this element is to support the cognitive and affective objectives of learning. Social presence supports cognitive objectives through its ability to instigate, sustain, and support critical thinking in a community of learners. (pp. 1, 52)

For the study a redefined term by Garrison, Anderson, and Archer (2000) was more specific and formed the basis of the survey design and overall study analysis:

> Social presence is the ability of participants in the community of inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as 'real people.' The primary importance of this element is its function as a support for cognitive presence. (p. 89)

Therefore the essential objective of a community of inquiry is to facilitate deep meaningful learning relating to problem solving and development of reasoning. Garrison et al. (2000) reviewed Lipman (1991) who describes "a community of inquiry as a valuable, if not necessary, context for an educational experience if critical thinking is to be facilitated and deep learning is to be an outcome" (p.91). It involves recognizing and understanding abstract relationships among theories. Some critical skills include the ability to compare, analyze, interpret and develop creative and innovative thoughts. It deemphasizes memory skills and emphasizes active understanding. It relates to active not passive learning. Maurino (2006) suggests "social presence and interaction can be a vehicle for the development of critical thinking skills and deep learning" (p. 2). Maurino

(2006) also found that social presence "involves discussion which can support reflection, constructions and critical thinking, creative problem exploration and idea generation" (p. 11).

Educators have responded to these interpretations and paradigm shift by constructing learning models, most notably the community of inquiry model (Garrison et al., 2000, p. 88) as shown in figure 1. The premise of this model dictates intertwined elements to initiate successful learning experiences. These include: social presence, supportive discourse, cognitive presence, setting climate, selecting content and teacher presence. The model works in a circular movement where all elements need to be present to develop learning.
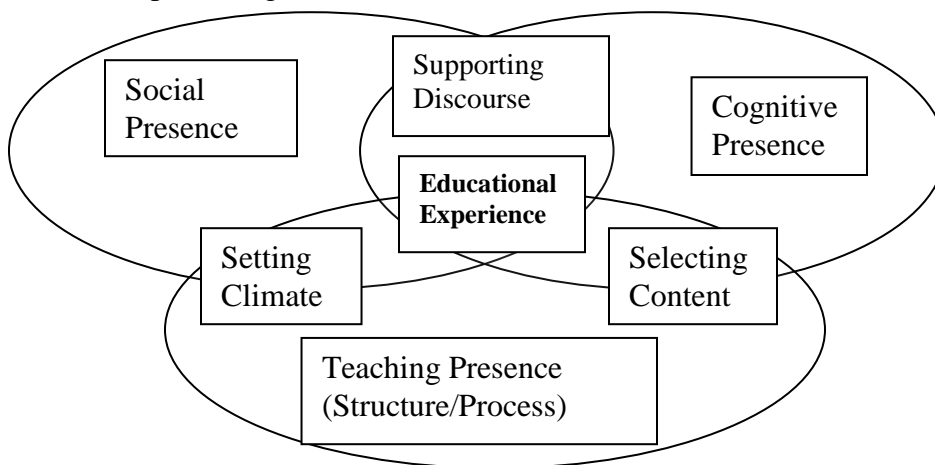
Figure 1. Rourke et al. (1999), reviewed the community of inquiry model in its development stages (Garrison, Anderson, and Archer, 2000. Unpublished manuscript) promoted social presence and continuous active learning by designing modules with interactive group discussions, use of open ended questions to motivate learners, initiate group assignments and incentives for students to support each other by building relationships. The model, later published by Garrison et al. (2000), has become a widely

sourced model for studies.   This interpretation one of many was the foundation of this

study. The decision was therefore to use the researchers' definitions of social presence

and deep meaningful learning based on the work in 2000 by Garrison, Anderson, and

Archer as they represent a central component within a community of inquiry to activate

and secure learning independency.

This was further explored by Rhode (2009) who:

> Found participants also maintained that the flexibility and independence
>
> characteristics of self-paced learning opportunities supplanted the need for certain
>
> types of interaction. They were willing to forgo interaction with one another to
>
> preserve the flexibility of their self-paced studies. Social presence acts as a
>
> conduit to cognitive learning and represents a nurturing security for adult learners.
>
> (p. 13)

Garrison et al. (2000) explain social presence as the "ability of learners to project

themselves as 'real people' socially and emotionally in a community of inquiry" (p. 8).

Garrison et al. reinforce the definition of social presence "as emotional expression, open

communication (risk-free expression) and group cohesion (encouraging collaboration)"

(p. 16). This definition formed the basis of the study. On this premise, does distance

education (DE) need to rely on social presence within its community of inquiry to ensure

learner knowledge acquisition or is DE being misrepresented by this theory?

C. Statement of the problem

This study examines and explores the claims that support the assertion of social

presence theory impacting the community of inquiry as a central model to enhance

cognitive learning of adults in DE which fosters deep meaningful learning. The purpose

of this study is to test the validity of social presence assertions with respect to nurturing

deep meaningful learning from the perspective of students engaged in distance education

Master's studies. This study challenged and questioned this paradigm shift by

investigating existing literature and empirical studies advocating this shift to determine

the adequacy of such arguments. By examining the basis of support for assertions

derived from empirical studies, the study attempts to diffuse social presence theory, most

recently advocated by Garrison et al. (2000), as a conduit to cognitive learning and as an

operator for development of critical and deep meaningful learning experiences for adults.

The researcher examined data collected from a mixed methods study involving a

sequential procedure of surveys followed by exploring views gained from qualitative

telephone interviews with four participants. Following this, a sequential explanatory

strategy of the data was used (Creswell, 2009) to discover emerging trends. From this

mixed methods perspective, the researcher expected to discover the contribution social

presence has on learning independency or development of deep meaningful learning.

D. Research Questions to be investigated

The research was conducted using mixed methods based on a sequential

procedure. This method involves a combination of quantitative and qualitative research.

The quantitative survey method targeted a large population to establish population trends

and allow the researcher to generalize results; however, due to several limiting factors the

researcher was compelled to utilize a convenient sample resulting in generalization of the

findings not being made. The quantitative survey method used a Likert scale for question

responses as follows: Strongly Disagree (A), Somewhat Disagree (B), Don't Know (C), Somewhat Agree (D) and Strongly Agree (E). The letters served to identify the responses from the participants. A qualitative method survey followed in the form of follow-up telephone interviews with respondents who requested participation. The qualitative method involved in-depth detailed exploration of research based on open-ended questions. These open-ended interview questions were designed for a qualitative reference of individuals in order to further validate results. The purpose of the open-ended questions was to encourage participants to provide views and interpretations of social presence and to determine if social presence was a necessity for deep meaningful learning. Operational definitions of social presence and deep meaningful learning was provided to participants to ensure responses were framed appropriately. Complete survey used online is included in Appendix B.

Main Question:

The main research goal was based on the over-arching concept: This study examines and explores the claims that support the assertion of social presence theory impacting the community of inquiry as a central model for cognitive learning of adults in distance education (DE) which facilitates an outcome of deep meaningful learning. This was supplemented by sub-questions and telephone interviews to validate the study.

Sub Questions of Quantitative Survey:

1. As an online learner do you project yourself socially in a community of learners to enhance your deep meaningful learning?

2. Do you project yourself as a 'real person' by providing personal details in order to build relationships with fellow learners online?

3. As part of a community of learners where social presence can exist, as an online learner do you engage in building relationships to support deep meaningful learning?

4. Is it essential for you as an online learner to participate in online discussions (computer-mediated communication such as online chat) to create deep critical learning?

5. In an online Master's degree environment, if high levels of social presence exist, do you think this would be detrimental to learning?

6. As an online learner engaged in Master's degree studies, do you think conveying emotional expression (such as non-verbal cues using emoticons) will support your knowledge building?

7. Do you rely on trusting fellow learners in on-line discussions to motivate you in critical inquiry?

8. If you participate online in collaborative group work, will cognitive learning occur for you?

9. Is the presence of other learners required to support your deep meaningful learning?

10. In a distance learning course, do you think you would experience deep meaningful learning only if the group peer discussion was moderated by a teacher?

11. When you participate in synchronous online discussions does it help you to build trust with your fellow online learners?

12. For an online distance Master's Education program, would you gain deep meaningful learning by working on your own?

13. As an online learner if social presence did not exist (socially projecting in chat conferences) would cognitive and active learning occur for you?

14. As an online learner, do you need to exchange and validate ideas with other online learners to gain deep meaningful learning?

15. As a distance learner, if you project yourself emotionally are you able to create idea generation for cognitive and active learning?

16. As an online learner do you project your personal characteristics into the community of inquiry to influence the effectiveness of your own knowledge acquisition?

17. As a distance learner do you think online participation is effective for creative problem exploration?

18. If you actively engage in social activity with other community of online learners do you think you would have the ability to sustain and support your critical thinking?

19. If a community of on-line distance learners exhibited control and authority in threaded discussions would you become intimidated and therefore not participate?

20. If social presence didn't exist and the community of learners did not interact, do you think it would negatively impact your deep meaningful learning?

21. Do you think fairly high levels of social presence are necessary to support the development of your deep and meaningful learning?

22. As an online learner do you think your interactive discussion in the community of learners is necessary for you to understand complex theory?

23. If group work is part of your distance learning course do you think it should be extended to the interactive online community of learners to gain a better understanding of complex theory?

24. Do you as an online learner think an online community of learners emotionally interacting on a social level can hinder deep meaningful learning?

25. Do you as an online learner think online chat significantly contributes to developing more authentic group collaboration for knowledge building?

26. In a study conducted by Conrad (2009), one participant commented "I personally depend on other classmates to stimulate my thinking process" (p. 7). Do you agree or disagree that interactive discussion forums are effective in learning strategy?

27. As an online learner do you think better instructor efforts are necessary to improve deep learning in online discussions?

Sub Questions of Qualitative Survey:

28. Describe how you think social presence impacts your ability to learn and supports your cognitive learning skills to acquire knowledge?

29. Referring to the definitions of social presence and deep meaningful learning, what online activities did you engage in to develop deep meaningful learning?

30. How do you create deep meaningful learning?

31. Describe how participating in a community of other learners, thus a social

    presence exists, helps you understand complex theory?

32. In a distance learning course, if group peer discussion (representing social

    presence) did not exist do you think cognitive learning would occur for you?

    Explain.

33. Do you gain any deep meaningful learning from interactive distance education

    (DE) discussions supported by socially projecting your personal characteristics as

    a real person (use of emoticons and building relationships)?

34. Do you rely on the presence of other learners to support your learning (describe

    with examples)?

35. As an online Master's Degree education learner, do you need to build

    relationships with fellow on-line learners to enable idea generation?

36. Do you require a teacher to moderate on-line discussions to enable development

    of deep meaningful learning?

E.1. Delimitations of the Study (Researcher is in control)

The study is conducted to validate a core element of the community of Inquiry

model by Garrison, Anderson, and Archer (2000). This element is social presence. Due

to the time constraints the remaining two elements: cognitive presence and teaching

presence and three sub elements: supporting discourse, setting climate and selecting

content, were not fully reviewed; however, as these are interactive elements, some

discussion of these reference points evolved based on responses from open ended

questions designed in the study. The sample population was limited to Master's of

Distance Education (MDE) students enrolled in a distance education University. Surveys

were circulated by email and accessible on the Athabasca University Centre for Distance

Education (CDE) website for a limited period of time by a CDE administrator.

Participants had chosen voluntarily whether to respond to surveys and be available for

phone interviews. The consent form for the survey indicated participation was not

compensated, would not impact their course grades and they could withdraw at any time.

Participants were chosen from a centralized arena – MDE students who are English

speaking. The survey was limited in generalizations made for impact of social presence

due to a convenient sample employed and the specific country surveyed. In some

instances where isolation was particular and less interaction outside of distance learning

was apparent the results warranted social presence as an impact to cognitive learning.

E. 2. Limitations of the Study (Researcher is not in control)

This is the first use of the questionnaire with no pretest. To retain anonymity, the

researcher utilized the university's centre for distance education administration for survey

distribution handling. This caused several delays in survey distribution in a timely

manner due to the lack of a specific process for administration relating to a Master's level

survey administered to Master's level students within the same educational institution.

The researcher acknowledges as a result the distribution of the survey planned for late fall

was administered in late February which may have conflicted with end of term

obligations for students, causing a lower than expected return rate for surveys. This was

a study which employed a convenient sample of Master's level students enrolled in their

final year. Consequently, no generalizations can be made to any other population due to the sample size issues. The study did not explore program data on the students. The researcher cautions students may not have actively engaged in an online learning community.

In preparing this study, one difficulty existed in locating a clear definition of social presence. The foundation of the study is related to the work by Garrison, Anderson, and Archer (2000), the decision was to use these researchers' definitions of social presence and deep meaningful learning. The definition of social presence was provided in order to allow participants to engage in active discussion and provide personal views; however, the participants' interpretation may not have appreciated fully the definition of social presence and therefore may have caused outliers impacting accuracy of results.

F. Definitions of terms (operational)

Active Learning: Garrison et al. (2000) identified as "an awareness of critical thinking and inquiry" (p. 96). The "dynamic essential to metacognitive ability that encourages students to approach a problem strategically and actively seek out sources of knowledge, discover biases, sift through increasingly large quantities of information…and formulate or defend their own intellectual positions" (p. 96).

Adult Learner: Selman, Selman, Cooke, and Dampier (1998) found "adult learners reach a state of both self-awareness and self-determination sufficient to make his or her own learning decisions. Adult learners intentionally and voluntarily place themselves in

a learning situation and measure it to determine the extent to which learning will occur in order to meet personal learning objectives" (p. 124).

Asynchronous: Maurino (2006) defines as "new communication technologies enabling discussions held online…where communication turnaround is delayed by hours or days" (p. 1). Maurino (2006) advises, these types of "discussions may lack speed, spark and energy of a face-to-face conversation and hinder the development of dynamic and interactive discussion" (p. 2).

Chat: Osman and Herring (2007) found "chat to be designated as a tool for enhancing social interaction (Herring & Nix, 1997, as cited in Osman and Herring, 2007, p. 125)". It is referred to as a "threaded discussion of online talking in the form of asynchronous or synchronous activity enabled by computer-mediated communication (CMC)" (p. 125). "Synchronous activity relates to participants talking at the same time whereas asynchronous activity relates to communication which has a delayed turnaround" (Maurino, 2006, p. 1).

Cognitive presence: Garrison et al. (2000) define this as "in any particular configuration of a community of inquiry participants are able to construct meaning through sustained communication" (p. 89).

Cognitive processes or ability: Garrison et al. (2000) argue it involves cognitive processes or meta-cognitive ability that "encourages students to approach a problem strategically and actively seek out sources of knowledge, discover biases, sift through the

increasingly large quantities of information now available, and formulate and defend their own intellectual positions" (p. 96)

Cognitive learning: Rourke et al. (1999) referred to it as "how much students thought they had learned in a course (Sanders and Wiseman, as cited in Rourke et al., 1999, p. 55)". Learners are actively engaging in mental processes to comprehend theories which they study. They would have the ability to construct a meaning from what they learn and apply the concepts.

Collaborative Learning: Moore and Kearsley (2005) describe this as "a learning environment in which individual learners support and add to an emerging pool of knowledge of a group" (p. 323). Moore and Kearsley (2005) emphasize learners seek peer relationships as they work together creating learning communities.

Community of Inquiry: Garrison et al. (2000) argued that this model was designed to guide the use of computer conferencing to support critical thinking in higher education. It is composed of learners and instructors as key participants in the educational process. This process involves a teaching and learning transaction that capitalizes on the abundance of interaction possible with media such as conferencing.

Computer Conferencing: Moore and Kearsley (2005) define as "allowing students and instructors to interact, either asynchronously or in real time using personal computers to deliver a variety of text, voice, visuals, shared applications, and video" (p. 87).

Deep Meaningful Learning (dml): Relates to problem solving and development of reasoning skills. It involves recognizing and understanding abstract relationships among theories. Some critical skills include the ability to compare, analyze, interpret and develop creative and innovative thoughts. It deemphasizes memory skills and emphasizes active understanding. It relates to active not passive learning. Maurino (2006) suggests social presence and interaction can be a "vehicle for the development of critical thinking skills and deep learning" (p. 2). It involves "discussion which can support reflection, constructions and critical thinking, creative problem exploration and idea generation" (pp. 11-12). According to Entwistle (2000) "in the deep approach, the intention to extract meaning produces active learning processes that involve relating ideas and looking for patterns and principles on the one hand (a *holist* strategy - Pask, 1976; 1988, as cited in Entwistle, 2000), and using evidence and examining the logic of the argument on the other (*serialist)*. The approach also involves monitoring the development of one's own understanding (Entwistle, McCune & Walker, 2000, p. 3)".

Distance Education (DE): Moore and Kearsley (2005) define as "teaching and learning in which learning normally occurs in a different time and/or place from teaching…and requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements" (p. 324).

Domain of learner: Neuman (2006) found, "A cultural setting or site in which people regularly interact and develop a set of shared understandings or "miniculture" that can be

analyzed" (p. 470). Domain of learner relates also to gaining cognitive learning or deep meaningful learning.

Graduate and Higher Education: Relates to students who engage in educational programs at the post undergraduate level at a university. The courses would relate to programs at the Master's or Doctoral level. Garrison et al. (2000) explain "critical thinking, a process and outcome that is frequently presented as the ostensible goal of all higher education" (p. 89).

Interaction: Moore and Kearsley (2005) identify this as "exchange of information, ideas, and opinions between and among learners and teachers. A widely cited interpretation discriminates between learner-teacher interaction, learner-learner interaction, and learner-content interaction" (p. 325).

Learner Autonomy/Strategy: Moore and Kearsley (2005) regard this concept as "people who have capacities for making decisions regarding what, how, and to what extent they learn" (p. 326). They argue that people differ in these capacities but they can be developed, and their exercise is beneficial when instructors are at a distance. Learners will seek different methods to achieve knowledge such as self discovery and exploration of subjects.

Learner Independence: This involves a study mode allowing for individuals to learn at their own study pace. Rhode (2009) suggests the "self-paced approach affords more autonomy to learners, allowing each to proceed at an individualized pace while providing benchmarks for progress and achievement" (p. 3). Rhode (2009) learned that "adapting

learning environments to meet the individual needs and preferences of learners while strengthening learning conditions that preserve learner independence" (Lee & McLoughlin &, 2008b, as cited in Rhode, 2009, p. 3)".

Life-long learning: Selman et al. (1998) argued "educational influences on the person over the entire life span…during childhood and youth, as well…adult years" (p.21).

Likert scale: The scale is required for ease of interpretation of responses from participants for the quantitative survey. The quantitative survey method used a Likert scale for question responses as follows: Strongly Disagree (A), Somewhat Disagree (B), Don't Know (C), Somewhat Agree (D) and Strongly Agree (E). The letters served to identify the responses from the participants.

Mixed Methods Research: Creswell (2009) suggests "recognizing that all methods have limitations, researchers felt that biases inherent in any single method could neutralize or cancel the biases of other methods" (p. 14). This type of research is defined by Creswell (2009) as "an approach to inquiry that combines or associates both qualitative and quantitative forms of research. It involves philosophical assumptions, the use of qualitative and quantitative approaches, and mixing of both approaches in a study" (p. 230). For validation of data, both a quantitative survey and qualitative set of open-ended questions was deployed for this study, a sequential explanatory strategy was used (using the results of the qualitative data to validate and explain the quantitative results).

Online learning: Maurino (2006) defines as "new communication technologies enabling discussions to be held online" (p. 1). It involves learning through the use of accessing

material and content requirements of a course utilizing computer based electronic

technology where physical interaction is non existent. Moore and Kearsley (2005) define

as "teaching and learning in which learning normally occurs in a different time and/or

place from teaching…and requires special techniques of course design, special

instructional techniques, special methods of communication by electronic and other

technology, as well as special organizational and administrative arrangements" (p. 324).

Paradigm shift: Moore and Kearsley (2005) emphasize "models or systems of education

influenced by different values about knowledge, learning and the role of the teacher.

Distance education represents a shift from traditional educational paradigm… teacher and

institution-centered, rigidly scheduled, and traditional-aged student-centered" (p. 327).

Selecting content: Garrison et al. (2000) define 'content' as the design and development

of learning activities and assessment. It involves selecting, organizing and presenting the

content or theory applicable to the learning concepts to enable ease of comprehension for

adult learners.

Self-directed learning: Selman et al. (1998) describes the " 'self-directed' learner…the

person may decide what to learn, may start (and stop) at any point, adjust the learning

goals at any time, choose the style or educational process or resources…maximizes

independence and flexibility, but also the hazards which accompany lack of structure and

imposed discipline" (p. 28).

Sequential procedure (for Mixed Methods): Creswell (2009) explains a "researcher

seeks to elaborate on or expand on findings of one method with another" (p. 234).

"Beginning with a quantitative method in which a theory is tested, followed by a qualitative method involving detailed exploration with a few individuals" (p. 14).

Setting climate: Rossman (2000) states "there are two aspects of climate: physical environment and psychological atmosphere. The physical environment can be created with the use of video intervention for online courses to simulate a face-to-face atmosphere. The psychological component enables learners to feel secure, safe and treated with respect and dignity. All responses by learners are valued and not diminished" (p. 7).

Social learning theory: Social learning theory is rooted in the humanistic approach to learning which emphasizes the autonomy of the individual. Spencer (1998) associates it with self-directed learning. This current set of beliefs is commonly used and the result is a cultivation of acceptance to practice or support this theory. Educators require individuals to learn from each other in order to develop mental learning processes.

Social organization of learner: Selman et al. (1998) found the social organization of learner refers "discussion groups where those present are sharing their experience and knowledge" (p. 24). Preferences determined by the learner associates their online activity and view of social presence as a method to reduce isolation or to assist other learners with clarification. Learners do not view social presence of online environment as a mechanism for gaining deep meaningful learning.

Social presence (sp): Rourke et al. (1999) discovered "Tinto (1987, as cited in Garrison et al., 2000) emphasizes social presence supports cognitive objectives through its ability

to instigate, sustain and support critical thinking in a community of learners" (p. 52).

Garrison et al. (2000) reinforce this as the "ability of learners to project themselves as

'real people' socially and emotionally in a community of inquiry" (p. 94). Garrison et al.

(2000) emphasize the definition of social presence as "emotional expression, open

communication (risk-free expression) and group cohesion (encouraging collaboration)"

(p. 102). The function of this element, Rourke et al. (1999) explain, is to "support the

cognitive and affective objectives of learning" (p. 52). Furthermore, they report "the

construct of social presence can be traced back to Mehrabian's (1969, as cited in Rourke

et al., 1999) concept of immediacy which he defined as those communication behaviors

that enhance closeness to nonverbal interaction with another…nonverbal cues such as

facial expressions, body movements, and eye contact increase sensory stimulation" (p.

53).

Supporting discourse: Garrison et al. (2000) describe as open exchange of information.

Discourse needs to be open and truth-seeking. It must be supportive in acknowledging

individual contributions and reacting to specific content of the message.

Synchronous: Maurino (2006) defines as "new communication technologies enabling

discussions to be held online…with participants 'talking' at the same time" (p. 1).

Teacher presence: Rourke et al. (1999) identify this important element as designing and

managing learning sequences, providing subject matter expertise and facilitating active

learning.

Chapter II – Review of the Literature

A. *Theoretical Overview of the theory and research*

A review of the literature reveals extensive work over several decades promoting and imposing social presence theory linking cognitive skills for constructing learning and educational experiences. The core framework of this study is based on the paradigm of a community of inquiry designed by Garrison et al. (2000). The framework is also associated with Spencer's (1998) theory highlighting the debate about adult education theory being linked to the andragogy model proposed by Knowles (1988) in parallel to the pedagogy model. In 1998, Spencer emphasizes "Knowles helped to distinguish the education of adults from schooling…but misses the understanding of adult education as a distinctive social activity" (p. 19). So how is social activity or presence critical to adult distance education? An epistemology is evolving which describes a framework for course design and teaching method reversing the roles of learners and teachers but without convincing and validated empirical studies. Social presence argues that learners evolve as creators of knowledge through the community of learning they participate in. The learners' role is to discover theory independently not just act as recipients of knowledge. The teacher's role is to organize and direct learners rather than guide and teach principles of theory. Garrison et al. (2000) expressed views regarding community of inquiry as a progressive concept. They state "participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication" (p. 89). They revealed in their work the significance of social presence

as a critical operator in the community of inquiry for learners to develop cognitive presence in higher learning environments. They note collaboration in education was observed by Dewey (1882-1953) "for Dewey, education is a collaborative reconstruction of experience" (p. 92). They reason the basis of critical thinking as it relates to experience is based on "the ideas of Dewey (1933) and his conception of practical inquiry" (p. 98).

From this research, Rourke et al. (1999) reviewed and analyzed a concept of community of inquiry (Garrison et al., 2000. Unpublished manuscript). Within this context, they argued "social presence can be traced back to Mehrabian's (1969) concept of immediacy" (p. 53). They describe in detail the concept of community of inquiry reported as "Garrison, Anderson, and Archer's (2000) community of inquiry model, which was specifically designed to guide the use of computer conferencing to support critical thinking in higher education" (p. 51). This model is represented as an innovative concept with some reference traced back to Dewey's (1882-1953) perception of education linked to collaboration and experience. In fact, the community of inquiry does not reflect a ground-breaking concept but rather dates further back to the 17th century where well-known philosophers and psychiatrists of the day developed, proposed and postulated successful learning environments. They postulated social learning and collaboration in learners' behaviours within a community of inquiry was highly recommended for learners to develop a critical viewpoint. Investigating the concept of social presence as a mechanism leading to cognitive presence (cognitively and actively learning in a community of inquiry) in order to facilitate deep meaningful learning, a

review of historical literature was conducted to reveal a number of overall themes emerging. The first part is the historical foundation for social learning (establishing this is not a new phenomenon). This section includes sub-topics of the following: the community of inquiry approach; the inquiry methods applied to teaching and the criticism of the historical approaches. The second part is a critical assessment of recent literature which consists of: weaknesses and strengths of existing empirical studies; methodological deficiencies of empirical studies; lack of empirical studies to support claims of cognitive presence, effects of social presence on cognitive presence and impacts of social presence on the community of inquiry model.

B. Research in cognate areas relevant to Thesis topic

The various research studies have been categorized and assigned major themes in order to enhance the readability of the literature review.

Historical Foundation for Social Learning
Existence of Social learning theory prior to the 20th century

The idea of social learning in a community of inquiry is not a modern concept where the potential exists for independent thinkers to exchange ideas and develop deep meaningful learning (dml). In fact, this idea has evolved over a few hundred years dating prior to the 17th century. This review, summarized in table one, however was limited to the beginning of the 17th century and inclusive of the 20th century.

Table 1 - *Community of Inquiry Thinking*
Review of historical literature for the community of inquiry thinking category
representing summary of empirical studies that support or do not support the claim of
social presence.

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
Rousseau (1768)		Passive, self-directed learner Learning needs to be independent Learning through observation and discovery by individual Misdirection and mistakes in deep learning and pursuit of knowledge caused by interacting with others due to their selective pre-conceived notions
Dewey (1882-1953)	Needs to reflect social centre where people interact socially and intellectually to gain knowledge without distinction to class or race Supports collaboration among learners In schools in order for people to continually engage in intellectual discourse – education is a cultivation process among learners	
Dewey (1882-1953)	Supported and defined the concept of a community as a range of fullness of sharing within a community Determined the optimum method of knowledge acquisition was rooted in a community of learners	

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
	socially interacting on an intellectual level collaborating in a social learning environment	
Garrison et al. (2000)	designed an innovative concept "called the community of inquiry model" – to guide use of computer conferencing	
Rourke et al. (1999)	Regarded as innovative and progressive	
	New concept - social presence reflect learners building relationships on an emotional and intellectual level	

Table 1 provides a historical foundation of the community of inquiry. The summarized information describes the concept of learners interacting on an intellectual level in order to achieve learning. Rousseau (1768) explored the concept of the learning and in his own response to the need for knowledge acquisition proposes learners become self-motivated. He argued the claim of learning knowledge from a variety of sources including instruction given by multiple teachers and subject matter experts were ineffectual. In his famous work, Emile, he postulated that a strong education is derived from students discovering with their own initiative and curiosity. As they discover they analyze and understand without the assistance of others. This personal achievement would be retained in memory and condition in them the process to learn how to learn. He claimed, "to unfold the powers of children…to arouse in them the sense of the observer

and of the pioneer; to make them discoverers-rather than imitators…and not slavish

dependence upon the words of others" (p. 6). Rousseau (1768) developed the idea of a

passive learner who discovers and validates information independently. Rousseau's

(1768) work does not support the claim that social presence is a means to developing

cognitive learning or deep meaningful learning. Rousseau's (1768) argument is founded

on the idea of complex learning which does not reflect a rhizomatic nature (introducing

one idea which merges with another learner's idea and builds into multiple ideas to form

a root system of interacting elements of information) but rather a process of how to learn

with the use of a self-directed method. The learner learns a process or concept through

personal insight, persistence, experience, thoughtful observation and examination of

individual elements of an idea or object to discover it's meaning and purpose. "He will

examine every new object for a long time without saying a word" (p. 126). In fact,

Rousseau (1768) argues that developing a reliance of learning from others can be

detrimental as knowledge from other learners may be selective based on pre-conceived

ideas that may lack accuracy. Rousseau (1768) reinforces this claim in his discussion and

observation of Emile as "obliged to learn by his own effort, he employs his own reason,

not that of another. Most of our mistakes arise less within ourselves than from others" (p.

155). He further reiterates this idea with "to have the social virtues…he only needs to

know the relations which make them necessary; and this knowledge his mind is ready to

receive. He considers himself independently of others…He is alone in human society,

and depends solely upon himself" (p. 157).

        The process of cognitive and deep meaningful learning has been debated over the

last century. Support for this is found in Psychology of Being in by Dewey (1882-1953),

who referred education to involving the social activity of its members. Dewey (1882-1953) argues, "the difference between the school as an isolated thing related to the state alone, and the school as a thoroughly socialized affair in contact at all points with the flow of community life" (p. 82). Dewey (1882-1953) postulates the educational institution needs to reflect a social centre where people interact with each other with one focus of learning. He suggests that class and race can exist as barriers to learning so it is necessary to ignore these elements, adopt a social connectedness and a collegial attitude among learners in order that a healthy learning exchange can occur.

> In what ways shall the school as a social centre perform these various
> tasks?...First, there is mixing people up with each other; bringing them together
> under wholesome influences, and under conditions which will promote their
> getting acquainted with the best side of each other. I suppose, whenever we are
> framing our ideals of the school as a social centre, what we think of is particularly
> the better class of social settlements…not merely a place where ideas and beliefs
> may be exchanged, not merely in the arena of formal discussion…Classes for
> study may be numerous, but all are regarded as modes of bringing people
> together, of doing away with barriers of caste, or class, or race, or type of
> experience that keep people from real communion with each other. (pp. 90-91)

The idea of cognitive learning being defined by a parameter of collaboration among socially oriented individuals seeking to explore, discover and acquire knowledge of a particular subject matter is not a modern concept as postulated by Garrison, Anderson and Archer (2000) but something which can be traced back to the 17th century and even pre-dating BC. The establishment of an educational institution proposed may not have

been formally designed in a bricks and mortar state but likely resembled a convergence of like-minded people with similar learning objectives. A reliance on computer generated synchronous or asynchronous discussions in a distance learning environment where learners could associate and collaborate without regard to physical or geographical residence and time zone may not have existed but other means of communication would have been available such as face to face meetings, written forms (letters, scrolls) and even symbolic illustrations on various elements (rocks, carvings and bones) pre-dating BC. Therefore, the concept of social presence in learning should not be regarded as only innovative and progressive as argued in 2000 by Garrison, Anderson and Archer. Dewey (1882-1953) reinforces the need for social presence to be an active element in schools in order for people to continually engage in intellectual discourse for the benefit of knowledge acquisition and renewal beyond known historical foundations of education and reveal emerging theories. "We have seen that a community or social group sustains itself through continuous self-renewal, and that this renewal takes place by means of the educational growth of the immature members of the group… Education is thus a fostering, a nurturing, a cultivating process" (p. 15). Dewey (1882-1953) continues with a definition of a social center as:

> Some four specific developments may be mentioned as having a bearing upon the question of the school as a social centre. The first of these is the much-increased efficiency and ease of all the agencies that have to do with bringing people into contact with one another…the superiority of one's own religious and political creed, are much shaken when individuals are brought face-to-face with each other, or have the ideas of others continuously and forcibly placed before them.

No educational system can be regarded as complete until it adopts into itself the

various ways in which social and intellectual intercourse may be promoted, and

employs them systematically. (pp. 84-85)

In 1999, Rourke et al. postulated social presence reflected learners building relationships

on an emotional and intellectual level and engaging in critical thinking online. To support

this system, in 2000, Garrison et al. designed an innovative concept "called the

community of inquiry model which was specifically designed to guide the use of

computer conferencing to support critical thinking in higher education" (p.51). They

argued this could be traced back to Mehrabian's (1969) "concept of immediacy" (p. 53).

In fact, support dates back prior to the middle ages and even BC of people collaborating

and formulating concepts to acquire knowledge. However in the interest of volume of

works to be reviewed by the researcher focused on limiting works back to the 17th

century. During this period, the perception of a community of inquiry was postulated in a

similar form by Dewey (1882-1953) in 1899 who describes both the school as a social

centre and the community of inquiry as

Socialism of the intelligence and of the spirit. To extend the range and the fullness

of sharing in the intellectual and spiritual resources of the community is the very

meaning of the community. Because the older type of education is not fully

adequate to this task under changed conditions, we feel its lack and demand that

the school shall become a social centre. The school as a social centre means the

active and organized promotion of this socialism of the intangible things of art,

science, and other modes of social intercourse. (p. 93)

In 1899, Dewey (1882-1953) in direct opposition to Rousseau's (1768) theory of a self-motivated learner, determined the optimum method of knowledge acquisition was rooted in a community of learners socially interacting on an intellectual level collaborating in a social learning environment. Empirical studies conducted in relation to social learning theory, summarized in table 2, focus on learners developing relationships and providing stimuli to peers in order to develop learning processes.

Table 2 – Social Learning Theory
Review of historical literature for the social learning theory category representing summary of empirical studies that support or do not support the claim of social presence.

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
Miller (1909)	Associated social presence with the ability of learners to build relationships in order to create learning stimuli (ideas) to share Learners are motivated by stimuli for cues	Motivation of injecting stimuli in community of inquiry related to incentives for conference participation
Bandura (1969)	Social learning resembles imitation. The process is based on one learner creating an idea and this becomes a cue for the next learner to imitate and grow another idea	Discounts theory by indicating this learning process has limited value as not all learners will achieve same level of knowledge in order to continue to provide stimuli Lack of empirical support for one idea (stimuli) can invoke another idea in which multiple ideas become interrelated Incentives motivate learners Bandura (1969) advises that acquisition of knowledge is developed from self-directed learning where learners explore and discover ideas independently

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
Pacquet (1999)	Mutual understanding and trust by building relationships with other learners	Learners gain cognitive presence through self-motivation of generating new ideas. Ideas linked to an individual's perspective and past experiences Cognitive thought processes are not learned from others but self-motivated Learners must continually generate and contribute ideas, reflecting self-directed learning into the community of inquiry in order to enable cognition. Cautions learning network of multiple perspectives and ideas can inhibit learning if not organized and moderated Emphasizes importance of teacher presence in a community of inquiry If learners are passive then levels of cognitive presence will remain low
Rheingold (2002)	Learners interacting online don't need to build relationships but due to the common mechanism in which they interact they are in effect socially building knowledge Learners engage in asking questions of each other in order to gain knowledge	Argues a better way of building knowledge and cognitive learning is self-discovery

Table 2 refers to social learning theory and how learners are motivated by various cues in order to enhance their learning. In 1909, Miller advanced the idea of deep complex learning emerging from a group of learners associating or building relationships by providing support for how a learner is motivated by stimuli to learn. He describes the aspects of social learning as learners following a method based on stimuli which causes the learner to provide a response. "It is the study of the circumstances under which a response and a cue stimulus become connected. After learning has been completed, response and cue are bound together in such a way that the appearance of the cue evokes the response" (p. 1). However, Miller (1909) emphasizes that learning is not associated with rote practice but rather developed by motivation; rooted in Maslow's (1962) hierarchy theory of reward. "The recently merging awareness of, and concern with growth (self-actualization) motivation" (Maslow, 1962, as cited in Miller, 1909, p. 27)". This theory is linked to online higher education learners who are intrinsically aware of an incentive of required marks allocated for attendance and participation in peer group discussion forums.

The foundation of social learning theory continued to be investigated and developed throughout the years. In 1969, Bandura responded to the concept by referring to it as imitation. The process is based on one learner creating an idea and this becomes a cue for the next learner to imitate and grow another idea. However, Bandura (1969) discounts this theory by indicating this learning process has limited value. In fact he states: "different learning mechanisms were invoked, without adequate empirical basis, to account for the acquisition of one social response and ten interrelated social responses that are designated as various aspects of a given role" (p. 219). He argues that learners

being exposed to incentives such as participation marks can result in a learner's motivation to provide input and learning stimuli to others.

Bandura (1969) argues that interactive elements within the environment need to exist in order for intellectual experience to occur; however, he cautions that not all learners will experience this and need to contribute to the environment in order to cognitively learn. "Persons are neither autonomous agents nor simply mechanical conveyers of animating environmental influences" (p. 1175). He develops this idea by proposing that individuals learn through the act of their self-direction: learners contributing ideas to the environment are successful in the knowledge building process only if other learners also contribute. "Social cognitive theory subscribes to a model of emergent interactive agency… they make causal contribution to their own motivation…Any account of the determinants of human action must, therefore, include self-generated influences as a contributing factor" (p. 1175). Bandura (1969) postulates cognitive learning occurs when social presence within a community of inquiry exists; however, within the same study he later advises that acquisition of knowledge is developed from self-directed learning where learners explore and discover ideas independently. "These conceptions are formed on the basis of knowledge gained through observational learning, inferences from exploratory experiences, information conveyed by verbal instruction, and innovative cognitive syntheses of preexisting knowledge" (p. 1181). Bandura (1969) later affirms this point by promoting the idea of independence which he says: "requires a generative conception rather than a one-to-one mapping between representation and action" (p. 1181). Bandura (1969) further emphasizes this concept of self-learning by describing learners who gain cognitive presence through self-

motivation of generating new ideas. These ideas are developed based on a learner's perspective and derived from their own past experiences. "Through their capacity to manipulate symbols…engage in reflective thought, people can generate novel ideas and innovative actions that transcend their past experiences. They bring influence to bear on their motivation and action in efforts to realize valued futures" (p. 1182). In 1969, Bandura's work is rooted in how the 'self' influences thought provoking ideas which are inherently linked to past knowledge and past experiences. He postulated that cognitive thought processes are not learned from others but self-motivated and not influenced by the environment around them.

Rheingold (2002) supports the idea of learners operating within a community socially. He suggests that people who interact online don't need to build relationships but due to the common mechanism in which they interact they are in effect socially building knowledge. Rheingold (2002) defines these social learners as smart mobs "people who are able to act in concert even if they don't know each other. The people who make up smart mobs cooperate in ways never before possible because they carry devices that possess both communication and computing capabilities" (p. xii). He postulates social presence in learning is reciprocal where learners engage in asking questions of each other in order to gain knowledge. "The way you learn, everybody tells you, is by asking others" (p. 165)

Rheingold (2002) emphasizes this theory from a foundation of works but at the same time disengages the reader from his claim of socializing learning by suggesting a better way of learning is self-discovery. "Children seem to learn about the world by

exploring it and playing with it—that play is a powerful form of learning—and that by shaping the way the environment invites discovery" (p. 166).

In response to this theory in 1936, Pacquet discusses the negative aspects of social learning by suggesting that learners must continually self-generate and contribute ideas into the community of inquiry in order to enable cognition. If learners are passive then levels of cognitive presence will remain low. "Indeed, not all social learning is feed-forward in nature, and, consequently, the neural net arrangements may encompass only a portion of the Boulding space, may link the various components only loosely, and may also generate "low" learning." (p. 16).

Pacquet (1936) defines social learning within a community of inquiry as:

> It is based on the existence of a social capital of trust, reasonableness, and mutual understanding that facilitates the debates and generates a sort of basic pragmatic ethic likely to promote interaction and synergies among the many potential partners in each of the three families of organizations. (p. 16)

Pacquet (1936) further cautions the learning network of multiple perspectives and ideas can inhibit learning if not organized and moderated:

> The learning economy is the source of wealth creation and is rooted in a social or collective mobilization of knowledge: learning is harnessing the collective intelligence of the team as a source of continuous improvement (Florida & Kenney 1993, as cited in Pacquet, 1997, p. 20). This idea is rooted in ensuring a teacher presence exists in the community of inquiry in order for it to be effective. There are ample possibilities for coordination failures that can slow down the

process of learning (de la Mothe & Paquet, 1997, as cited in Pacquet, 1997, p.

21).

Table 3 -Summary Social Presence (Affective Domain of cognitive success-Need for Interaction)
Review of recent literature for social presence category representing summary of empirical studies that support or do not support the claim of social presence.

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
Osman and Herring (2007)	Establish a sense of community. Both Synchronous and asynchronous online activity required to enhance social interaction	Limitation of dynamics of synchronous online chat with computer mediated conferencing (CMC) Small number of responses to support claims Learners require teachers to provide organization "teacher presence" Facilitators create a constructivist environment played important role
Garrison et al. (2000)	Social presence (sp) is an integral element in sustaining cognitive presence and deep meaningful learning (dml) in a community of inquiry. Cognitive presence is sustainable when significant degree of sp has been established	Establishment of community of inquiry can be problematic for social presence. Lack of empirical results to support relationship building in a community of inquiry for sp
Rourke et al. (1999)		Teacher presence is critical element
Conrad (2009)	Significant relationship exists between cognitive presence and satisfaction and between cognitive presence and perceived	Learners who planned absences from community were omitted from results of study – inconclusive support

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
	learning	Study of participation based on requirement of course and risk of loss of marks. Perspective was incentive based for online conferencing activity providing inadequate results

Recent literature summarized in table 3, emphasizes the effective domain of cognitive success relating to the need for interaction, thus social presence among learners. Osman and Herring (2007) argue synchronous and asynchronous tasks enhance social interaction to create a sense of community. They emphasize 'deep learning' in contrast to shallow, 'rote' learning entails seeking understanding by relating new information to existing knowledge and experience and by critically evaluating concepts (e.g., Beattie, Collins, & Mcinnes, 1997, as cited in Osman and Herring, 2007), and it requires higher levels of cognition (Bloom, 1956, as cited in Osman and Herring, 2007, p. 125). However, in 2007, Osman and Herring acknowledged the limitation of dynamics of synchronous chat with multiple asynchronous discussion threads in computer mediated conferencing (CMC). Learners are challenged to follow ideas and create synthesis in meaning. Garrison et al. (2000) promote social presence in CMC as an integral element in sustaining cognitive presence to foster deep meaningful learning in the community of inquiry. Yet in a contradictory statement indicate "given the reliance of computer conferencing on the written word, the establishment of a community of inquiry can be problematic with regard to establishing social presence" (p. 94).

Garrison et al. (2000) argue that:

>Cognitive presence by itself is not sufficient to sustain a critical community of
>learners. Such an educational community is nurtured within the broader social-
>emotional environment of the communicative transaction. They argue that
>cognitive presence is more easily sustained when a significant degree of social
>presence has been established (Garrison, 1997; Gunawardena, 1995, as cited in
>Garrison et al., 2000). Socio-emotional interaction and support are important and
>sometimes essential in realizing meaningful and worthwhile educational
>outcomes. Social presence, in the form of socio-emotional communication is
>possible in CMC, but not automatic. (pp. 94-95)

Garrison et al. (2000) identify teacher presence as a third element in the community of inquiry which is a critical "binding element in creating a community of inquiry for educational purposes" (p. 96). The argument by Garrison et al. (2000) is ambiguous as they later de-emphasize teacher presence in the process of cognitive retention by indicating "the element of teaching presence is a means to an end-to support and enhance social and cognitive presence for the purpose of realizing educational outcomes" (p. 90). Further ambiguity is revealed by a statement found in a study conducted by Rourke et al. (1999) who argued teacher presence is the critical element to establish cognitive impact as it "includes designing and managing learning sequences, providing subject matter expertise, and facilitating active learning" (p. 52). This is compared to social presence which is identified only as a supportive mechanism in "the function of this element is to support the cognitive and affective objectives of learning" (p. 52). The study by Garrison et al. (2000) lacks credibility as no quantitative results are provided to support the relationship between the strong active element of social presence and the

development of cognitive retention or deep meaningful learning. In fact, Garrison et al.

(2000) conclude "much work remains to be done before we truly understand how a

worthwhile educational experience can be optimally designed and delivered in a text-

based environment" (p. 103).

Osman and Herring (2007) determined as a design mechanism, learners require

teachers to provide organization, continuous interaction and monitoring with insightful

questions to challenge assumptions. This is the teacher presence element of the

community of inquiry model by Garrison et al. (2000) As discovered in 2007, by Osman

and Herring, free exchange and critical thinking becomes disconnected from the learning

environment with cross cultural learners who are intimidated by power relations among

students or do not challenge the teacher's opinion due to cultural experiences. Results

are less than convincing due to the ability of the study to generalize the findings to all

environments. Osman and Herring (2007) caution "the number of learners and

facilitators was small. With a larger number of participants, the inferential statistics could

be conducted that would be necessary to make statistical generalizations" (p. 137).

Contradictory to the objective of promoting social presence, the results validate teacher

presence should dominate online environments limiting opportunities for active learning

and social presence by learners. They argue "the efforts of the facilitators and project

designers to create a constructivist environment played an important role…without this

sustained guidance the constructivist outcomes that were observed almost certainly would

not have come about" (p. 136).   The goal of their study was to evaluate "the usefulness

of synchronous chat for deep, conceptual learning in the context of a distance education

program" (p. 128).   The nature of the results activity de-emphasizes social presence as a

direct correlation to meaningful learning. In fact, Osman and Herring (2007) reveal support that "overtime…discourse facilitation increased" (p. 133). They conclude most on-line chat sequences were dominated by facilitators which fail to support learner collaboration and effective impact of social presence on knowledge construction. In addition, the results are weak as the study was conducted in a teacher-centred culture where expertise is rarely challenged. The results appear to support a top-down teaching style rather than collaboration among learners to construct knowledge. In fact, the researchers caution the use of the study for designing courses involving cross-cultural learners as only one cultural group was used in addition to a small number of participants in the study.

In contrast, Conrad (2009) employed a study for lack of social presence experienced through planned absences. In 2009, Conrad's study derived results from six learners who were absent to determine the impact of their learning experience. However, results are not conclusive as findings omit the impact of social presence dynamics of the non-absent group for overall knowledge construction. Further inadequacies in results are apparent, recognized by Conrad (2009) as a limitation, during the follow-up synchronous focus group, represented by only two participants. The small sample size of six and contradictory nature of the study lacks creditability to generalize for a larger population. Yet, Conrad (2009) states a significant relationship exists between cognitive presence and satisfaction and between cognitive presence and perceived learning. Further research is inconclusive for revealing social presence as participation online is linked to a requirement for conferencing marks rather than provide an open opportunity and need for

learners to build a community of inquiry. Conrad (2009) states "sustained absence from the course could potentially threaten grades" (p. 9).

Table 4 - Developing Critical Meaning in online Environment (Learner Centredness)
Review of recent literature developing critical meaning online representing summary of empirical studies that support or do not support the claim of social presence.

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
Maurino (2006)		A 2002 study by Picciano found no difference in learning outcomes
		Good information exchange but not conclusive support for creative problem generation
		Teacher presence (instructors) provide scaffolding to allow students deep learning
		Not happened yet at high level – further research needed
		Need for instructor involvement rather than self-directed learner
		Community of inquiry model not well supported for knowledge
		Validates teacher presence should dominate but cautions studies lack of qualitative nature analysis of instructor objectives

A number of researchers focused on the development of critical meaning in an online environment, as summarized in table 4. Some of their research investigated if social presence was essential to online study. Maurino (2006) evaluated 37 studies (19 graduate level, 11 undergraduate level, combining both on-line and blended (face-to-face) courses) to investigate critical inquiry, deep learning, presence and interaction in table 4.

Maurino's (2006) selection process was based on whether an article indicated the purpose of the research study was to investigate critical inquiry, deep learning, presence, and interaction. Maurino (2006) advises the studies reviewed were varied and some included triangulation. Content analysis of class transcripts, discussion threads, or Listservs was identified as a popular method of assessing learning (used in the last five to ten years). The content analysis was performed in an effort to analyze responses of the students. The responses were categorized for quantity (frequency) or quality of discourse (one word answers versus well constructed arguments in discourse).

Maurino (2006) concluded a general outcome from "a 2002 study by Picciano found that there was no difference in learning outcomes for low, moderate and high participants" (p. 3) activity. Other studies revealed similar outcomes of online participation represented good information exchange but not conducive to creative problem exploration and idea generation. According to literature, Maurino (2006) found instructors to be responsible "for providing the scaffolding that allows students to advance from passive to deep learning" (p. 4). Maurino (2006) concluded from the literature review that the potential for development of deep learning and critical thinking skills through online threaded discussions has not yet happened at a high level or to any great extent and further research is needed. Maurino (2006) emphasizes the need for more instructor involvement rather than shifting the responsibility to the self-directed learner. Maurino's (2006) research highlights the community of inquiry model is not well supported as a functional requirement for knowledge acquisition where all elements must be operative: social, cognitive and teacher presence. In fact, Maurino's (2006)

review validates teacher presence should dominate but cautions studies lack qualitative

nature, assessment and analysis of instructor objectives.

Table 5 - Strategies for Creating Social Presence (Reduce Learner Isolation)
Review of recent literature for strategies creating social presence representing summary of empirical studies that support or do not support the claim of social presence

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
Aragon (2003)		Advocates social presence reduces isolation and anxiety. Social presence exists for learning creation by instructors Learning achieved evolving a strategy of group of projects, collaboration learning and constant monitoring by instructor. No attempt by Aragon to correlate social presence with cognition No empirical results provided
Garrison et al. (2000)	'Emotions' inseparably linked to task motivation and persistence for critical inquiry. Focus on technology to adapt a better exploration than how social presence creates a link to deep meaningful learning	No correlation to deep meaningful learning Garrison et al. indicate further studies are necessary

A further probe of learning strategies to create social presence as summarized in

table 5 where a number of studies show conflicting results, limitations in studies and

design flaws. In 2003, reveals Aragon advocates social presence reduces isolation and

anxiety for learners to create a common ground for sharing an exchange of information. The study investigates the establishment of identities and relationships among learners with common interests creating a learning environment perceived as warm, collegial, and approachable. Aragon (2003) proposes the responsibility for creating social presence exists first with the instructor, but ongoing maintenance extends to the learners. Aragon (2003) suggests limiting class size of 30:1 learner/teacher ratio, inclusion of welcome messages and learner profiles supplemented by video and audio broadcasts and to establish initial social presence by reflecting emotions of students and instructor. Aragon (2003) advises a successful learning environment is achieved by evolving a strategy of group projects, collaborative learning, constant monitoring of discussion boards and timely feedback. Although the strategy is thoroughly outlined, Aragon (2003) does not attempt to correlate social presence with cognitive skills or to provide any empirical results to validate this assertion. Garrison et al. (2000) express significant detail on social presence relating to emotional expression which is translated into computerized emoticons to denote physical presence and provide "self-disclosure…to establish trust, seek support and thus find satisfaction (Cutler, 1995, as cited in Garrison et al., 2000) such as 'closeness, warmth and attraction' (p. 99). They argue "emotions are inseparably linked to task motivation and persistence, and, therefore, to critical inquiry" (p. 99).

They conclude that computer conferencing has potential for creating an educational community but work remains to be done to understand the educational experience. The focus is therefore on the technology to use which can adapt to a better experience rather than how social presence creates a link to deep meaningful learning. In their article, they provide data gathered from computer conferencing transcripts and

results that reveal a high frequency of text messages from one group and limited

engagement from the other group. From this data they postulate the intuitive impressions

that were formed while reading the transcripts of the sociability and educational

effectiveness of the two conferences. Within this study there is no correlation to deep

meaningful learning. In fact, the researchers state that further studies are necessary.

Table 6 identifies a study which raises arguments which do not support social

presence as an element within the community of inquiry enabling the cultivation of deep

meaningful learning. The researchers advocate the purpose of the online environment is

to transition curriculum for ease of accessibility for self-directed learners.

Table 6 - Andragogy: Self-directed learning approach/Collaborative teaching
Review of recent literature for self-directed learning approaches and collaborative
teaching representing summary of empirical studies that support or do not support the
claim of social presence

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
Gibbons and Wentworth (2001)		Teachers to understand learning style of learners
		Use technology to transition curriculum to support self-directed learners
		Primary model is teachers stimulate critical thinking of learners through use of open-ended questions
		No support for empirical results

The underlying consensus by many educators, as summarized in table 6, is a

collaborative learning environment which in 2001 Gibbons and Wentworth formulate

guidance. To support adult learning they suggest teachers understand the unique learning

style and experiences of learners and use technology to transition curriculum to support

the self-directed learner. Gibbons and Wentworth (2001) advise teachers incorporate pre-

existing knowledge of learners to increase responsiveness and orient online delivery to

task/problem centred learning. The primary directive is a dialogue-based model through

the use of open-ended questions and tasks to stimulate critical thinking of learners. The

model lacks credibility as no support from empirical results exists to validate claims.

Table 7 - Instructor as Facilitator (Transition role from dispenser of knowledge to facilitator of learning)
Review of recent literature for instructor as facilitator representing summary of empirical studies that support or do not support the claim of social presence

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
Wheeler (2007)		Significant patterns didn't exist between social presence and critical meaning during a study conducted with 345 participants
		Operational definitions used for the study are teacher centered
		Reliance of learner autonomy correlates to precise instructions from teacher
		Study Omits relevance for creating meaningful learning but emphasizes learners' perception of social presence is access and responsiveness of teachers
		Results from the findings conclude are not significant for social presence
Henning and Van der Westhuizen (2004)		Study involved teacher's experience with e-learning platform
		Study focuses on coping strategy with technology not critical

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
		awareness of learning objectives
		Results of findings conclude transition to online learning communities in South Africa linked to low levels of cognitive activity

In contrast to the attempts to argue social presence correlates to meaningful learning, Wheeler (2007) conducted a study over a two and a half year period using a sample of 345 participants. As summarized in table 7, the quantitative study revealed significant patterns did not exist between social presence and development of critical meaning; in fact, the operational definition of social presence by Wheeler (2007) resembles a connectedness to the teacher rather than an establishment of a community and relationship building. Results indicated reliance of learner autonomy correlates to precise study instructions from the teacher. This was further supported by the students' need to control the learning process through self-organization of time. The study omits any relevance for creating meaningful learning but emphasizes learners' perception of social presence is access and responsiveness of teachers. Wheeler (2007) cautions results to be insignificant for social presence due to a high concentration of autonomous students who relied less on immediacy and access of a teacher. Wheeler (2007) cautions generalizations of findings due to the limitations of the study design including students studying in a blended environment and no attempt was made to investigate the subtleties of individual student experiences.

Exploring a global perspective on social presence, Henning and Van der Westhuizen (2004) examined cognitive experience in online communities in South

Africa. The sample population involved six teachers describing their encounter with the

e-learning platform. The study also included a research group of 3 pairs of students.

Qualitative data collected included discussion postings, emails and term papers. The

study demonstrated experiences of coping with technology for both teachers and learners

rather than the ability for learners to improve critical awareness or promote deep

meaningful learning. Results of the findings conclude transition to online learning

communities is difficult in South Africa and linked to low levels of cognitive activity due

to the need for increased basic skills of technology and personal acceptance of both

learners and teachers.

Table 8 - Social Education (Interactive elements of learning/Facilitation process)
Review of recent literature for interactive elements of learning and facilitation process in social education representing summary of empirical studies that support or do not support the claim of social presence

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
Rhode (2009)	Builds on community based model (Anderson, 2003, as cited in Rhode, 2009) Explores the dynamics of interaction within a self-paced environment	Argues minimal empirical support exists for meaningful learning to occur as learner preference may dictate learner interaction Low sample size of ten Results indicated significant intervention with instructor and content with no reference to social activity to enhance critical meaning Participants in study ranked synchronous chat as lowest important elements Findings support a need for instructional design facilitating active engagement with content and instructor-learner interaction

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
		Participants reiterated willingness to forgo social activity as it diminishes learning
Gray (2004)		Researcher's dual role didn't bracket involvement
		Relationship active engagement online illustrates connection to reduce isolation
		Study findings emphasize moderator enhances community maintaining group process Study emphasizes teacher presence develops a sense of community
		Verbatim results indicate contradictory support as novice participants experienced a lack of community
Diaz, Swan, Ice, and Kupczynski (2010)		Study findings emphasize reliance on teacher presence. This is valued over cognitive and social presence
		Data measured perceptions by students enrolled in college and university courses relating to business and not specific to distance education
		Respondents rated social presence as least important
Shea et al. (2009)	Significant support that cognitive presence could be predicted based on perceived teaching and social presence	Focus on teaching presence as the bridging factor to both cognitive and social presence
		Unspecified courses relate to graduate level distance education

Author	Empirical study arguments supporting claim of social presence	Empirical study arguments not supporting claim of social presence
		Master's program
		Courses combined college and university which may have dictated the higher level of social presence as a requirement for course grades although this is not clarified in the study
		Conclude results are not directly correlated to deep meaningful learning – mention students achieved the triggering and exploration stage of cognitive presence
Shea and Bidjerano (2009)	Large scale study conducted showing significant results for social presence element associated with comfort in online discussion	Findings do not mention social interaction of learners with peers online but concentrate on the social interaction between learners and teachers.
		Results do not disclose if high levels of teacher presence are dependent on motivating students for incentive based forum activity for required grades.

To revisit building a community of inquiry model and determine if social presence influences it, Rhode (2009) explores the dynamics of interaction within a self-paced online learning environment. Studies conducted by Rhode (2009) are summarized in table 8 emphasizing the building of the community based model (Anderson, 2003, as cited in Rhode, 2009) where deep and meaningful formal learning is supported as long as one of the three forms of interaction (student-teacher; student-student; student-content) exists at a high level. Rhode (2009) argues minimal empirical support exists for

meaningful learning to occur in all instances as learner preferences may dictate learner interaction with an instructor over other learners. The sample size for the study was ten and included data collected in the form of semi-structured telephone interviews and ninety-four survey questions. Results of the findings indicated significant interaction with instructor and content with no reference to social activities to enhance critical meaning. In fact, reported frequencies showed participants ranked learner communication and synchronous chat, embodying social presence, with learners among the lowest important elements. Rhode (2009) argues the findings support a need for instructional design that facilitates active engagement with content and instructor-learner interaction. Participants further reiterated their willingness to forgo social activity as this interpersonal activity is viewed as challenging and may diminish learning.

A similar study by Gray (2004) investigates the role of community of practice and how it supports informal workplace learning. The pilot study involved forty-three participants of the Alberta Learning Council who voluntarily participated in an online community with the researcher serving as moderator for the community. The researcher's dual role in the study is noted as a limitation which may influence responses from participants however a self-reflective journal was used to bracket assumptions and subjectivity. Gray (2004) emphasizes the interplay between experienced members and newcomers as an important dimension of creating knowledge. Gray's (2004) findings indicate interaction of learners online provided incentive for learners to reduce isolation by building relationships with other learners active engaged, increase of professional connection to colleagues for work related problems and encouragement to learn the subject matter. Gray (2004) also notes the moderator enhanced the function of the

community providing technical support and maintaining group process. However, some contradictions exist in the verbatim where novices experienced vulnerability over lack of sense of community and support.   The study lacks support to explore the impact of students enrolled in an online course of study and more importantly does not reflect on deep meaningful learning correlated to social presence. The study reveals the moderator elevates input, generates thought and develops the sense of community which dispels the social presence aspect of learners creating this element.

Recently in 2010, Diaz, Swan, Ice, and Kupczynski conducted a study relating to the perception of students involved in online courses achieving social, cognitive and teacher presence as it relates to the community of inquiry model. The study findings are not strongly aligned to the current study as the population they used targeted a combined sample of undergraduate and graduate level students in both college and university. In addition, the perceptions were measured based on courses oriented to business management and not distance education. Their results however are indicative of similar findings of the current study in that "item-importance scores indicate that students valued teaching presence above cognitive and especially social presence" (p. 27). The authors also noted respondents in the study rated social presence items as being overall least important.

Similarly, Shea et al. (2009) advocate much research provides significant support "at the higher stages of integration, application and resolution, develops as a result of instructor teaching presence and is mediated by social presence.   They claim a significant population sample was used in a previous study resulting in "more than 70% of variance in students' reported cognitive presence could be predicted based on

perceived teaching and social presence" (Shea and Bidjerano, 2009, as cited in Shea et al., 2009, p. 548). Their current study measures the relationship of "student social presence develops as a result of instructor teaching presence or instructor social presence" (Shea et al., 2009, p. 11). The study involved two courses, one "offered by a state college…that specializes in distance adult education for non-traditional learners and…two courses in Business Management" (Shea et al., 2009, p. 11).

Contrary to the current study where the survey was based on open student perspectives of social presence facilitating deep meaningful learning. The study by Shea et al. (2009) uses a controlling factor of social presence generated by teacher presence. In fact, the study in 2009 conducted by Shea et al. suggests teacher presence is a necessary component. This differs from current findings of this study confirm a consensus among learners that teacher presence was valued but not necessary along with social presence to nurture deep meaningful learning. In fact participants agreed independent self-directed learning without social presence was the optimal choice for obtaining deep meaningful learning.

Shea et al. (2009) conclude "social presence indicators decline with the decline in instructor teacher presence indicators" (p. 13). They also concluded "students did reach the integration stage in the threaded discussions, levels of cognitive presence reflecting triggering and exploration were far more common" (p. 17).   However, they caution "placing too much emphasis on the lower phases of the cognitive presence process i.e., triggering and exploration, particularly if we believe that deep meaningful learning does not occur until students move to the integration and resolution stages" (p. 15). Their "results indicate that when the online instructor is leading, students tend to follow; higher

levels of teaching (and social) presence on the part of the instructor tend to lead to higher

levels of social presence from the students" (p. 17). They conclude further research

should be based on identifying instructor presence. This differs greatly from the current

study as the focus is on social presence impacting the community of inquiry where

learners interact with peers online to transition to cognitive presence which will foster

deep meaningful learning. In addition, their findings do not clarify if social presence

activities relate to incentive based requirements for the courses.

In 2009 Shea and Bidjerano conducted a large scale study in excess of two

thousand learners. They reported results which:

> Indicated that the social presence element associated with comfort in online
>
> discussion was the most significant item correlated with variance in the cognitive
>
> presence of the respondents…When students see their instructors taking an active
>
> role in focusing online discussion on relevant issues, they also report higher
>
> cognitive presence. (p. 551)

This differs from the current study as their findings do not mention social interaction of

learners with peers online but concentrate on the social interaction between learners and

teachers. The results also do not specify if high levels of teacher presence are dependent

on motivating students for incentive based forum activity for required grades.

C. Critique of validity of appropriate theory and research literature

Table 9 – A. Weakness of empirical Studies/Methodological Deficiencies

Summary of literature categorized by weakness of empirical studies or methodological deficiencies

Issue	Author(s)
Reliance on teacher presence	Osman and Herring (2007), Maurino (2006),

Issue	Author(s)
	Aragon (2003), Rhode (2009), Gray (2004), Gibbons and Wentworth (2001), Diaz, Swan, Ice, and Kupczynski (2010), Shea et al. (2009), Shea and Bidjerano (2009)
Cross-cultural studies (lack of technological expertise)	Osman and Herring (2007), Henning and Van der Westhuizen (2004)
Low sample size	Conrad (2009), Osman and Herring (2007), Rhode (2009), Henning and Van der Westhuizen (2004)
Vagueness of operational definitions (linked to teacher presence)	Garrison et al. (2000), Rourke et al. (1999), Wheeler (2007)
Researcher involvement	Gray (2004)
Contradictions in theory	Gray (2004)

Table 10 – B. Strengths of empirical Studies [Supports current study]
Summary of literature categorized by strengths of empirical studies which support current study

Issue: social presence and relationship to cognitive presence	Author(s)
Diminishing learning	Rhode (2009), Diaz, Swan, Ice, and Kupczynski (2010)
No significant relationship found in results	Wheeler (2007), Rhode (2009), Maurino (2006)
Validate teacher presence to dominate community of inquiry	Maurino (2006), Rhode (2009), Osman and Herring (2007), Gray (2004), Diaz, Swan, Ice, and Kupczynski (2010), Shea et al. (2009), Shea and Bidjerano (2009)
Limited to learner isolation reduction	Aragon (2003), Gray (2004)
Access to teacher	Osman and Herring (2007), Shea and Bidjerano (2009)
Effectiveness of transitioning mass curriculum	Gibbons and Wentworth (2001), Osman and Herring (2007)

Issue: social presence and relationship to cognitive presence	Author(s)
Technological impact over cognitive presence	Cutler (1995 as cited in Garrison et al., 2000), Henning and Van der Westhuizen (2004)

The research literature reviewed contains design flaws and contradictory results on the validity of social presence sustaining critical or deep meaningful learning, as identified in tables 9 and 10. Numerous quantitative and qualitative studies appear superficial in nature and reliability for generalizing this ideology for constructive learning is weak. The combination of low sample sizes (Conrad, 2009; Rhode, 2009; Henning and Van der Westhuizen, 2004), lack of empirical results (Aragon, 2003; Gibbons and Wentworth, 2001) and cross-cultural studies (Osman and Herring, 2007; Henning and Van der Westhuizen, 2004) involving participants lacking expertise in technology create less than convincing results to generalize findings to all environments or identify a direct correlation to meaningful learning. A number of studies are not conclusive as findings omit the impact of social presence dynamics of the non-absent groups (Conrad, 2009); involve high degrees of teacher presence (Maurino, 2006; Aragon, 2003; Rhode, 2009; Diaz et al., 2010; Shea et al., 2009; Shea and Bidjerano, 2009) or facilitator moderation (Gray, 2004) limiting students to build a community of social presence and fail to reflect learner collaboration and overall knowledge construction. Further diffusion of the social presence theory is illustrated by Wheeler (2007) who conducted a study over a two and a half year period using a sample of 345 participants. The quantitative study revealed significant patterns did not exist between social presence and development of critical or deep meaningful learning; in fact, the operational definition Wheeler (2007) uses for social presence resembles a connectedness to the teacher rather than an establishment of a

community and relationship building. Studies conducted by Maurino (2006), Rhode (2009), Osman and Herring (2007), Diaz et al. (2010), Shea et al. (2009), Shea and Bidjerano (2009) and Gray (2004) validate teacher presence should dominate limiting opportunities for active learning and social presence from learners. Only over time when facilitators decreased activity do students contribute proportionately more activity.

D. Summary of what is known and unknown

The state of existing literature is extensive providing a framework for the current study. Examining various levels of literature with respect to social presence having a contribution to deep meaningful learning, it was discovered that much of the historical research in the late 18th century concentrated on socially learning in an educational institution diverging from predecessors (17th century) who emphasized schools of thought using methods of self-direction, exploration and observation. Progressing to the 19th century, social presence was viewed specifically to benefit workplace or geographically dispersed regions; while other studies focused on the perspective of the teacher for development of deep meaningful learning. Many of the results reveal limitations based on low sample sizes and/or participation in addition to researcher involvement in the study. In particular, the work of Osman and Herring (2007) and Maurino (2006) show findings indicated no significant relationship between social presence and critical, deep meaningful learning.

In 2006 Maurino's conclusion focuses on instructor involvement as a required active element in development of deep learning and critical thinking skills. Maurino

(2006) indicated the lack of tests in the area of social presence in online threaded discussions and further research is needed. Maurino (2006) found instructors to be responsible for providing the scaffolding that allows students to advance from passive (learners receive information without understanding, similar to basic memorizing skill) to deep meaningful learning (learners are active in developing understanding and building skills to apply learning). Maurino (2006) emphasizes the need for more instructor involvement rather than shifting the responsibility to the self-directed learner. Aragon (2003) echoes this rationale by proposing the responsibility for creating social presence exists first with the instructor, but ongoing maintenance extends to the learners. Similarly, Wheeler's (2007) quantitative study revealed significant patterns did not exist between social presence and development of critical meaning. Results of the findings indicated significant interaction with instructor and content with no reference to social activities to enhance critical deep meaningful learning.

A review of the literature reveals extensive work over several decades promoting and imposing social presence theory linking cognitive skills for constructing learning and educational experiences. The core framework of this study is based on the paradigm of a community of inquiry designed by Garrison et al. (2000). Much of the literature and studies reveal social interaction as existing with learners. In conclusion, from the literature review, it was discovered minimal empirical support exists for this assertion. Results that focused on social presence techniques to test validity differ from the researcher's study as these were not targeted to a pure distance education environment for Master's studies (higher education). In fact, some studies indicated no significant

relationship existed between social presence and cognitive activity for deep meaningful learning. In addition, many of the results reveal limitations based on low sample sizes and/or participation in addition to researcher involvement in the study. The methodology for the current study was to enable generalization of the results planned through a large sample size to understand how social presence was not a valid indicator for critical and deep meaningful learning for adults learning in a distance education setting. The objective of this study was to provide a common ground for further studies to determine interpretations of optimal adult learning strategy and paradigm to adopt by learners and teachers for distance education.

Chapter III – Research Procedures

A. Research Methodology

The intent of the study was to demonstrate if existence of social presence was required to contribute to cognitive presence in order to facilitate a deep meaningful learning outcome. The mode of inquiry for this research study was deductive. A large survey sample size of 290 participants was obtained. Actual returned surveys for the study were 25 including follow up telephone interviews conducted with four participants. Contrary to previous studies, this study focused on the perspective of distance education master level students only (including those students enrolled in their 1st year and those students in their final year). The target survey was designed with thirty-six base questions. All information from surveys was transcribed, coded and grouped into clusters for themes. Operational definitions of social presence and deep meaningful learning were provided to participants to ensure responses are framed appropriately.

The study incorporated two phases of research for the analysis for improved validation of data. The first phase of the data collection was derived from creating an online web survey (Lime survey) from the survey questions 1-27, and administering it online (including invitation and consent to participate). This was cost effective, convenient and less time consuming then a mail out survey. The quantitative survey method used a Likert scale for question responses as follows: Strongly Disagree (A), Somewhat Disagree (B), Don't Know (C), Somewhat Agree (D) and Strongly Agree (E). Anonymity of the participants was retained as only letters served to identify their responses. Complete survey that was used online is included in Appendix E.

The second phase of qualitative research involved telephone interviews. The purpose of the second phase was to allow interpretation, exploration and explanation of outliers (multiple regressions – participants with extreme scores, the means, standard deviations and range of scores for variables) derived from the quantitative findings. The qualitative method involved in-depth detailed exploration of research based on open-ended questions. These open-ended interview questions were designed for a qualitative reference of individuals. The data was derived from telephone interviews conducted with participants who agreed to voluntarily provide their contact details from the online survey instrument.

A chi-square test was used to determine association between groups. Creswell (2009) suggests recognizing that all methods have limitations. Researchers felt that biases inherent in any single method could neutralize or cancel the biases of other methods. The study employed mixed methods with a sequential procedure. (Creswell, 2009). The data was cross-sectional, with the data collected at one point in time over a period of two weeks.

The Centre for Distance Education (CDE), on behalf of the researcher, initiated the invitation and consent to Master's Degree Education students by email. Any participants who voluntarily provided contact details in the online survey for participation in the telephone interviews constituted consent as per these original forms provided by the CDE administration in the initial email to students. A selection of these participants was conducted in which four were chosen for a telephone interview. Stratification was not used (gender representation, education or income) in the study. The population consisted of students enrolled in a Master's Distance Education program in their 1st year

and those in their final year. To retain anonymity, the researcher utilized the university's centre for distance education administration for survey distribution handling. This caused several delays in survey distribution in a timely manner due to the lack of a specific process for administration relating to a Master's level survey administered to Master's level students within the same educational institution. The researcher acknowledges as a result the distribution of the survey planned for late fall was administered in late February which may have conflicted with end of term obligations for students, causing a lower than expected return rate for surveys. As a result the size of the population was at a minimum due to the study being employed with a convenient sample of Master's level students enrolled in their final year. Consequently, no generalizations can be made to any other population due to these sample size issues. No pretest of the survey was conducted in order to conserve time.

B. Specific procedures

The study involved questions from the survey and telephone interviews regarding social presence as an impact to deep meaningful learning based on students enrolled in courses in 1st year to finalists in the Master's of Distance Education (MDE) program at a distance education University. This dual perspective covered a broad spectrum of core courses and thesis related research courses.   The intent of the research was to determine an objective perspective of students who continued in the program effectively and reduce the margin of error based on a specific group. In this way the overall impact of social presence can be measured from inception to completion.   Due to circumstances beyond the control of the researcher (as noted in the limitations section of this study), the study

employed a convenient sample of Master's level students enrolled in their final year. Consequently, no generalizations can be made to any other population due to the sample size issues.

For the quantitative research, the total survey sample size was two hundred and ninety participants. On January 31, 2011, an initial request for participation in a quantitative online survey was mailed to distance education master degree program students at a distance education university by a Centre for Distance Education (CDE) administrator, followed by a secondary request two weeks after on February 16, 2011.

Creswell (2007) instructs the researcher to bracket out any personal views for the study and to concentrate on the views of the participants who have experienced this phenomenon (p.60). As an MDE student and researcher for this study, it is necessary to acknowledge and bracket my personal experiences and views of DE. Furthermore, I was not a participant in this study; rather participants were approached and asked to participate voluntarily in the study. The duration of the telephone interviews was thirty minutes to one hour long. Participants were provided a copy of the combined consent form and survey (Appendices B-E).

C. Research Population

 1) The targeted population of the study included various telephone interviews and surveys from the student's perspective, including both students enrolled in their 1st year and those students enrolled in their final year of the Master's Distance Education program—including the thesis project. This was critical to measure a broad spectrum of

students and how they perceive social presence in the development of meaningful

learning experiences.

2) The research was supplemented by follow up telephone interviews with approximately

four MDE students selected from the online survey population.

3) To retain anonymity, the researcher utilized the university's centre for distance

education administration for survey distribution handling. This caused several delays in

survey distribution in a timely manner due to the lack of a specific process for

administration relating to a Master's level survey administered to Master's level students

within the same educational institution. The researcher acknowledges the distribution of

the survey planned for late fall was administered in late February which may have

conflicted with end of term obligations for students, causing a lower than expected return

rate for surveys. As a result the size of the population was at a minimum due to the study

being employed with a convenient sample of Master's level students enrolled in their

final year. Consequently, no generalizations can be made to any other population due to

these sample size issues.

4) The research results were indicative of an online university. Due to circumstances

beyond the control of the researcher (as noted in the limitations and research population

sections of this study), the study employed a convenient sample of Master's level

students enrolled in their final year. Consequently, no generalizations can be made to any

other population due to the sample size issues. Although this university is located in

Canada, the findings would avoid a limited concentration in one urban centre as

enrollment of distance learners are from various countries. Although a majority of students are from Canada, potentially a global perspective could have been achieved.

D. Instrumentation

The compilation of data and storage of the surveys were on a laptop computer which is password protected and secured in the researcher's home office when not in the researcher's active possession.

An online survey of twenty-seven questions was conducted via an on-line survey web method included on the CDE website in order to retrieve a positive sample of recipients. Survey participation along with consent was voluntary and initiated via email distribution from CDE program administrator.

The focus of the research was mixed methods in nature. The survey itself established quantitative research and was supplemented by follow-up interview questions to provide the qualitative basis. The aim was to determine the validity of social presence creating meaningful learning for adult learners in a distance education environment. The survey employed a five-point Likert scale in order to obtain data responses from the perspective of students enrolled in an online Master's of distance education program. This measure signified each participant's attitude with respect to social presence impacting cognitive presence which will foster deep meaningful learning. Neuman (2006) suggests a benefit to using Likert scales is "the simplicity and ease of use…When several items are combined, more comprehensive multiple indicator measurement is possible" (p. 210).

E. Pilot Study

A general pilot study was performed by the researcher in April 2009 involving two MDE students who accepted the invitation for an informal interview regarding general learning experiences encountered from traditional to non-traditional format (distance learning). Information was transcribed during the phone interview, recorded and emailed back to the participants to verify information was transcribed accurately. The researcher gained insight to further investigating online activities learners engage in for a Master's degree in distance education. It had formed the concept to initiate the basis of the current study. As the pilot study questions were broad in nature and reflected satisfaction levels in acquiring knowledge through a distance level course, the questions for the current study were significantly modified and increased to focus specifically on social presence as an element in a community of inquiry.

F. Data Collection

The study was sequential, with the data collected at one point in time over a period of two weeks. The first phase of the data collection was derived from creating an online web survey (Lime survey) from the survey questions 1-27, and administering it online (including invitation and consent to participate). This was cost effective, convenient and less time consuming then a mail out survey. The second phase of the study was from telephone interviews conducted with participants who voluntarily provided their contact details from the online survey instrument. The interviews included

the use of open-ended questions (# 28-33) and additional sub-questions derived based on

the responses from the on-line survey questions and where the significant results

emerged.

For data input and analysis, statistical software (SPSS, Microsoft version 11.0)

was employed. All data (responses) collected from the on-line survey were entered by

direct method into the SPSS software. This enabled generation of frequency and

reliability tables including chi-square tests on each response to determine if the group

response (mean) for the question was significant to enable acceptance of the null

hypothesis. All data was collected confidentially. Interview participants' names were

replaced by pseudonyms which were: F1, F2, M3 and M4 along with a code (Likert scale

letter) representing responses. The data remains confidential as responses are identified

by letters from the Likert scale rather than by response name. Any names or contact

information received by the researcher from participants who volunteered to participate

in the follow-up telephone interviews will be destroyed five years following the

interviews. There was no remuneration for the participation in either the on-line survey

or the follow-up telephone interviews.

The researcher conducted the interviews by phone and listened to the responses,

using a recording device to enable taking notes and ensure accuracy. For the first pass of

interview responses, open coding was used. The researcher located themes and assigned

codes. The second pass of the interview responses involved axial coding whereby

connections, causes and interactions among themes was made through organizing

responses into categories. The last stage in the coding involved selective coding of the

qualitative data in which the researcher examined all of the codes to select data that supported the coding categories developed. The collection of the survey included respondents (students) enrolled in the MDE program at a distance education University. The on-line surveys were posted on the CDE website and included instructions for the students to participate in the survey made accessible through the Lime survey website: http://rsurvey.athabascau.ca/admin .The schedule for the survey distribution is included in Appendix A.

G. Treatment of the Data

Interview methods

The researcher reviewed the survey responses obtained from the survey questions. The mode of inquiry for this research study was deductive. Contrary to previous studies, this study focused on the perspective of distance education master level students only (including those students enrolled in their 1st year and those students in their final year). The study employed mixed methods with a sequential procedure. This involves a combination of quantitative and qualitative research. Operational definitions of social presence and deep meaningful learning were provided to participants to ensure responses were framed appropriately.

The target survey was designed with twenty-seven base questions. For data collection and analysis, statistical software (SPSS, Microsoft version 11.0) was used. All data (responses) collected from the on-line survey was entered by direct method into the SPSS software. This enabled generation of frequency and reliability tables including chi-

square tests on each response to determine if the group response (mean) for the question was significant to enable acceptance of null hypothesis. Each response category was assigned a data point on the scale (A to E) which was used for quantifying the results. The quantitative survey method used a Likert scale for question responses as follows: Strongly Disagree (A), Somewhat Disagree (B), Don't Know (C), Somewhat Agree (D) and Strongly Agree (E). Anonymity of the participants was retained as only letters served to identify their responses. A qualitative method survey followed in the form of follow-up telephone interviews with respondents who agreed to participate. The qualitative method involved in-depth detailed exploration of research based on open-ended questions. The size of the population was targeted to two hundred and ninety participants; however, the survey return rate was minimal at twenty-five. A Likert scale was used in the online survey only. The telephone interview consisted of open-ended questions. No pilot test was used to conserve time. For validation of data, as both a quantitative survey followed by a qualitative set of open-ended questions were being deployed a sequential explanatory strategy was used (Creswell, 2009).

These open-ended interview questions were designed for a qualitative reference of individuals in order to further validate results. For the qualitative survey, the responses from the questions were coded to determine the range of significant driving factors, such as: not interested, social interaction distracts learning, no sense of community – power learners, no obstacles to learning, no change, confirms social presence connected to deep learning, confirms teacher presence connected to deep learning. The responses were categorized using open-coding (associate responses to categories) followed by axial coding (association of responses in categories to create themes). In order to select the

survey respondents as participants in the follow-up interview, the researcher reviewed the

surveys received for respondents who included their contact information as per the

invitation consent form: "Providing contact information (your contact E-mail or phone

number) at the end of the survey means that you agree to participate in the follow-up

interview, if selected." (Appendix B – Online Survey Consent form). The follow-up

interviews were conducted over the phone. The researcher conducted four follow-up

interview sessions, based on responses to voluntary interview participation, with graduate

level students enrolled in their final year of the Master's of Distance education program

at an online university. Due to the time consuming nature of conducting telephone

interviews, in order to obtain a rich data sample from the pool of surveys, an examination

of survey responses was conducted to determine outliers. From this selection of

participants, four were chosen for a telephone interview. No stratification was used

(gender representation, education or income) prior to sampling. Although conducting

group forum sessions with MDE students would have provided an opportunity to observe

group dynamics and perform a discourse analysis, due to the logistics of residency of

some MDE students outside of Ontario, these sessions were not conducted. Interview

participants' names were replaced by pseudonyms: F1, F2, M3 and M4 and a code

(Likert scale letter) to represent responses. Data was identifiable only to the extent the

participants agreed to provide their contact information for follow-up telephone

interviews. During the phone interviews, responses were listened to, recorded on tape and

written in draft notes by the researcher.

The responses are published in the final thesis document and are identified by

pseudonyms only; any names and contact information are not disclosed. All information

from surveys was transcribed, coded and grouped into clusters for themes. There was no remuneration for the participation in either the on-line survey or the follow-up telephone interviews.

For the first pass of interview responses, open coding was used. The researcher located themes and assigned codes. The second pass of the interview responses involved axial coding whereby connections, causes and interactions among themes were made through organizing into categories. The first phase of research involved an analysis of the quantitative data followed by telephone interviews to form the qualitative phase of the research. This second phase served to interpret and explore outliers (multiple regressions – participants with extreme scores, the means, standard deviations and range of scores for variables) derived from the quantitative findings. A chi-square test was used to determine association between groups.

The last stage in the coding involved selective coding of the qualitative data in which the researcher examined all of the codes to select data that supported the coding categories developed. The compilation of data and storage of the surveys was on a laptop computer which is password protected and secured in the researcher's home office when not in the researcher's active possession.

Respect for Privacy and Confidentiality

The study was approved by Athabasca University's Research Ethics Board (REB). The approval letters are included in Appendix E. To protect each individual participating, names and contact details of participants were substituted with the numbers F1, F2, M3 and M4. Each participant was asked to verbally respond to the survey

questions during the telephone interview. Some attempt was made to transcribe verbatim

results. Where accuracy of the statement was required the researcher read the responses

back to the participant for confirmation. Data was stored on a computer and locked with a

password. To retain confidentiality the original data will be destroyed after a period of

five years. Following the compilation of the data and research, all confidential

information will be destroyed. All information will be erased from hard drives or other

electronic media.

Chapter IV - Results

This study examines and explores the claims that support the assertion of social presence theory impacting the community of inquiry as a central model for cognitive learning of adults in distance education (DE) which facilitates an outcome of deep meaningful learning. The purpose of this study is to test the validity of social presence assertions with respect to developing deep meaningful learning from the perspective of students engaged in distance education Master's studies. The study employs mixed methods with a sequential procedure. This involves a combination of quantitative and qualitative research. This was a study which employed a convenient sample of students enrolled at the graduate level; due to limited participation generalizations cannot be made to any population.

Quantitative Data Results

Of the total sample distribution, twenty-five participants engaged in the online survey of twenty-seven questions. Of the twenty-five participants, three did not complete the entire survey and therefore were excluded from the data results. Table 11 provides detail on the participation rate for the online survey.

A web survey instrument called Limesurvey was used to facilitate survey response input by participants in order to retain anonymity of participants. To ensure data integrity, web survey responses were directly exported into statistical software without manual intervention. For the quantitative data, statistical analysis was performed by the researcher using SPSS 11.0 version for windows. Once data was exported, the

researcher performed an audit of the data to ensure completeness and accuracy of the data

extract. The final participant sample included twenty-two respondents for twenty-seven

questions based on a five point Likert scale for a total of five hundred and ninety-four

potential responses (original online survey questions and results are included in Appendix

F). Of the twenty-two respondents, eighteen provided their name and contact information

for a potential telephone interview follow-up. For the selection of interview participants,

the researcher reviewed the survey responses to determine those participants who

selected a significant answer from the Likert scale (such as Strongly Disagree or Strongly

Agree). Of the total respondents, shown in table 11, four who selected significant

responses in the survey, were chosen to participate in a one hour follow-up telephone

interview.

Table 11 – Quantitative online survey Participation Rate
Represents participation rate from Quantitative online survey for current study

MDE degree students Mailed	Number of Participants in online Survey	% Response Rate	Number of Completed Responses for online Survey	% of Completed Responses	Number of Respondents providing contact information	% of participants chosen in telephone survey
290	25	9 %	22	88%	18	22%

Non-parametric chi-square tests were used to analyze the association between two

variables such as projecting socially in a community of learners to enhance deep

meaningful learning. A statistical significance level factor of probability (p) p>0.05 was

used to indicate there was a 95 percent chance that the quantitative results were not due to

a chance factor alone but accurately reflected the population. The assumption in using

the chi-square statistic is that each respondent observation from the quantitative online

survey is independent. Each respondent was different and only responded to the total of

twenty-seven questions in the online survey once. For each of the questions, the

probability factor used was 0.05. If the statistic result shows a significance factor greater

than 0.05, this translates to the null hypothesis being accepted as the difference between

the expected frequency and the observed frequency is due to chance alone. If the statistic

result shows a significance factor less than 0.05, this translates to the null hypothesis

being rejected as the difference between the expected frequency and the observed

frequency based on an association rather than due to chance alone.

Table 12 – Chi-square non-parametric test: Category: Conceptual Framework, Questions 1-6
Represents chi-square non-parametric test results for questions one to six in the conceptual framework category (social presence as it relates to online learning)

Question	Chi-Square Statistic	Asymp.Sig. factor	Degrees of Freedom (df)	Observed Number (N)	Significant
1	1.727	0.422	2	22	No
2	1.182	0.554	2	22	No
3	18.0	0.000	3	22	Yes
4	2.364	0.500	3	22	No
5	4.818	0.306	4	22	No
6	3.818	0.282	3	22	No

The category of 'conceptual framework' in table 12 reflects the concept of social

presence as it relates to online distance learning for a Master's degree program. For the

results of the first set of questions within this category, five of the six questions reveal

that there is no significant correlation between the observed and expected responses. The questions relate to projecting a personality as a real person in the community of inquiry in order to build relationships with fellow online learners (including chatting) which helps to enhance deep meaningful learning. However, the results of question three (as part of a community of learners where social presence can exist, as an online learner do you engage in building relationships to support deep meaningful learning?) reveal there is a significant association between the observed responses and expected responses. Although the results are very significant, the researcher further investigated this aspect in the qualitative results which revealed a learners' preference to engage in self-directed learning to acquire knowledge rather than consume time building relationships online. In fact, figure 2 reveals a number of respondents differentiated from the norm of the central data tendency, represented by the non-symmetric shape or distribution of the frequency.
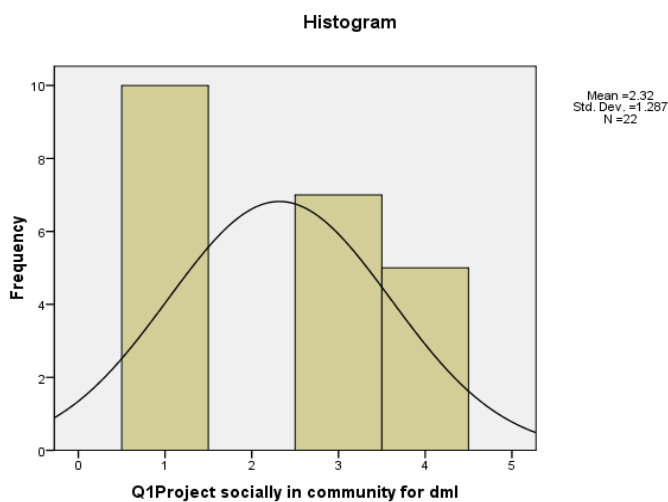
Figure 2. A histogram generated from the quantitative results survey in relation to question one of learners projecting socially to build relationships by projecting personal

characteristics as a real person to enhance deep meaningful learning in a community of

inquiry for deep meaningful learning.

In figure 2 the bar denoted as one reflects the Likert scale response of somewhat

disagree and shows a high frequency of 10 or 45.5% of the survey sample. This reveals

learners disagree with this approach. An analysis of the qualitative results indicated

learners experience participation withdrawal and focus on independent activities to

enhance deep meaningful learning.

Table 13 - Category: Indicators of Cognitive Activity, Questions 7-15
Represents chi-square non-parametric test results for questions seven to fifteen in the indicators of cognitive activity category (associated with deep meaningful learning)

Question	Chi-Square Statistic	Asymp.Sig. factor	Degrees of Freedom (df)	Observed Number (N)	Significant
7	6.182	0.186	4	22	No
8	11.091	0.011	3	22	Yes
9	9.364	0.053	4	22	No
10	22.545	0.000	4	22	Yes
11	5.273	0.260	4	22	No
12	4.545	0.208	3	22	No
13	5.273	0.153	3	22	No
14	8.000	0.092	4	22	No
15	3.091	0.378	3	22	No

The category 'indicators of cognitive activity' in table 13 reflects the associated

with deep meaningful learning as it relates to online distance learning for a Master's

degree program. For the results of the second set of questions within this category, seven

of the nine questions reveal that there is no correlation between the observed and

expected responses. The questions within this category relate to trusting the presence of

other learners online to motivate critical inquiry, collaboration among learners in group

work to exchange ideas and develop cognitive learning. The content of three questions

relate to presence of other learners for deep meaningful learning (question nine), self-

directed learning (question twelve) and removing social presence to develop cognitive

learning (question thirteen).   Of the nine questions, two questions revealed significant

association. Respondents indicated that collaboration in group work promotes cognitive

learning and cognitive learning would only occur if a teacher was present to moderate

online discussions.   This dependency on teacher presence is also revealed in the

qualitative results. The results of the central tendency reflect significant activity

(indicated uneven distribution of activity above the line of normal tendency) in support of

working independently.
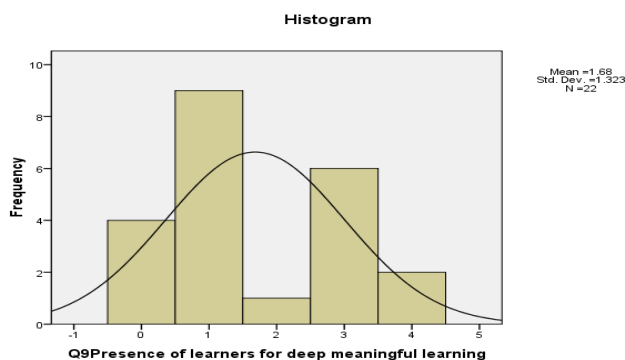
Figure 3. A histogram generated from the quantitative results survey in relation to

question nine for the presence of learners required to support deep meaningful learning.

For question nine, the bar in figure 3 denoted as bar number one reflects the

Likert scale response of somewhat disagree and shows a high frequency of 9 or 40.9% of

the survey sample for question nine. This reveals learners to work independently and not

rely on peers for developing deep meaningful learning. Compared to the qualitative

results most learners agree that social presence inhibits deep learning. This is further

supported by figure 4 for question twelve which relates to whether online distance

Master's education program learners would gain deep meaningful learning working on

their own. Respondents indicated they somewhat and strongly agree working on their

own is more beneficial. This is depicted by the identical bar results three and four, each at

8 or 36.4%

Histogram

Mean =2.68
Std. Dev. =1.46
N =22

Q12Masters dml by working on own
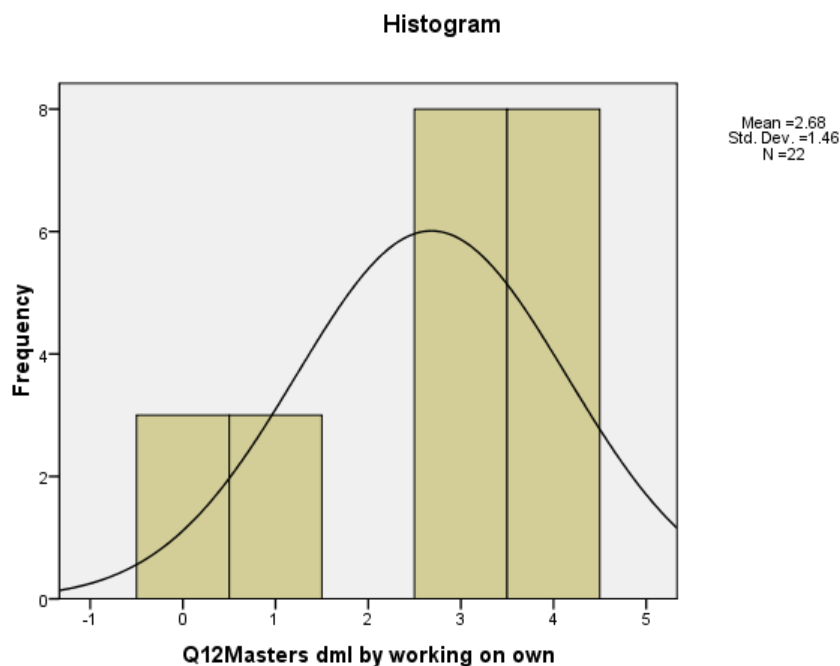
Figure 4. A histogram generated from the quantitative results survey in relation to question twelve for Master's level students creating deep meaningful learning by working on their own.

Similar results exist for the qualitative data indicating most learners enhance deep meaningful learning by engaging in self-directed knowledge activities. For question thirteen, figure 5, removing social presence for cognitive learning to occur, respondents indicated that they somewhat and strongly agree. This further supports the argument of no association between the variables cognitive learning and social presence. The bar chart reveals agreement in bars three and four at 9 or 40.9% and 7 or 31.8%.

Histogram

Mean =2.68
Std. Dev. =1.359
N =22

Q13If sp didn't exist would cognitive learning still occur
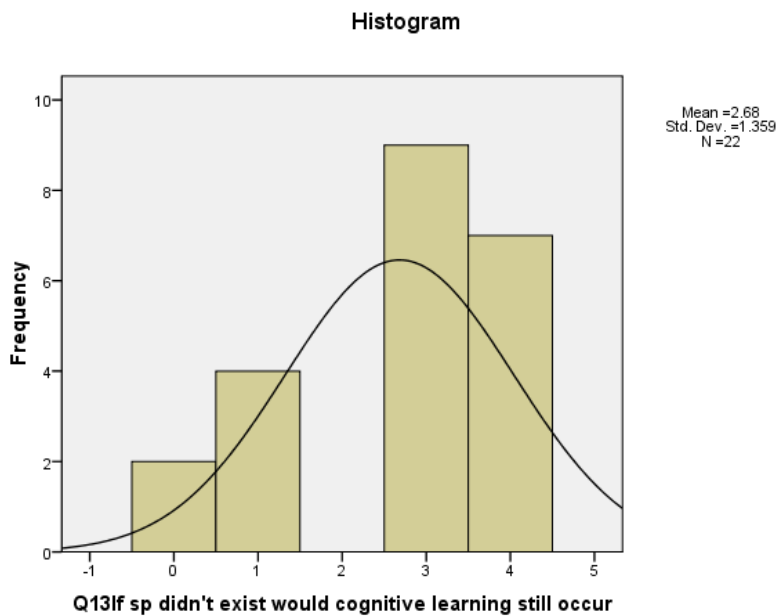
Figure 5. A histogram generated from the quantitative results survey in relation to question thirteen if social presence did not exist would cognitive learning still occur for learners.

Respondents indicated they somewhat and strongly agree working on their own is more beneficial. This is depicted by the identical bar results three and four, each at 8 or 36.4%. In further support of this argument similar responses occurred for question fourteen, relating to exchanging and validating ideas with other online learners to gain deep meaningful learning. Figure 6 indicated by bars zero and one for strongly and somewhat disagree at 3 or 13.6% and 8 or 36.4%. Learners therefore create ideas on their own rather than exchange with fellow online learners. The chart also reveals that the respondents were also in agreement with this concept. To validate these results, this question was included in the interview and data results supported the disagreement that learners do not exchange ideas to gain deep meaningful learning.

Histogram

Mean =1.95
Std. Dev. =1.362
N =22

Q14Need to exchange ideas to gain dml
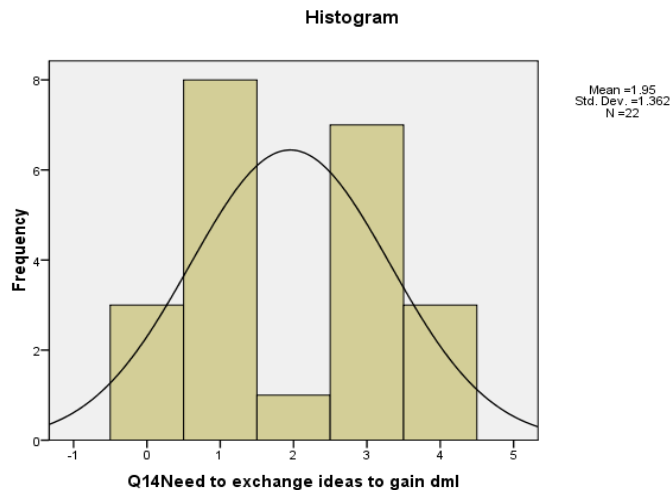
Figure 6. A histogram generated from the quantitative results survey in relation to question fourteen for learners having the need to exchange ideas to gain deep meaningful learning.

Table 14 – Category: Effectiveness of Claims, Questions 16-23
Represents chi-square non-parametric test results for questions sixteen to twenty-three in the effectiveness of claims category (social presence contributing to deep meaningful learning)

Question	Chi-Square Statistic	Asymp.Sig. factor	Degrees of Freedom (df)	Observed Number (N)	Significant
16	32.091	0.000	4	22	Yes
17	14.000	0.003	3	22	Yes
18	7.091	0.131	4	22	No
19	6.182	0.186	4	22	No
20	1.636	0.651	3	22	No
21	1.636	0.651	3	22	No
22	3.909	0.418	4	22	No
23	2.545	0.637	4	22	No

The category 'effectiveness of claims' in table 14 reflects the indicators of social presence contributing to deep meaningful learning as it relates to online distance learning for a Master's degree program. For the results of the third set of questions within this category, six of the eight questions reveal that there is no correlation between the observed and expected responses. The questions within this category relate to projecting personal characteristics into the community of inquiry to influence the effectiveness of knowledge, using online participation for creative problem exploration, learners experiencing intimidation from fellow learners exhibiting control and authority in discussions. In fact, the central tendency distribution for question nineteen, if a community of online learners exhibited control and authority would learners become

intimidated and not participate, figure 7 shows a high disagreement for bars zero and one

for 8 or 36.4% and 5 or 22.7%. This reveals learners are not intimated by authoritative

fellow online learners. The majority of the data reflects a symmetrical distribution.
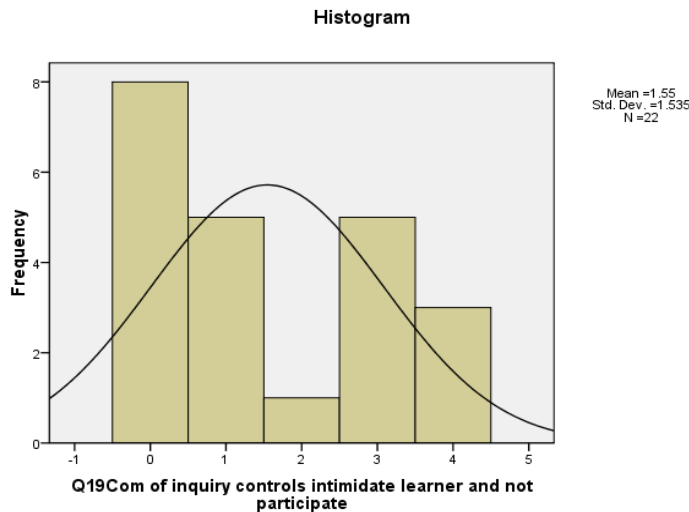
Figure 7. A histogram generated from the quantitative results survey in relation to

question nineteen of online learners in a community of inquiry that control and intimidate

other learners causing non-participation.

Furthermore, there is a strong indication of learners gaining deep meaningful

learning even with the absence of social presence. In association with this argument, the

data from question twenty (figure 8) and question twenty-one (figure 9) reveal high

frequency. For question twenty respondents indicated a strongly and somewhat disagree

at 5 or 22.7% for both bars zero and one; although a number of respondents also

indicated they somewhat and strongly agree in bars three and four at a higher frequency

of 8 or 36.4% and 4 or 18.18%. The results of question twenty-one, relating high levels

of social presence required to support deep and meaningful learning, support the data

result in question twenty as they strongly and somewhat disagree at 6 or 27.3% and 7 or

31.8% that high levels of social presence are required in order to develop deep

meaningful learning. Survey respondents rely on independent learning rather than

engaging in social presence online in order to develop deep meaningful learning.

Histogram

Mean =2.05
Std. Dev. =1.527
N =22

Q20If sp didn't exist and no interact in comm inquiry negative dml
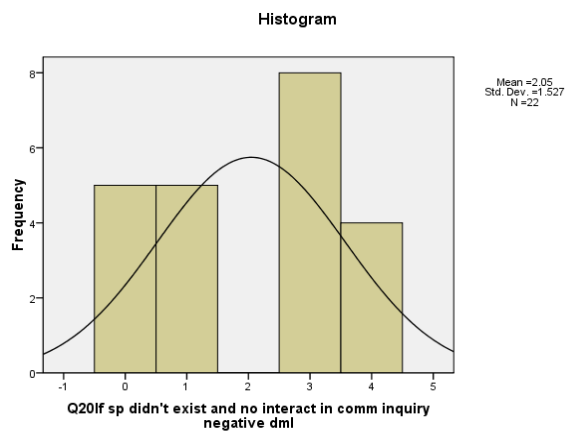
Figure 8. A histogram generated from the quantitative results survey in relation to

question twenty, learners experiencing a negative impact to deep meaningful learning if

social presence did not exist.

Histogram

Mean =1.68
Std. Dev. =1.492
N =22

Q21High levels of sp needed for dml
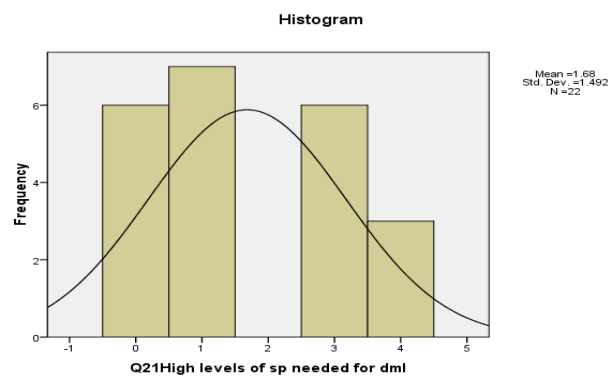
Figure 9. A histogram generated from the quantitative results survey in relation to question twenty-one of learners requiring high levels of social presence for deep meaningful learning to occur.

Of the eight questions, two questions revealed significant association. Respondents indicated that projecting personal characteristics into the community of inquiry influences knowledge acquisition and actively participating online promotes creative problem exploration. This strong correlation was further explored with the qualitative data which revealed learners prefer to be self-reliant.

Table 15 - Category: Relationship/Existence of social presence to deep meaningful learning, Questions 24-27
Represents chi-square non-parametric test results for questions twenty-four to twenty-seven for the relationship building and existence of social presence for deep meaningful learning category

Question	Chi-Square Statistic	Asymp.Sig. factor	Degrees of Freedom (df)	Observed Number (N)	Significant
24	6.727	0.081	3	22	No
25	16.636	0.002	4	22	Yes
26	8.182	0.042	3	22	Yes
27	15.273	0.004	4	22	Yes

The category 'relationship/existence of social presence to deep meaningful learning' in table 15 reflects the correlation of social presence to deep meaningful learning as it relates to online distance learning for a Master's degree program. For the results of the fourth set of questions within this category, one of the four questions

reveals that there is no correlation between the observed and expected responses. The

questions within this category relate to emotional online interaction hindering deep

meaningful learning, depending on other learners to stimulate the thinking process and

better instructor efforts is required to improve deep learning. Of the four questions, three

questions revealed significant association. Respondents indicated that online chat

significantly contributes to developing authentic group collaboration for knowledge

building, improving instructor efforts to improve deep learning and a relying on other

learners to stimulate the thinking process.   This strong correlation was further explored

with the qualitative data which revealed learners prefer to work independently as group

collaboration and active online participation can hinder learning.   The majority of

learners reflect a strong reliance on teachers to improve deep meaningful learning. This

is revealed both in the frequency results and the qualitative data. Question twenty-seven

figure 10, indicates a somewhat and strongly agree result in the bars three and four at 11

or 50% and 5 or 22.7%. A reliance on teacher presence for access, discussion moderation

and clarity is indicative of the qualitative results also.
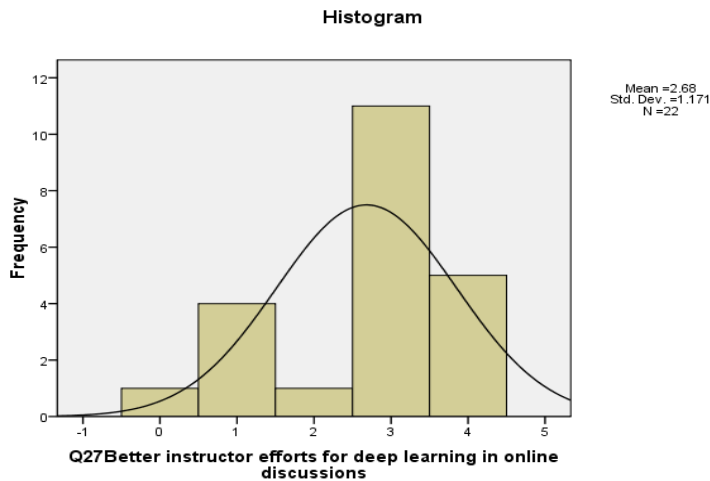
Figure 10. A histogram generated from the quantitative results survey in relation to question twenty-seven where better instructor efforts are required for deep meaningful learning to occur in online discussions.

Qualitative Data Results

For the qualitative data, each respondent was interviewed separately by telephone. The telephone call was recorded on tape and later transcribed through a manual process of reviewing and listening to each recorded tape. The transcription was typed into a word document. The number of questions varied depending on the interview responses where sub-questions may have been appropriate (original interview verbatim transcript including axial codes and categories assigned is included in Appendix G). To retain anonymity, respondent names have been removed from this transcript and replaced with the following gender/numeric identifier: F1 = Female participant 1; F2 = Female participant 2; M3 = Male participant 3; M4 = Male participant 4.   Selection of telephone interview respondents was not dependent on gender. A gender analysis is not included in the results review. From the telephone interviews with the four participants, eighty-two

total responses were recorded. Table 16 provides detail on the question distribution for

each respondent.

Table 16 – Qualitative Telephone interview question distribution
Represents interview question distribution results for qualitative telephone interviews with participants

Respondent	Number of Questions responded to by Participant during telephone interview
F1 (Female participant # 1)	24 questions and responses
F2 (Female participant # 2)	30 questions and responses
M3 (Male participant # 3)	12 questions and responses
M4 (Male participant # 4)	16 questions and responses
Total Responses	82 questions and responses

In order to analyze the qualitative data, the interview transcripts (see Appendix G)

were assessed using a coding approach, categorized and analyzed for patterns for

correlations to be determined to understand the outcome of results. A number of patterns

(category themes) emerged from the transcripts and these included: teacher presence

dependency, cognitive learning unrelated to social presence (sp), building relationships

inhibits deep meaningful learning (dml), social organization of learner, learner strategy,

self-directed learning, life long learning, social presence has no effect on domain of

learner and collaboration distracts deep meaningful learning.

The transcript from each meeting was initially coded for terms emerging from the discourse such as key words and phrases. Three exact copies of the transcripts were made in order to facilitate ease of reading and marking the codes. The first copy involved an open coding process. The first copy was used to code the data based on initial reaction to the discourse from each meeting. The open codes were written using a green colored pencil on the margins of the transcript to offset them from the main discourse. The second copy and reading of the transcript facilitated re-coding or axial coding to validate the initial original coding identification. The axial codes were written using a red colored pencil. The third copy was used to facilitate addition of ideas and notes as the margins were not wide enough to allow legibility of both codes and notes. The purpose of this exercise was to substantiate and validate the reason for the code. All open and axial codes were entered into an excel spreadsheet program for ease of sorting capability. The axial codes were sorted in order to derive a frequency table. A combined analysis of codes and notes followed using the three copies of the transcript. Additional notes taken along with the codes and key words were reviewed to illustrate emerging patterns and linked ideas or repetition of codes in order to identify themes or categories. The fourth assessment of the transcript involved transferring the handwritten and themes identified based on the sorted frequency from the spreadsheet program into the transcript word document.

The bracketed codes represent the category themes. These are identified within a bracket twice appearing before and after each participant's response that was relevant for coding. The selected axial codes follow the bracketed code and these are preceded by the word CODE=. Based on the analysis and interpretation of the transcripts and the coding

process, selective codes were chosen which appeared relevant to the ideas and patterns

emerging from the discourse. For ease of reference the codes, categories and associating

frequency identified from the transcript (Appendix G) have been placed in tables.

The first table (17) illustrates the axial codes and the number of times these

occurred during the discourse. The second table (18) illustrates the category themes and

associated frequency. The purpose of the first two tables is to illustrate a summary of the

codes/categories and identifiable patterns (frequency) from the transcript (Appendix G).

The third table (19) merges these above two tables and is followed by a data discourse

analysis of emerging themes identified which test the validity of social presence

assertions with respect to developing deep meaningful learning from the perspective of

students engaged in distance education Master's studies. The transcript is analyzed to

understand the nature of the themes and categories that emerged from the discussions

with the interview participants. To retain privacy, university names have been removed

and replaced with the italicized words: *a distance education university*.

Table 17 – Axial Code and Frequency
Represents qualitative axial coding derived from participant responses following qualitative telephone interviews

Axial Code	Frequency	Frequency % of Total
TP for learning (complex) and DML	28	7%
Cognitive learning w/o SP	14	4%
TP access for questions, impacts learning	17	4%
No bldg relationships for idea generation	4	1%
Blg relationships (emoticons) detriment to learning, not for dml	12	3%
Forums need TP to moderate	13	3%
SP to reduce isolation	11	3%
Build own thoughts/theory for dml, self-idea generator	28	7%
cognitive learning w TP	4	1%
self discovery, exploration for dml, self	18	5%

SOCIAL PRESENCE IMPACTING COGNITIVE LEARNING

Axial Code	Frequency	Frequency % of Total
knowledge		
creates dml on own, reading, own research, independent	75	20%
DML – created by connected to prior knwl, experience	7	2%
SP, discussions inhibits learning	20	5%
help others, forums mechanism to aid others	18	5%
multiple perspectives inhibits complex learning	8	2%he
Value one-one, time with TP	8	2%
dml unrelated to SP	29	8%
non-peer reliance for dml	50	13%
Grp Work distracting,not helpful,doesn't increase DML	17	4%
Total	**381**	100%

Table 18 – Category and associated Frequency by Respondent
Represents analysis of associated frequency of themes derived from participant responses following qualitative telephone interviews

Respondent	Category	Frequency
F1	Teacher Presence Dependency	4
	Cognitive Learning unrelated to SP	5
	Building Relationships inhibits DML	2
	Social Organization of Learner	9
	Learner Strategy	5
	Self-directed learning	5
	Life-long learning	1
	SP no effect on Learner's Domain	10
	Collaboration distracts DML	3
F2	Teacher Presence Dependency	13
	Cognitive Learning unrelated to SP	6
	Building Relationships inhibits DML	3
	Social Organization of Learner	2
	Learner Strategy	8
	Self-directed learning	9
	Life-long learning	0
	SP no effect on Learner's Domain	18
	Collaboration distracts DML	6
M3	Teacher Presence Dependency	5
	Cognitive Learning unrelated to SP	4

Respondent	Category	Frequency
	Building Relationships inhibits DML	1
	Social Organization of Learner	5
	Learner Strategy	8
	Self-directed learning	4
	Life-long learning	2
	SP no effect on Learner's Domain	11
	Collaboration distracts DML	1
M4	Teacher Presence Dependency	3
	Cognitive Learning unrelated to SP	3
	Building Relationships inhibits DML	4
	Social Organization of Learner	6
	Learner Strategy	7
	Self-directed learning	5
	Life-long learning	0
	SP no effect on Learner's Domain	13
	Collaboration distracts DML	0

Table 19 – Category, Codes and associated Frequency
Represents summary and distribution of category, codes and associated frequency derived from participant responses following qualitative telephone interviews

Category	Axial Code	Frqncy	% of Total
Teacher Presence Dependency	TP for learning (complex) and DML	19	4%
	TP access for questions, impacts learning	28	5%
	Forums need TP to moderate	11	2%
	cognitive learning w TP	19	4%
	Value one-one, time with TP	18	3%
	Total frequency by Category	**95**	18%
Cognitive Learning unrelated to SP	Cognitive learning w/o SP	29	5%
	Total frequency by Category	**29**	5%
Building Relationships inhibits DML	No bldg relationships for idea generation	10	2%
	Blg relationships (emoticons) detriment to learning, not for dml	13	2%
	Total frequency by Category	**23**	4%
Social Organization of	SP to reduce isolation	16	3%

Category	Axial Code	Frqncy	% of Total
Learner			
	help others, forums mechanism to aid others	27	5%
	Total frequency by Category	**43**	8%
Learner Strategy	Build own thoughts/theory for dml, self-idea generator	42	8%
	self discovery, exploration for dml, self knowledge,	40	8%
	Total frequency by Category	**82**	16%
Self-directed learning	creates dml on own, reading, own research, independent	65	12%
	Total frequency by Category	**65**	12%
Life-long learning	DML - created by connected to prior knwl, experience	4	1%
	Total frequency by Category	**4**	1%
SP no effect on Learner's Domain	SP, discussions inhibits learning	15	3%
	dml unrelated to SP	44	8%
	non-peer reliance for dml	102	19%
	Total frequency by Category	**161**	30%
Collaboration distracts DML	multiple perspectives inhibits complex learning	14	3%
	Grp Work distracting,not helpful,doesn't increase DML	14	3%
	Total frequency by Category	**28**	6%
	Total	530	100%

Summary of Axial and Category data

From the axial code frequency table it is apparent categories of emerging patterns

with the highest frequency relate to similar conclusion of significant outliers with the

quantitative data. Of the total 530 responses, in order of significance, the major

categories include social presence (sp) has no effect on learner's domain (frequency of

161 or 30%), teacher presence dependency (frequency of 95 or 18%), learner strategy (frequency of 65 or 12%) and social organization of learner (frequency of 43 or 8%). The remaining categories have a lower frequency and include collaboration distracts deep meaningful learning (dml) (frequency of 28 or 6%), cognitive learning unrelated to sp (frequency of 29 or 5%), building relationship inhibits dml (frequency of 23 or 4%), social organization of learner (frequency of 10 or 2%) and life-long learning (frequency of 4 or 1%).

Within the first online survey category of conceptual framework of social presence, in comparison to the quantitative results significant data varying from the central tendency revealed a high disagreement of 45.5% for question one of projecting socially in a community in order to gain deep meaningful learning (dml). This is associated with the qualitative data with the highest frequency of 161 responses or 30% reporting that social presence (sp) does not effect a learner's domain. The axial codes which relate to this category include sp discussions inhibits learning, dml is unrelated to sp and a high degree of non-peer reliance for gaining dml.

In the second online survey category of indicators of cognitive activity, three questions are highly correlated to the qualitative results. For question nine in the online survey, the presence of other learners required for gaining dml, a high number of respondents, 40.9%, indicated disagreement. Respondents also indicated a high frequency of agreement, 36.4%, in question twelve relating to online MDE students working on their own to gain dml. Further to this, question thirteen, removing sp for cognitive learning to occur, shows a high agreement of 40.9%. All three questions correlate to the qualitative research data revealing a strong independence in learning.

Learners are motivated by self-directed activities on non-peer reliance and self-creation of dml through self-discovery, personal research and exploration. Learners emphasized in discourse, cognitive and deep meaningful learning are both unrelated to social presence. Further to this concept, the results for question fourteen, relating to exchange of ideas online with other learners to gain dml, indicate learners somewhat and strongly disagree at 36.4%. In the discourse this relates to sp having no effect on the learner's domain, cognitive learning unrelated to sp and learner strategy. Another significant outlier revealing a disagreement of 36.4%, in the quantitative results was question nineteen, online learners exhibiting strong authority would intimidate other learners. This relates to the interview discourse associated with self-directed learning and sp has no impact on learner's domain. Both of these categories emphasize a learner independence and non-reliance of peers which would indicate they would not be impacted by controlling online learners as they would have minimal interaction with online fellow learners.

In the third category of the quantitative survey, effectiveness of claims, question twenty, relating to negative impact to dml if sp didn't exist, shows a high disagreement of 22.7%. This reveals sp is not directly associated or has any valid impact on dml. This result is also supported in the qualitative discourse where a high frequency of codes appear in the sp has no impact to dml category. Learners are not dependent on sp to gain dml. The following question in the online survey was question twenty-one, high levels of sp are required to support dml, revealed similar results of somewhat and strong disagreement indicated at 31.8% and 27.3%. In relation to the qualitative results, learners

express a high level of independence on self-directed learning and creating their own dml without the reliance on peer online learners.

The final question in the quantitative survey shows significant variance from the central tendency, agreement at 50%. This question relates to better instructor efforts are needed to improve dml and correlates highly with the qualitative results where learners frequently expressed they value the time with the teacher and emphasized the need to access teachers for questions and dml.

Qualitative Discourse Analysis

Respondent: F1 (personal communication, March 10, 2011)

Frequency Categories > 5 (see table 18): SP no effect on learner's domain, social organization of learner, self-directed learning, learner strategy, cognitive learning unrelated to sp

The first participant, F1, describes herself as a passive learner who doesn't rely on social presence for learning. During the telephone interview with the F1, several questions evoked a response of social presence having no effect on learner's domain. She emphasizes the distraction she experiences online by fellow learners. "I was getting into the information rather than...being distracted having to participate online" (Appendix H, p. 163). F1 discovered that fellow learners who spend time engaging in social relationship building through side chatting or use of emoticons consumes valuable time for learning. "I would find it more beneficial because I don't really want to have to weed through what is relevant and what isn't and then yes I agree comments are kind of a waste of time" (Appendix H, p. 159). Her objective as a learner is to focus on learning. "I just want to get my learning done and not really into the social side of it" (Appendix H, p. 158).

She pursues creating dml on her own through her own research, reading and non reliance on peers.   The high frequency of sp having no effect on the learner's domain is representative in F1 commentary that online sp is neither related nor effective in facilitating deep meaningful learning. "It's not really structured to provide any type of learning or deeper learning is the way I look at it" (Appendix H, p. 162). This was an argument put forth by Rousseau (1768) when he described optimum learning as self-creation and observance. Learner's independence is discussed by F1 when she describes her learning strategy of independent research, reading and self-exploring to gain dml. "I do a lot of research outside… I will do my own research and start digging quite deep into that topic– and other readings, journal articles" (Appendix H, p. 159). She discusses how she creates dml by building on the personal research, her own ideas and connecting to her own knowledge or life experience in order to understand and acquire dml. "I do find that if make a connection to what I know in some way it may not be 100%...you can connect it here to life experience or prior learning it makes more sense." (Appendix H, p. 161).

The social organization of the learner F1 reflects a learning decision to withdraw from participation or activity online as it does not, in her perspective, provide a benefit to develop deep meaningful learning. She concentrates on self-directed learning as she finds sp online to be distractive to her cognitive learning. "SP aspect can quite often be a distraction…I can concentrate more on what I want to be learning and expanding my knowledge in a particular subject" (Appendix H, p. 163). From the researcher's question thirty-five: "would you say when you're focusing on the learning, do you obtain that from sp or yourself independently" (Appendix H, p. 165); her response was: "Myself independently" (Appendix H, p. 165). The perspective for F1 is she does not regard

social presence as influencing her learning ability is "I personally am not a sp person, so I

don't find that it impacts in any way with my learning" (Appendix H, p. 158). Given the

social organization of this learner she does recognize the need for some learners to utilize

and benefit from interactive online discussions to reduce isolation and connect with other

learners having the same objective. "It provides a connection with people who are going

through the same thing. I guess that's the bottom line" (Appendix H, p. 158).

Other factors of importance to F1 include how she values her one-to-one time

with the teacher in order to gain clarity. She views teacher presence to be critical to

improving online forums by adding structure and guidance. She prefers instructors to

participate on an equal basis or subject matter expert to enable valuable dml rather than

directing the online activities. "I don't think it's worthwhile…they can participate but not

necessarily as a teacher but more… not even authority, but in essence, as subject matter

expert" (Appendix H, p. 165). F1 describes how teacher immediacy and accessibility are

important factors in efficiency of learning over reliance on peers. "Definitely, yeah it's

nice to know the teacher was there if you really need it…you can ask questions knowing

you are going to get a response" (Appendix H, p. 165)

Respondent: F2 (personal communication, March 9, 2011)

Frequency Categories > 5 (see table 18): SP no effect on learner's domain, teacher presence dependency, self-directed learning, learner strategy, cognitive learning unrelated to sp, collaboration distracts dml

The second participant, F2, identifies herself as an independent learner who does

not rely on social presence to effect her learning ability or develop deep meaningful

learning. "I don't really know that it does effect my learning. I learn very well on my

own" (Appendix H, p. 167).   In fact, she argues that multiple discussions online by fellow learners, hence existence of social presence, inhibits her learning. "Rather than having to go through moodle or go through the landing for me that almost inhibits my learning" (Appendix H, p. 167). However she does emphasize the importance of having access to a good instructor to provide guidance and clarification to questions. F2 participant states, "To me the most important thing is to have a good instructor that you can turn to if you have questions" (Appendix H, p. 167).

She later discusses how her learning was enhanced by the existence of a teacher to work one to one with, "I found that I was better able to ask my questions and it enhanced my learning better when it was just one on one with me and the instructor" (Appendix H, p. 167).   Both categories: sp no effect on learner's domain and teacher presence dependency showed high frequency codes based on F2's discourse. F2 continued to reiterate in her discussion with the researcher the fundamental methods of her gaining complex or deep learning was through the aid of a teacher. "For me I would probably get there faster just with the aid of an instructor" (Appendix H, p. 169).

Although F2 describes her learning being enhanced by the aid of a teacher, she classifies herself as an independent, self-directed learner who does not rely on social presence to gain deep meaningful learning. "I'm quite independent…one on one when you had questions, you get the question answered and I could go on myself and keep learning" (Appendix H, p. 169).   Throughout the discourse, F2 continued to emphasize how she valued the time with the instructor and found it is more efficient to work with an instructor to gain deep meaningful learning. "I really valued that time I had with my instructor and I could call them" (Appendix H, p. 168)

The frequency categories representing significance in the discourse for F2 includes social presence has no effect on learner's domain, self-directed learning, learner strategy and cognitive learning unrelated to social presence. This is evident by several comments F2 had in her discourse with the researcher. F2 creates and evaluates her deep learning based on her own prior knowledge and learning methods of reading journals or engaging in her own research, external to fellow online learners. She states, "I don't want to see what other people are thinking…I guess more passive type of learning…me reading…going online and finding journal readings…You have to have a certain level of knowledge to be able to evaluate" (Appendix H, p. 169). The high frequency of sp having no effect on the learner's domain is representative in F2's commentary that online sp is not related nor is it effective in facilitating deep meaningful learning. She indicates that she will participate in online activities but only if this is a course requirement "I do interact…like they have that component…with your peers but sometimes my thinking is quite a bit different then what other people are thinking" (Appendix H, p. 170).

In fact, relating to the frequency category, collaboration distracts dml, she states a group of online learners engaging in discussion can become a hindrance to learning as their understanding may not be accurate. "Each person brings their own viewpoint to it which can sometimes be a hindrance too. I mean if they're thinking wrong you might start thinking wrong" (Appendix H, p. 172). F2's perspective on group work evoked a similar response that collaborating in a smaller team can hinder learning resulting in her preference to work independently. "I find group work really distracting. I just do better on my own" (Appendix H, p. 174). This argument was put forth in 1768 by Rousseau when he describes optimum learning as self-creation and observance. Rousseau (1768)

argued misdirection and mistakes can occur in deep learning and pursuit of knowledge

caused by interacting with others due to their selective pre-conceived notions.

Learner's independence is discussed by F2 when she describes her learning

strategy of self-directed learning by reading, generating her own ideas and self-exploring

to gain dml. "I get ideas…I have plenty of ideas on my own…I'll often be reading

something…I'm always generating my own thoughts" (Appendix H, p. 176).

For her cognitive learning F2 concludes it is unrelated to social presence but is improved

with teacher presence. "Definitely there would be cognitive learning" (Appendix H, p.

173).

Respondent: M3 (personal communication, March 10, 2011)

Frequency Categories > 5 (see table 18): SP no effect on learner's domain, learner strategy, teacher presence dependency, social organization of learner

The third participant M3, describes himself as an independent learner who does

not rely on social presence to develop his deep meaningful learning. He clearly defines

his perspective on the impact of social presence on deep meaningful learning by the

following comment "social presence (SP) does not impact my ability to learn or engage

in deep meaningful learning (dml)" (Appendix H, p. 178).   As compared to all of the

telephone interview participants (F1, F2, M3, M4), the results of the discourse conclude

the highest frequency for each remains with the category social presence has no effect on

learner's domain. In this aspect, all learners work independently with no peer reliance in

order to develop deep meaningful learning. Support for this is in M3's comment

regarding his learning strategy: "we don't require necessarily the presence of others to

process information… most of my learning has been self-taught…I don't require a SP in

order to learn, process information and experience as you described deep meaningful

learning" (Appendix H, p. 178). When M3 responds to question twenty-nine regarding

online activities he engages in to develop deep meaningful learning,

he reiterates this point with:

> Forums that were engaging and fun and enjoyable but they weren't required for
>
> me to learn nor was my SP required in order for me to learn…so the SP definition
>
> is not germain to my ability to learn or my enjoyment of learning or necessary to
>
> invoke dml. (Appendix H, p. 179)

> For his learning strategy, M3 classifies himself as a self-directed learner who

engages in personal research and exploration in order to fully understand the subject

matter he is studying. "I create dml through research, I create dml through

reading…through being able to calibrate what I'm bringing in…I create learning for

myself through writing and thinking through the information that I'm picking up and

absorbing" (Appendix H, p. 179).

> In his view, M3 determines a community of learners and working with others not

necessary to gain complex learning, by simply stating: "Ok…Well it doesn't…Well I

mean I pity the person who can only learn in the presence of others." (Appendix H, pp.

180-181).

> He finds group work disrupts the learning process, experiences participation

withdrawal with online social presence and views online participation as an incentive to

gain required grades. "I started to find the forums extremely tedious…I just completely

lost interest in them. I started to participate in them simply because the marks and I

wanted to get good grades" (Appendix H, p. 181). In contrast to this, M3 does mention

that he has interacted online with fellow learners for understanding concepts; however, his learning strategy was directed toward aiding other online learners rather than himself. "Sometimes I…use the forums as a mechanism to aid other classmates who were having a difficulty with a certain concept" (Appendix H, p. 182)

Further support exists for the category of social presence not effecting learner's domain, when the researcher asked question thirty-three, regarding gaining deep meaningful learning from interactive DE discussions supported by socially projecting personal characteristics as a real person, M3 responded with: "no. not at all, that's almost ludicrous" (Appendix H, p. 182).

In general discourse, he also provided the comment regarding social presence as: "Yes I think SP is bogus" (Appendix H, p. 184). When asked the question thirty-four of relying on the presence of other learners to support your learning he further reiterates this point, by responding with: "Not at all. No, not at all" (Appendix H, p. 183). In fact, as a learner M3 does not engage in interactive activity for deep meaningful learning nor does he interact to generate ideas or thoughts. M3 remains classified as an independent learner and supports this with his comment: "Absolutely not. I can generate ideas just on my own. I can generate ideas just reading popular press" (Appendix H, p. 183).

Although M3 identifies himself as an independent learner he also appreciates the importance of having a good instructor for clarification and guidance. The frequency for teacher presence is not very high but is still an element that M3 relies upon for clarification or to improve the quality of online discussion forums, but not for deep meaningful learning. He states: "I had a couple of questions on the way…no I didn't require anybody else at all, I was off and running…I do find the forums are better when

there is a teacher there, a subject matter expert there" (Appendix H, pp. 183-184). Later

in the discourse, M3 differentiates from this view of not relying on a teacher for learning

when the researcher asks him the question that if only a teacher was accessible to provide

one-to-one learning for ideas and direction, he responds with emphasis "Great, love it"

(Appendix H, p. 184). The final perspective on social presence impacting learning is

stated by M3 as: "it can be fun and it does provide a level of social interaction which is

kind of nice but as a requirement for learning -- no" (Appendix H, p. 185).

Respondent: M4 <u>(personal communication, March 10, 2011)</u>

Frequency Categories > 5 (see table 18): SP no effect on learner's domain, learner strategy, social organization of learner, self-directed learning

For the fourth participant, M4, the frequency categories he identified were similar

to the other participants. His most significant category, he identified as social presence

having no effect on learner's domain. For question twenty-eight, describe how you think

social presence impacts your ability to learn and supports your cognitive learning skills,

M4's response focused on non-peer reliance and his self-learning capabilities. "Actually,

I don't put a lot of stock in Social Presence (SP) to be able to learn" (Appendix H, p. 186)

M4 does not regard online forums, social presence, to be an optimum mechanism

for complex learning but as an environment for fellow learners to reduce isolation in their

independent learning strategy. Similar with the other respondents (F1, F2, M3, M4), he

disagrees with a forced participation in order to learn subject matter.

> In the MDE with all of the courses having such a reliance and a forced
>
> participation in forums…that I believe they need to seriously rethink the role of
>
> these forums. I see these forums…the basic purpose that they serve to reduce any

isolation in distance learners…to actually learn the material –I don't think so.

(Appendix H, p. 186)

Further support for this was apparent when the researcher asked him the question if the group peer discussion component were removed would he still gain cognitive learning, his response was: "would it occur, Most definitely, most definitely" (Appendix H, p. 190).

M4 describes his learning strategy as exploring and studying material independently. He does not rely on social presence to develop his deep meaningful learning.

M4 states:

I study it and I do my readings and I construct a well thought out response and that whole process is what brings about the deep meaningful learning… It's the process of me studying on my own to bring about the deep meaningful learning (dml). (Appendix H, p. 187)

He further reiterates this point by describing the method he chooses in order to enable deep meaningful learning "Through exploration of a topic" (Appendix H, p. 188)

He regards himself as a self-directed learner and prefers not to work with fellow learners in order to develop research ideas as inefficient for developing deep meaningful learning. In the following comment he states "I find it inefficient to have to rely on other people…I don't look to others for that learning, I've come to rely solely on myself to accomplish that learning" (Appendix H, pp. 188, 191). M4 classifies himself as an independent learner who methodically observes and determines components of a subject matter in order to intimately understand it. "I'm an iterative, incremental type of person

and so what I need to do is peel it back in layers. And so ummm this is why I need my alone time" (Appendix H, p. 189).

M4 regards himself as a self-directed learner who generates his own creative ideas to apply to his subject matter knowledge, "No. I'm a very creative and inventive individual. I don't need anybody's help in fact" (Appendix H, p. 192). When M4 was asked by the researcher question thirty-four, regarding relying on the presence of other learners to support his learning, he clearly responded with: "No. That's a one word answer" (Appendix H, p. 192).

M4 argues his perspective of the purpose of social presence to be for people who seek support, desire to create a sense of belonging and familiarity among other and learners and reduce isolation. He states "I find that they are used predominantly as social support…the whole social aspect of these forums and things is to give people a sense of belonging or camaraderie" (Appendix H, pp. 193-194).

However, he does experience some reliance on teachers when he chooses to ask for direction in order to clarify points, "I'm not afraid to take a particular question and fire it off to the professor and say look this is where I'm thinking and then I get an answer back" (Appendix H, p. 188)

Chapter V – Discussion and Recommendations

The main objective of the research was to examine and explore the claims that support the assertion of social presence theory impacting the community of inquiry as a central model for cognitive learning of adults in distance education (DE) which facilitates an outcome of deep meaningful learning. The purpose of the study was to test the validity of these social presence assertions with respect to nurturing deep meaningful learning from the perspective of students engaged in distance education Master's studies. The foundation of the study related to the community of inquiry model designed by Garrison et al. (2000) which reflects interconnecting elements of teacher presence, cognitive presence and social presence (see figure 1) to initiate successful learning experiences. The basis of the study examined social presence as a critical element to advance the ability of learners to achieve cognitive presence.

Garrison et al. (2000) argue:

> The second core element of the model, social presence, is defined as the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as 'real people'. The primary importance of this element is its function as a support for cognitive presence, indirectly facilitating the process of critical thinking carried on by the community of learners. (p. 89)

The author challenges the necessity of social presence to be an active element in online distance education at the Master's level in the development of complex or deep meaningful learning.   Support for this argument is twofold; firstly, the review of the

literature exposed several decades of weaknesses and strengths of existing empirical

studies; methodological deficiencies of empirical studies; lack of empirical studies to

support claims of cognitive presence, effects of social presence on cognitive presence and

impacts of social presence on the community of inquiry model. Secondly, the outcome of

results conducted for this research study show emerging themes exposing social presence

as an inhibitor to cognitive learning, social presence not effecting the domain of a learner

including non-reliance of peers for idea generation, a consistent learner strategy focusing

on self-directed learning, a strong teacher dependency and building of relationships as a

detriment to learning.   This study challenges this concept rooted in the argument made

by Garrison et al. (2000):

> As cognitive presence is in an educational transaction, individuals must feel
>
> comfortable in relating to each other. Cognitive presence by itself is not sufficient
>
> to sustain a critical community of learners. Such an educational community is
>
> nurtured within the broader social-emotional environment of the communicative
>
> transaction. We hypothesize that high levels of social presence with
>
> accompanying high degrees of commitment and participation are necessary for
>
> the development of higher-order thinking skills and collaborative work. (p.94)

Examination of Literature Review - Strengths and Weaknesses

In review of the literature the author discovered strong empirical studies

conducted by Rousseau (1768) which do not support the claim of social presence

impacting the development of deep meaningful learning. He postulated that learners are

passive and independent in their acquisition of knowledge. Detailed studies he conducted

concluded that optimum learning is gained through observation and discovery by the individual. He argued that reliance on peers is a detriment to learning. Learners in pursuit of deep learning and knowledge can be falsely influenced by interacting with others causing misdirection and mistakes due to their selective pre-conceived notions. This theory continued to be challenged by theorists such as Dewey (1882-1953) who postulated higher learning supports collaboration in a community of inquiry to enable people to continually engage in intellectual discourse reflecting a social centre.

Miller (1909) associates social presence with the ability of learners to build relationships in order to create learning stimuli (ideas) to share. He argues learners are motivated by stimuli for cues. However, Miller's (1909) assertion loses value due to motivation of injecting stimuli in community of inquiry relates to incentives for conference participation.

Bandura (1969) builds on Miller's (1909) theory of incentive based learning. Bandura (1969) claims social learning resembles imitation based on one learner creating an idea which becomes a cue for the next learner. Bandura's (1969) study concluded a lack of empirical support that one idea (stimuli) can invoke another idea in which multiple ideas become the basis of a network reflecting complex learning. Bandura's (1969) theory does not support social presence impacting deep meaningful learning as he later emphasizes similar agreement with Rousseau (1768). Bandura (1969) advises acquisition of knowledge is better developed from self-directed learning where learners explore and discover ideas independently. Learners gain cognitive presence through self-motivation of generating new ideas, not social presence. The ideas, Bandura (1969)

argues, are rooted in an individual's perspective and past experiences and cognitive thought processes are not learned from others but are self-motivated.

Similarly, with Pacquet (1999) who identified learning as a mutual understanding and trust by building relationships with other learners as defined by Rourke et al. in 1999, does not support social presence as impacting deep meaningful learning. Pacquet (1999), like Bandura (1969), claims learners must continually generate and contribute ideas, reflecting self-directed learning into the community of inquiry in order to enable cognition. Pacquet (1999) further cautions there are inherent risks of a social learning network with multiple perspectives and ideas as these can inhibit learning if not organized and moderated. In addition, if learners are passive then levels of cognitive presence will remain low, which may be linked to incentive based online activity to generate ideas. Pacquet (1999) emphasizes the importance of the teacher presence element in a community of inquiry.

Rheingold (2002) initially supports the claim of social presence impacting deep meaningful learning by indicating learners engage in asking questions of each other to gain knowledge promoting social relationship building; however, contradicts his own theory by arguing a better way of building knowledge and cognitive learning is self-discovery based on self-observation and self-exploration in addition to reliance on a teacher for direction.

A review of recent literature identified similar emerging themes in empirical studies of not supporting the claim that social presence impacts deep meaningful learning. Osman and Herring in 2007 discuss establishing a sense of community to enhance social interaction but indicate a limitation of dynamics of synchronous online

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chat with computer mediated conferencing. Garrison et al. (2000) who claim the

assertion that social presence is an integral element in sustaining cognitive presence and

deep meaningful learning in a community of inquiry provide further support that an

establishment of a community of inquiry can be problematic for social presence. They

also indicate there is a lack of empirical results to support relationship building in a

community of inquiry.

Maurino (2006) found a study by Picciano in 2002 indicating that there is no

difference in learning outcomes and did not support the claim of social presence

impacting deep meaningful learning. They argue social presence online reflects good

information exchange but there is no conclusive support for problem creation, idea

generation and further research is needed for high-level learning.   In direct opposition to

Garrison et al. (2000), Maurino (2006) emphasizes the community of inquiry model is

not well supported for knowledge. In fact, Garrison et al. (2000) contradicted their own

assertion by indicating there is no correlation of social presence to deep meaningful

learning and recognized the need for future studies.

Following Maurino (2006), Wheeler (2007) conducted a study to discover

significant patterns did not exist between social presence and critical meaning and that

reliance on learner autonomy correlates to precise instructions from teachers. Teacher

presence is a widely accepted element to impact deep meaningful learning and is

reinforced by the author's current research findings. Rhode (2009) also found that

minimal empirical support exists for meaningful learning to occur as learner preference

may dictate learner interaction. Rhode's (2009) results indicated significant intervention

with the instructor and content with no reference to social activity to enhance critical

meaning. The outcome of the study showed participants ranked synchronous chat as the lowest important elements and indicated their willingness to forgo social activity as it diminishes learning. This response occurred frequently in the author's current study.

Recent studies conducted by Diaz et al. (2010) emphasize reliance on teacher presence which is valued over cognitive and social presence. Some issues with the study related to data measuring perceptions by students enrolled in college and university courses relating to business as compared to specifically relating to distance education. In addition, the results of the findings concluded that respondents rated social presence as least important.

Shea et al. (2009) did however conduct a study which resulted in significant support that cognitive presence could be predicted based on perceived teaching and social presence. However, the focus of the study was on teaching presence as a bridging factor to both cognitive and social presence. The study did not specify courses related to graduate level distance education Master's program and therefore was not comparable to the current study. In addition, courses combined college and university which may have dictated the higher level of social presence as a requirement for course grades although this is not clarified in the study. Results concluded learners achieved the triggering and exploration stage of cognitive presence but that these findings are not directly correlated to deep meaningful learning.

Shea and Bidjerano (2009) conducted a large scale study showing significant results for social presence element associated with comfort in online discussion. However, findings do not clarify social interaction of learners occurring with peers online but concentrate on the social interaction between learners and teachers. In addition,

results do not disclose if high levels of teacher presence are dependent on motivating students for incentive based forum activity for required grades.

Unanticipated Findings of Quantitative Results

Statistical non-parametric chi-square tests were processed and evaluated to determine the association between projecting socially as a person in a community of learners and developing deep meaningful learning. The assumption in using the chi-square statistic is that each respondent observation from the quantitative online survey is independent. The results of the tests showed minimal significant indicators of relationship between social presence and deep meaningful learning. For the quantitative results, participants were asked to select a response using the Likert scale of Strongly Disagree (A), Somewhat Disagree (B), Don't Know (C), Somewhat Agree (D) and Strongly Agree (E) in the online survey.

The outcome of the quantitative results did reveal most respondents indicated acceptance of social presence as an active element in online distance education. The author recognized this as an initial support to the assertion that social presence theory impacted the community of inquiry to develop deep meaningful learning. This was later rejected as inconclusive support existed due to the significant outliers that were revealed in the survey findings which became the basis of the qualitative part of the study.

The majority of significant outliers for a number of the survey questions selected a Strongly Disagree category from the Likert scale which justified the decision to reject the apparent support to the assertion.

The author anticipated the imbalanced outcome from the quantitative results due to the timeline and low return rate of surveys (9%). This is justified by the scope of the survey participant pool being derived from students engaged in 1st year core courses and those students enrolled in their final year of the Master's of distance education program, who may have encountered a number of conflicting activities interfering with their uncompensated volunteer participation in the study such as course exams, course assignments, family and work responsibilities. It also may have been indicative to the outcome of the qualitative findings which dictated a strong non-reliance on online activities.

The findings reflecting a defined opposition to social presence impacting the development of deep meaningful learning were thoroughly examined and investigated for selection of follow-up telephone interviews. The emerging themes from the rich qualitative data re-supported the conclusion that social presence does not impact deep meaningful learning. Justifying this argument the emerging themes from the qualitative results, in order of significance, were: social presence has no effect on learner's domain, teacher presence dependency, learner strategy (self-discovery, self-idea generator), self-directed learning, social organization of learner (social presence only to reduce isolation), collaboration distracts deep meaningful learning, cognitive learning is unrelated to social presence, building relationships inhibits deep meaningful learning and life-long learning.

The study was based on a mixed methodology which allowed the researcher to examine further if the quantitative results were indicative of the assertion that social presence impacted deep meaningful learning. These significant responses were analyzed

across all web survey questions by the author to discover similar patterns in not

supporting the claim that social presence develops deep meaningful learning. These

multiple patterns of significant responses emerged as outliers in the quantitative data that

indicated social presence was not a required element in online distance education to gain

deep meaningful learning. These significant outliers formed the basis of the qualitative

part of the research study. Quantitative respondents who differentiated from the norm of

the central data tendency represented the pool of qualitative interview follow-up.

Examination of Qualitative Results

The qualitative results indicate that the claim of social presence impacting

cognitive learning is invalid and not supported. Definitely, this was revealed in the

literature review reporting several studies that emphasized the lack of empirical support

and no significant association. Outcome of the study results reveal social presence is not

a valid indicator for critical and deep meaningful learning for adults learning in a distance

education setting.

Study findings validate social presence inhibits learning especially multiple online

learner perspectives. Multiple viewpoints can mislead and misdirect the learner to an

inaccurate concept or theory. This is emphasized in Rousseau's (1768) theory that

misdirection and mistakes in deep learning and pursuit of knowledge is caused by

interacting with others due to their selective pre-conceived notions.

Results of study findings validate teacher presence needs to be an active element

for learners to access for clarification, guidance, although it is not mandatory for a

teacher to moderate online discussion forums. Study findings also conclude that teacher

presence provides organization and structure as well as accessibility for questions,

guidance and clarification for learners. The outcome of the study results provides support

learners significantly value time with the instructor.

Although limitations to the population size existed for this study requiring the

researcher to employ a convenient sample resulting in generalizations not being made to

a population, the results of the findings confirm significant outcomes. The study findings

presented are not meant to be authoritative in nature, however do provide insight and

value from the perspective of graduate level students enrolled in a Master's degree in

distance education. These findings strongly suggest there is no significant relationship

between social presence and complex, critical or deep meaningful learning. This is

supported by qualitative data results and consensus among learners indicating social

presence, the presence of other learners and group work is inefficient and not required for

deep meaningful learning. Findings conclude no significant relationship exists between

social presence and deep meaningful learning, cognitive learning and building a

community of inquiry for deep meaningful learning. Findings strongly suggest that there

is no difference in the learning outcomes; in fact, social presence was determined to act

as a hindrance to deep meaningful learning. Social presence is determined to be a

mechanism to reduce isolation of learners and add an element of camaraderie but not for

the purpose of learning. The outcome of the results show learners' engaging in

independent activities such as self-exploration, self-discovery, personal reading, self-idea

generation and self-directed learning are the optimal methods of developing deep

meaningful learning rather than social presence. Findings also concluded no significant

relationship exists between social presence, building relationships and creative idea generation. Social presence is viewed by learners as enabling a friendly collegial environment to reduce isolation of learners.

Contribution this study will make to the literature

This study attempted to magnify and challenge empirical results of social interaction remaining as a non-learning platform similar to a chatting feature rather than exemplify deep meaningful learning. There was a need to further isolate the meaning of social presence and whether it had an impact on critical and deep meaningful learning. This warranted the purpose of the current study to diffuse social presence as an operator for development of critical and deep meaningful learning. Many of the results conclude limitations based on low sample sizes and/or participation in addition to researcher involvement in the study. The methodology for the current study was to enable generalization of the results planned through a larger sample size to understand how social presence is not a valid indicator for critical and deep meaningful learning for adults learning in a distance education setting. The objective of this study was to provide a common ground for further studies to determine interpretations of optimal adult learning strategy and paradigm to adopt by learners and teachers for distance education.

Recommendations:

Although the focus of the study was to test the assertions that social presence in a community of inquiry contributes to cognitive presence in order to facilitate the outcome of deep meaningful learning, the results of the study findings emphasized teacher

presence dictating much of the necessary stimuli for learners to achieve or foster deep meaningful learning. Within the community of inquiry, the circular aspect culminates in a centering phenomenon for learners to achieve which is educational experience as termed by Garrison et al. (2000) "a conceptual framework that identifies the elements are crucial prerequisites for a successful educational experience…a worthwhile educational experience is embedded within a community of inquiry that is composed of teachers and students—the key participants in the educational process" (pp. 87-88). Based on emerging themes and analysis of this study that this is a terminology which is broad in nature and in order to transition to specificity it is proposed by the researcher to re-define educational experience as tangible learning outcome. However, the researcher cautions future studies would need to be conducted to determine if the usage of community of inquiry as an exclusive mechanism in distance education is warranted.

The outcome of the research study suggests distance education universities revisit course content with core requirements of forum based team work. Based on the findings, learners reveal group work results in a detriment to learning and supports a team-based approach which is more valuable to undergraduate based university programs. Learners engaged in a Master's level degree for distance education view group work as tedious and support a teamwork approach rather than develop deep meaningful learning. Learners proposed an increase in assignment and individual project-based work.

Study findings indicated learners emphasize a need for instructors to be accessible for students for one-to-one instruction, clarification of questions and guidance; however not necessary for mandatory online discussion forums. If there is a requirement for online

discussion forums, learners suggest increased participation by instructors as an equal subject matter participant.

Based on the outcome of results, learners concluded similar arguments for the need by the university to revisit mandatory online forum participation within the distance education Master's degree program. This perspective is supported by the study findings showing the social orientation and learner strategy concentrating on self-directed and independent learning without the need for interacting or relying on fellow online learners to achieve deep meaningful learning.   Learners' emphasized social presence inhibits learning. Learners indicated their preference to focus on their independent research through self-reading, self-idea generation, observations and understanding of the subject matter based on personal experiences and knowledge.

The outcome of the findings dictated a strong learner independence which indicated multiple perspectives and collaborative group work distracts complex learning. These respondents strongly suggested that optional rather than required group work is desired for the Master's level distance education program. Furthermore, discourse results concluded neither social presence nor building relationships impacts deep meaningful learning and course design should be flexible to provide an option for those learners to disengage from the online learning activities without impact to incentive based grading. From the literature review and the study findings, the researcher's intent is to increase awareness for the future of adult distance learners enrolled in a Master's level program for distance education. The results of the study justify further investigations of claims that support the assertion of social presence theory impacting the community of inquiry

as a central model for cognitive learning of adults in distance education which enables cultivation of deep meaningful learning.

Future Study Recommendations:

o Further studies are suggested to determine the value of integrating group interaction tasks in online environment for students engaged in a master level distance education program.

o It is recommended of the distance education Master's program that the mandatory forum discussion component be revisited to determine retention validity. The author is not suggesting from this recommendation that mandatory forum discussions be eliminated from the distanced education Master's program, however it is suggested an optimum method would be adoption of choices and flexibility in course design based on the learner's perception and organization.

o Further studies are suggested to determine the level of interaction and outcome values associated with student to teacher activity. The study would need to investigate the level of teacher presence and the level of dependency from the student perspective and whether the outcome was beneficial and linked to cognitive and deep meaningful learning. Studies could involve identifying the need for accessibility of teacher for clarification, questions, and intense one-to-one time with the student.

o Further studies to validate teacher presence in online discussion forums to moderate or act as an as equal participant to generate ideas and act as subject matter expert

o Future studies to be conducted to investigate online Master's distance education program as flexible choices to students. The study could focus on independent project and assignment based work to develop deep meaningful learning versus socially building relationships in project team work and discussion forums.

o Future studies should be conducted to test the validity of learner interaction in online forums or collaborative group activity having an association with required course grades earned.

Chapter VI - References

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Chapter VII - Appendices

Appendix A – Data Collection/Survey Distribution Method

Task	Target Date(s)	Cost
Designed and Set up 27 question Lime survey on CDE website http://rsurvey.athabascau.ca/admin	November 13, 2010	Free as administered by CDE.
Collected and analyzed data (results were collected real-time from this site)	Feb 13, 2011- Feb 30, 2011	None as researcher performed
Data entered all exported data from Lime Survey website	Feb 13, 2011- Feb 30, 2011	None as researcher performed
Contacted respondents who included their contact information. Requested for participation in interview sessions (four) to be held by telephone	Mar 5, 2011 – Mar 6, 2011	None as researcher performed
Conducted interview sessions	Mar 7, 2011 – Mar 10, 2011	None as researcher performed
Performed Content and Discourse analysis on interview results	Mar 12, 2011– April 5, 2011	None as researcher performed
Total costs		$0

Appendix B – Online Survey Consent

Researcher name: Carol-Ann Lane   Email address: carolann.lane@utoronto.ca
Skype address: carol.ann.lane(aka blessed angel) Contact #: 905-897-1611

I, <u>Carol-Ann Lane</u>, am conducting a survey in relation to my research on how learners at a distance in the Master's of Distance Education (MDE) program at a Canadian University can effectively and coherently acquire knowledge without the influence of social presence. For your information, the purpose of this study is to test the validity of social presence assertions with respect to developing deep meaningful learning from the perspective of students engaged in distance education Master's studies. Your participation in this survey will greatly increase an understanding of the current Distance Education (DE) methods and impacts of learning on current and future DE students. The research question is <u>Does Distance education (DE) need to rely on an element of Social Presence within its community of inquiry to ensure learner knowledge acquisition?</u>

As part of this research, you are invited to participate in a 10-15 minute questionnaire and possibly volunteer for a 15-30 minute follow-up interview. Your participation in this study is voluntary and no compensation will be provided. During the telephone interviews, a recording device will be used to aid the researcher in efficient note taking. If you volunteer and are chosen to participate in a follow-up interview after the questionnaire, the interview site and time will be negotiated between you and the researcher. (Dependent upon the number of volunteers, not all may be selected for an interview.) Your answers to any interview questions are voluntary. You may choose not to participate or to withdraw from the study at any time and any identifiable data collected up to that point can be withdrawn. Participation or non-participation in the study will have no effect on your course marks or status in your program at Athabasca University. There are no known risks in participation in the study. Participants are not obliged to answer any questions that you find objectionable or which make you feel uncomfortable. The information you provide will be held in strict confidence. The confidentiality of all participants is assured. Names or other identifiers will not appear in

any reporting or findings. Only the researcher and the researcher's supervisor will see your responses. The aim of my research is to investigate existing epistemology to understand the definition and application of social presence and test the validity of social presence assertions with respect to developing deep meaningful learning from the perspective of students engaged in distance education Master's studies. The results from this research will hopefully provide a common ground for further studies to determine interpretations of optimal adult learning strategy and paradigm to adopt by learners and teachers for distance education. The existence of the research will be listed as an abstract, available online through the Athabasca University Digital Thesis and Project Room (DTPR), and the final research paper will be publicly available.

To frame your responses the following are definitions of social presence and deep meaningful learning: Garrison et al. (2000) redefined social presence as "the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as 'real people'. The primary importance of this element is its function as a support for cognitive presence." Deep meaningful learning relates to problem solving and development of reasoning skills. It involves recognizing and understanding abstract relationships among theories. Completing and submitting the online questionnaire means that you agree to inclusion of that data in the study. (You do not have to volunteer for an interview in order to take part in the questionnaire.)

Providing contact information (your contact E-mail or phone number) at the end of the survey means that you agree to participate in the follow-up interview, if selected.

Carol-Ann Lane
Signature of Researcher   Date

APPENDICES C and D: Recruitment

Information Letter/Invitation

Research Project Title: Social Presence Impacting Cognitive Learning of Adults in Distance Education (DE)

Investigator: Miss Carol-Ann Lane, Master's of Distance Education, Athabasca University

I am a Masters student in the Masters of Distance Education program at a Canadian University, currently conducting research on Social Presence Impacting Cognitive Learning of Adults in Distance Education (DE). This study examines and explores the evidence that supports the assertion of social presence theory impacting the community of inquiry as a central model for cognitive learning of adults in Distance Education (DE). This emerging paradigm is transforming the view of adult education. The purpose of this study is to test the validity of social presence assertions with respect to developing deep meaningful learning from the perspective of students engaged in distance education Master's studies.

As part of this research, you are invited to participate in a 15-25 minute questionnaire and possibly volunteer for a 15-30 minute follow-up interview. The information you provide is central to the research because of your experience with Distance Education and may help improve Distance Learning for adults in the future.

Your participation in this study is voluntary. You may choose not to participate or to withdraw from the study at any time and any identifiable data collected up to that point can be withdrawn. Participation or non-participation in the study will have no effect on your course marks or status in your program at Athabasca University.

If you volunteer and are chosen to participate in a follow-up interview after the questionnaire, the interview site and time will be negotiated between you and the

researcher. (Dependent upon the number of volunteers, not all may be selected for an interview.) Your answers to any interview questions are voluntary.

All data recorded in the study will be kept in the researcher's personal password-protected standalone computer at her home office. Participant identities will be protected by the use of pseudonyms, and no identifying information relating to any participant will be used in the course of writing up the study for purposes of the research final report. Identifiable data collected from participants who withdraw from the study will be destroyed without question. Data from this research will be destroyed by confidential shredding of written notes from telephone interviews or surveys and erasure on any hard drives or other computer media when all project marking requirements have been met (approximately June, 2016).

The information you provide will be held in strict confidence. The confidentiality of all participants is assured. Names or other identifiers will not appear in any reporting or findings. Only the researcher and the researcher's supervisor will see your responses.

Results of this research may be used for publication or presentation to academic and professional groups. The existence of the research will be listed as an abstract, available online through the Athabasca University Digital Thesis and Project Room (DTPR), and the final research paper will be publicly available.

This consent statement is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included please ask the researcher, who can be reached either at the e-mail address or telephone number below.

Researcher: Miss Carol-Ann Lane, Telephone: 905-897-1611,   E-mail:
carolann.lane@utoronto.ca
Supervisor: Dr. Jones, Telephone 1-866-514-6233,
E-mail: tom_jones_students@shaw.ca

The Athabasca University Research Ethics Board has reviewed this research study and may be reached by e-mailing rebsec@athabascau.ca or calling 1-780-675-6718 if you have questions or comments about your treatment as a participant. **Thank-you in advance for your participation in this survey and contribution to this research.**

PROCEED to SURVEY SITE: U R L
http://rsurvey.athabascau.ca//index.php?sid=34996&lang=en

Online survey site Text:

Welcome to the Social Presence Impacting Cognitive Learning of Adults in Distance Education (DE) site!

Investigator: Miss Carol-Ann Lane, Master's of Distance Education, Athabasca University

Thanks for your interest in taking part in my research. Your participation in this study is voluntary. You may choose not to participate or to withdraw from the study at any time and any identifiable data collected up to that point can be withdrawn. Participation or non-participation in the study will have no effect on your course marks or status in your program at Athabasca University.

The anonymous questionnaire should take 15-25 minutes to complete. **When you press the SUBMIT button, you are deemed to have provided your consent to inclusion of your questionnaire data in the study.** If you have not volunteered for an interview, your data cannot be identified and therefore cannot be withdrawn after it has been submitted.

DEEMED CONSENT:

- **QUESTIONNAIRE:** Completing and submitting the online questionnaire means that you agree to inclusion of that data in the study. (You do not have to volunteer for an interview in order to take part in the questionnaire.)

- **INTERVIEW:** Providing contact information (your contact E-mail or phone number) at the end of the survey means that you agree to participate in the follow-up interview, if selected.

   You will be asked to:

   - Allow the researcher to conduct a 15 to 30-minute interview with you at a later date;

- Allow the interview conversation to be tape-recorded; and

- Share with the researcher your experience related to social presence assertions in distance learning with respect to developing deep meaningful learning.

- Your participation is voluntary and you have the right to decline to answer any questions and to withdraw from the study at any time simply by letting the researcher know that that is your intention.

If you would like more detail about something mentioned here, or information not included please ask the researcher, who can be reached either at the e-mail address or telephone number below.

Researcher: Miss Carol-Ann Lane, Telephone: 905-897-1611,

E-mail: carolann.lane@utoronto.ca

Supervisor: Dr. Jones, Telephone 1-866-514-6233,

E-mail: tom_jones_students@shaw.ca

The Athabasca University Research Ethics Board has reviewed this research study and may be reached by e-mailing rebsec@athabascau.ca or calling 1-780-675-6718 if you have questions or comments about your treatment as a participant.

You should print a copy of this consent form to keep for your records and reference.

Proceeding to the questionnaire indicates that you have understood to your satisfaction the information regarding participation in the research project and **that you agree to participate.** You are free to withdraw from the study at any time. **Thank-you in advance for your participation in this survey and contribution to this research.**

PROCEED to QUESTIONNAIRE

Appendix E – Research Ethics Board Approval

Athabasca University

Canada's Open University™

MEMORANDUM

DATE: January 31, 2010

TO: Carol-Ann Lane

COPY: Dr. Tom Jones (Supervisor)
Janice Green, Secretary, Athabasca University Research Ethics Board
Dr. Simon Nuttgens, Chair, Athabasca University Research Ethics Board

FROM: Dr. Debra Hoven, Chair, CDE Ethics Research Ethics Review Committee

SUBJECT: **Ethics Proposal #CDE-10-02: "Social Presence Impacting Cognitive Learning of Adults in Distance Education (DE)"**

Thank you for providing revised documentation requested by the Centre for Distance Education (CDE) Research Ethics Review Committee in the Approval to Proceed memo issued January 11, 2010. Your cooperation in revising to incorporate minor changes requested was greatly appreciated.

On behalf of the CDE Research Ethics Review Committee, I am pleased to **confirm** that this project has been granted **FULL APPROVAL** on ethical grounds, and you may proceed with participant contact as soon as you can gain access to recruit (AU Institutional Permission).

> **For file purposes only** (no further review required)**,** please provide the following:

> - A copy of **Athabasca University Institutional Permission**, issued from Vice-President Academic Dr. Margaret Haughey, allowing access to AU systems and students for research purposes.
>
>   The AU Research Ethics office will assist you in requesting the institutional permission from Dr. Haughey by forwarding a copy of your final approved ethics application, along with a request on your behalf.

The approval for the study is **valid for a period of one year from the date of this memo.** If required, an extension must be sought in writing prior to the expiry of the existing approval. **A Final Report is to be submitted when the research project is completed.** The reporting form can be found online at http://www.athabascau.ca/research/ethics/ .

This approval of your application will be reported to the Athabasca University Research Ethics Board (REB) at their next monthly meeting. The REB retains the right to request further information, or to revoke approval at any time.

As implementation of the proposal progresses, if you need to make any significant changes or modifications, please forward this information immediately to the CDE Research Ethics Review Committee via rebsec@athabascau.ca , for further review.

If you have any questions, please do not hesitate to contact Janice Green at janiceg@athabascau.ca or rebsec@athabascau.ca .

Memorandum
Athabasca University◢

Vice-President Academic

Date:	February 11, 2011
To:	Carol-Ann Lane – AU MDE Student
From:	Margaret Haughey – Vice President Academic
Subject:	Institutional Permission – REB #CDE 10-02

You have been approved to contact Athabasca University students and systems for your research proposal "Social Presence Impacting Cognitive Learning of Adults in Distance Education (DE)" subject to the following conditions:

Your research proposal has been approved by the Athabasca University Ethics Board (AUEB);
Student information is used solely for the purpose outlined in the research proposal submitted to the AUEB;

Secondary uses of data or subsequent research proposal(s) will require additional approval of AUEB, permission of the students or former students and institutional permission if the individual is still an Athabasca University student;
Student participants will be provided with information about how information will be represented in documentation, reports and publications;
Student information will not be shared with a third party;

The nature of communication with students is that outlined in the research proposal submitted to the AUEB;

Students demographic information will be used solely within the research project;
Documentation such as student responses to questionnaires, interview responses (written or taped), observations of individual student behaviors, etc. will not be used for any purpose other than that outlined in the research proposal submitted to AUEB;

Student information will be kept confidential until it is destroyed after a period not in excess of 10 years;

Use of personal information will be in compliance with the **Freedom of Information, Protection of Privacy (FOIP)** legislation of the province of Alberta, Canada.

I wish you every success with your research project.

cc   Research Ethics Board
         Registrar

Appendix F –Online Survey Questions

For the following survey questions, use the following scale and choose only one response: Strongly Disagree (A), Somewhat Disagree (B), Don't Know (C), Somewhat Agree (D) and Strongly Agree (E).

Sub Questions of Quantitative Survey:

To frame your responses the following is the definitions of Social Presence and Deep Meaningful Learning:

Garrison et al (2000) redefined social presence as "the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as "real people." The primary importance of this element is its function as a support for cognitive presence." Deep meaningful learning relates to problem solving and development of reasoning skills. It involves recognizing and understanding abstract relationships among theories. According to Entwistle (2000), it involves relating ideas and looking for patterns and principles and using evidence and examining the logic of the argument.

This survey is designed to determine the validity of the research question. The following questions will assist the researcher to test the validity of social presence as an element contributing to deep meaningful learning. Your survey responses will be kept in confidentiality and only used by the researcher for this project. The survey should take approximately 20 minutes to complete. Please respond honestly.

<u>**Conceptual Framework**</u>
Below you will see a number of statements and questions associated with the concept of social presence as it relates to online distance learning for the Master's degree program. Read each statement and indicate your response by placing an **X** in the parenthesis ( ) beside the statement which relates closest to how you think it relates to your involvement in the Master's of Education program. There is no right or wrong answer; however do not spend too much time on any one statement. Please answer honestly on how the statement describes how you feel. It is important to complete every question and only provide one response to each question.

1) As an online learner do you project yourself socially in a community of learners to enhance your deep meaningful learning?

        ( ) **Strongly Disagree**
        ( ) **Somewhat Disagree**
        ( ) **Don't Know**
        ( ) **Somewhat Agree**
        ( ) **Strongly Agree**

2) Do you project yourself as a 'real person' by providing personal details in order to build relationships with fellow learners online?

      ( ) **Strongly Disagree**
      ( ) **Somewhat Disagree**
      ( ) **Don't Know**
      ( ) **Somewhat Agree**
      ( ) **Strongly Agree**

3) As part of a community of learners where social presence can exist, as an online learner do you engage in building relationships to support deep meaningful learning?

      ( ) **Strongly Disagree**
      ( ) **Somewhat Disagree**
      ( ) **Don't Know**
      ( ) **Somewhat Agree**
      ( ) **Strongly Agree**

4) Is it essential for you as an online learner to participate in online discussions (computer-mediated communication such as online chat) to create deep critical learning?

      ( ) **Strongly Disagree**
      ( ) **Somewhat Disagree**
      ( ) **Don't Know**
      ( ) **Somewhat Agree**
      ( ) **Strongly Agree**

5) In an online Master's degree environment, if high levels of social presence exist, do you think this would be detrimental to learning?

      ( ) **Strongly Disagree**
      ( ) **Somewhat Disagree**
      ( ) **Don't Know**
      ( ) **Somewhat Agree**
      ( ) **Strongly Agree**

6) As an online learner engaged in Master's degree studies, do you think conveying emotional expression (such as non-verbal cues using emoticons) will support your knowledge building?

      ( ) **Strongly Disagree**
      ( ) **Somewhat Disagree**
      ( ) **Don't Know**

( ) **Somewhat Agree**
( ) **Strongly Agree**

<u>Indicators of Cognitive Activity</u>
Below you will see a number of statements and questions associated with the deep
learning and cognitive activity as it relates to online distance learning for the Master's
degree program. Read each statement and indicate your response by placing an **X** in the
parenthesis ( ) beside the statement which relates closest to how you think it relates to
your involvement in the Master's of Education program. There is no right or wrong
answer; however do not spend too much time on any one statement. Please answer
honestly on how the statement describes how you feel. It is important to complete every
question and only provide one response to each question.

7) Do you rely on trusting fellow learners in on-line discussions to motivate you in
critical inquiry?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

8) If you participate online in collaborative group work, will cognitive learning occur for
you?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

9) Is the presence of other learners required to support your deep meaningful learning?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

10) In a distance learning course, do you think you would experience deep meaningful
learning <u>only</u> if the group peer discussion was moderated by a teacher?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**

( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

11) When you participate in synchronous online discussions does it help you to build trust with your fellow online learners?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

12) For an online distance Master's Education program, would you gain deep meaningful learning by working on your own?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

13) As an online learner if social presence did not exist (socially projecting in chat conferences) would cognitive and active learning occur for you?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

14) As an online learner, do you need to exchange and validate ideas with other online learners to gain deep meaningful learning?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

15) As a distance learner, if you project yourself emotionally are you able to create idea generation for cognitive and active learning?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

Effectiveness of Claims
Below you will see a number of statements associated with the effectiveness of claims made regarding social presence contributing to deep meaningful learning as it relates to online distance learning for the Master's degree program. Read each statement and indicate your response by placing an **X** in the parenthesis ( ) beside the statement which relates closest to how you think it relates to your involvement in the Master's of Education program. There is no right or wrong answer; however do not spend too much time on any one statement. Please answer honestly on how the statement describes how you feel. It is important to complete every question and only provide one response to each question. *Note in the following questions the word 'Chat' is used. Chat refers to threaded discussions of online talking enabled by computer-mediated communication (CMC).*

16) As an online learner do you project your personal characteristics into the community of inquiry to influence the effectiveness of your own knowledge acquisition?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

17) As a distance learner do you think online participation is effective for creative problem exploration?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

18) If you actively engage in social activity with other community of online learners do you think you would have the ability to sustain and support your critical thinking?

( ) **Strongly Disagree**

( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

19) If a community of on-line distance learners exhibited control and authority in threaded discussions would you become intimidated and therefore not participate?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

20) If social presence didn't exist and the community of learners did not interact, do you think it would negatively impact your deep meaningful learning?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

21) Do you think fairly high levels of social presence are necessary to support the development of your deep and meaningful learning?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

22) As an online learner do you think your interactive discussion in the community of learners is necessary for you to understand complex theory?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

23) If group work is part of your distance learning course do you think it should be extended to the interactive online community of learners to gain a better understanding of complex theory?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

Relationship/Existence of Social presence to deep meaningful learning

Below you will see a number of statements associated with the correlation of social presence to deep meaningful learning as it relates to online Distance learning for the Master's degree program. Read each statement and indicate your response by placing an **X** in the parenthesis ( ) beside the statement which relates closest to how you think it relates to your involvement in the Master's of Education program. There is no right or wrong answer; however do not spend too much time on any one statement. Please answer honestly on how the statement describes how you feel. It is important to complete every question and only provide one response to each question

24) Do you as an online learner think an online community of learners emotionally interacting on a social level can hinder deep meaningful learning?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

25) Do you as an online learner think online chat significantly contributes to developing more authentic group collaboration for knowledge building?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

26) In a study conducted by Conrad (2009), one participant commented "I personally depend on other classmates to stimulate my thinking process". Do you agree or disagree that interactive discussion forums are effective in learning strategy?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**

( ) **Somewhat Agree**
( ) **Strongly Agree**

27) As an online learner do you think better instructor efforts is necessary to improve deep learning in online discussions?

( ) **Strongly Disagree**
( ) **Somewhat Disagree**
( ) **Don't Know**
( ) **Somewhat Agree**
( ) **Strongly Agree**

Thank-you in advance for your participation in this survey and contribution to this research.

If you wish to participate in a follow-up interview, please provide your contact details:

Participant Name:

Email address: and/or **Contact number:**

Sub Questions of Qualitative Survey:

Overarching question: Describe how you think social presence impacts your ability to learn and supports your cognitive learning skills to acquire knowledge?

28. Describe how you think social presence impacts your ability to learn and supports your cognitive learning skills to acquire knowledge?

29. Referring to the definitions of social presence and deep meaningful learning, what online activities did you engage in to develop deep meaningful learning?

30. How do you create deep meaningful learning?

31. Describe how participating in a community of other learners, thus a social presence exists, helps you understand complex theory?

32. In a distance learning course, if group peer discussion (representing social presence) did not exist do you think cognitive learning would occur for you? Explain.

33. Do you gain any deep meaningful learning from interactive distance education (DE) discussions supported by socially projecting your personal characteristics as a real person (use of emoticons and building relationships)?

34. Do you rely on the presence of other learners to support your learning (describe with examples)?

35. As an online Master's Degree Education learner, do you need to build relationships with fellow on-line learners to enable idea generation?

36. Do you require a teacher to moderate on-line discussions to enable development of deep meaningful learning?

Appendix G – Quantitative Survey questions and results

Q1 As an online learner do you project yourself socially in a community of learners to enhance your deep meaningful learning?

Answer   **Count Percentage**
Strongly Disagree   (A) 0 0.00%
Somewhat Disagree (B) 10 45.45%
Don't Know   (C) 0 0.00%
Somewhat Agree   (D) 7 31.82%
Strongly Agree   (E) 5 22.73%
No answer   0 0.00%

Q2 Do you project yourself as a 'real person' by providing personal details in order to build relationships with fellow learners online?

Answer   **Count Percentage**
Strongly Disagree   (A) 0 0.00%
Somewhat Disagree (B) 5 22.73%
Don't Know   (C) 0 0.00%
Somewhat Agree   (D) 9 40.91%
Strongly Agree   (E) 8 36.36%
No answer   0 0.00%

Q3 As part of a community of learners where social presence can exist, as an online learner do you engage in building relationships to support deep meaningful learning?

Answer   **Count Percentage**
Strongly Disagree   (A) 2 9.09%
Somewhat Disagree (B) 4 18.18%
Don't Know   (C) 0 0.00%
Somewhat Agree   (D) 14 63.64%
Strongly Agree   (E) 2 9.09%
No answer   0 0.00%

Q4 Is it essential for you as an online learner to participate in online discussions (computer-mediated communication such as online chat) to create deep critical learning?

Answer   **Count Percentage**
Strongly Disagree   (A) 3 13.64%
Somewhat Disagree (B) 6 27.27%
Don't Know   (C) 0 0.00%
Somewhat Agree   (D) 8 36.36%

Strongly Agree   (E) 5 22.73%
No answer   0 0.00%

Q5 In an online Master's degree environment, if high levels of social presence exist, do you think this would be detrimental to learning?

Answer   Count Percentage
Strongly Disagree   (A) 6 27.27%
Somewhat Disagree (B) 7 31.82%
Don't Know   (C) 2 9.09%
Somewhat Agree   (D) 5 22.73%
Strongly Agree   (E) 2 9.09%
No answer   0 0.00%

Q6 As an online learner engaged in Master's degree studies, do you think conveying emotional expression (such as non-verbal cues using emoticons) will support your knowledge building?

Answer   Count Percentage
Strongly Disagree   (A) 4 18.18%
Somewhat Disagree (B) 6 27.27%
Don't Know   (C) 3 13.64%
Somewhat Agree   (D) 9 40.91%
Strongly Agree   (E) 0 0.00%
No answer   0 0.00%

Q7 Do you rely on trusting fellow learners in online discussions to motivate you in critical inquiry?

Answer   Count Percentage
Strongly Disagree   (A) 4 18.18%
Somewhat Disagree (B) 7 31.82%
Don't Know   (C) 1 4.55%
Somewhat Agree   (D) 7 31.82%
Strongly Agree   (E) 3 13.64%
No answer   0 0.00%

Q8 If you participate online in collaborative group work, will cognitive learning occur for you?

Answer   Count Percentage
Strongly Disagree   (A) 2 9.09%
Somewhat Disagree (B) 3 13.64%
Don't Know   (C) 0 0.00%
Somewhat Agree   (D) 12 54.55%

Strongly Agree   (E) 5 22.73%
No answer   0 0.00%

Q9 Is the presence of other learners required to support your deep meaningful learning?

Answer   Count Percentage
Strongly Disagree   (A) 4 18.18%
Somewhat Disagree (B) 9 40.91%
Don't Know   (C) 1 4.55%
Somewhat Agree   (D) 6 27.27%
Strongly Agree   (E) 2 9.09%
No answer   0 0.00%
page

Q10 In a distance learning course, do you think you would experience deep meaningful learning only if the group peer discussion was moderated by a teacher?

Answer   Count Percentage
Strongly Disagree   (A) 3 13.64%
Somewhat Disagree (B) 13 59.09%
Don't Know   (C) 1 4.55%
Somewhat Agree   (D) 4 18.18%
Strongly Agree   (E) 1 4.55%
No answer   0 0.00%

Q11 When you participate in synchronous online discussions does it help you to build trust with your fellow online learners?

Answer   Count Percentage
Strongly Disagree   (A) 3 13.64%
Somewhat Disagree (B) 3 13.64%
Don't Know   (C) 2 9.09%
Somewhat Agree   (D) 7 31.82%
Strongly Agree   (E) 7 31.82%
No answer   0 0.00%

Q12 For an online distance Master's education program, would you gain deep meaningful learning by working on your own?

Answer   Count Percentage
Strongly Disagree   (A) 3 13.64%
Somewhat Disagree (B) 3 13.64%

Don't Know   (C) 0 0.00%
Somewhat Agree   (D) 8 36.36%
Strongly Agree   (E) 8 36.36%
No answer   0 0.00%

Q13 As an online learner if social presence did not exist (socially projecting in chat conferences) would cognitive and active learning occur for you?

Answer	Count Percentage
Strongly Disagree	(A) 2 9.09%
Somewhat Disagree	(B) 4 18.18%
Don't Know	(C) 0 0.00%
Somewhat Agree	(D) 9 40.91%
Strongly Agree	(E) 7 31.82%
No answer	0 0.00%

Q14 As an online learner, do you need to exchange and validate ideas with other online learners to gain deep meaningful learning?

Answer	Count Percentage
Strongly Disagree	(A) 3 13.64%
Somewhat Disagree	(B) 8 36.36%
Don't Know	(C) 1 4.55%
Somewhat Agree	(D) 7 31.82%
Strongly Agree	(E) 3 13.64%
No answer	0 0.00%

Q15 As a distance learner, if you project yourself emotionally are you able to create idea generation for cognitive and active learning?

Answer	Count Percentage
Strongly Disagree	(A) 2 9.09%
Somewhat Disagree	(B) 7 31.82%
Don't Know	(C) 6 27.27%
Somewhat Agree	(D) 7 31.82%
Strongly Agree	(E) 0 0.00%
No answer	0 0.00%

Q16 As an online learner do you project your personal characteristics into the community of inquiry to influence the effectiveness of your own knowledge acquisition?

Answer	Count Percentage
Strongly Disagree	(A) 1 4.55%
Somewhat Disagree	(B) 2 9.09%

Don't Know   (C) 2 9.09%
Somewhat Agree   (D) 15 68.18%
Strongly Agree   (E) 2 9.09%
No answer   0 0.00%

Q17 As a distance learner do you think online participation is effective for creative problem exploration?

Answer   **Count Percentage**
Strongly Disagree   (A) 1 4.55%
Somewhat Disagree (B) 0 0.00%
Don't Know   (C) 2 9.09%
Somewhat Agree   (D) 12 54.55%
Strongly Agree   (E) 7 31.82%
No answer   0 0.00%

Q18 If you actively engage in social activity with other community of online learners do you think you would have the ability to sustain and support your critical thinking?

Answer   **Count Percentage**
Strongly Disagree   (A) 1 4.55%
Somewhat Disagree (B) 2 9.09%
Don't Know   (C) 5 22.73%
Somewhat Agree   (D) 7 31.82%
Strongly Agree   (E) 7 31.82%
No answer   0 0.00%

Q19 If a community of online distance learners exhibited control and authority in threaded discussions would you become intimidated and therefore not participate?

Answer   **Count Percentage**
Strongly Disagree   (A) 8 36.36%
Somewhat Disagree (B) 5 22.73%
Don't Know   (C) 1 4.55%
Somewhat Agree   (D) 5 22.73%
Strongly Agree   (E) 3 13.64%
No answer   0 0.00%

Q20 If social presence didn't exist and the community of learners did not interact, do you think it would negatively impact your deep meaningful learning?

Answer   **Count Percentage**
Strongly Disagree   (A) 5 22.73%
Somewhat Disagree (B) 5 22.73%

Don't Know   (C) 0 0.00%
Somewhat Agree   (D) 8 36.36%
Strongly Agree   (E) 4 18.18%
No answer   0 0.00%

Q21 Do you think fairly high levels of social presence are necessary to support the development of your deep and meaningful learning?

Answer   Count Percentage
Strongly Disagree   (A) 6 27.27%
Somewhat Disagree (B) 7 31.82%
Don't Know   (C) 0 0.00%
Somewhat Agree   (D) 6 27.27%
Strongly Agree   (E) 3 13.64%
No answer   0 0.00%

Q22 As an online learner do you think your interactive discussion in the community of learners is necessary for you to understand complex theory?

Answer   Count Percentage
Strongly Disagree   (A) 5 22.73%
Somewhat Disagree (B) 6 27.27%
Don't Know   (C) 1 4.55%
Somewhat Agree   (D) 6 27.27%
Strongly Agree   (E) 4 18.18%
No answer   0 0.00%

Q23 If group work is part of your distance learning course do you think it should be extended to the interactive online community of learners to gain a better understanding of complex theory?

Answer   Count Percentage
Strongly Disagree   (A) 3 13.64%
Somewhat Disagree (B) 5 22.73%
Don't Know   (C) 4 18.18%
Somewhat Agree   (D) 7 31.82%
Strongly Agree   (E) 3 13.64%
No answer   0 0.00%

Q24 Do you as an online learner think an online community of learners emotionally interacting on a social level can hinder deep meaningful learning?

Answer   Count Percentage
Strongly Disagree   (A) 2 9.09%
Somewhat Disagree (B) 9 40.91%

Don't Know   (C) 3 13.64%
Somewhat Agree   (D) 8 36.36%
Strongly Agree   (E) 0 0.00%
No answer   0 0.00%

Q25 Do you as an online learner think online chat significantly contributes to developing more authentic group collaboration for knowledge building?

Answer   Count Percentage
Strongly Disagree   (A) 2 9.09%
Somewhat Disagree (B) 3 13.64%
Don't Know   (C) 3 13.64%
Somewhat Agree   (D) 12 54.55%
Strongly Agree   (E) 2 9.09%
No answer   0 0.00%

Q26 In a study conducted by Conrad (2009), one participant commented "I personally depend on other classmates to stimulate my thinking process". Do you agree or disagree that interactive discussion forums are effective in learning strategy?

Answer   Count Percentage
Strongly Disagree   (A) 4 18.18%
Somewhat Disagree (B) 7 31.82%
Don't Know   (C) 0 0.00%
Somewhat Agree   (D) 10 45.45%
Strongly Agree   (E) 1 4.55%
No answer   0 0.00%

Q27 As an online learner do you think better instructor efforts is necessary to improve deep learning in online discussions?

Answer   Count Percentage
Strongly Disagree   (A) 1 4.55%
Somewhat Disagree (B) 4 18.18%
Don't Know   (C) 1 4.55%
Somewhat Agree   (D) 11 50.00%
Strongly Agree   (E) 5 22.73%
No answer   0 0.00%

Appendix H – Qualitative Telephone Interview Transcript

F1 = Respondent **– # 1** Gender – female (personal communication, March 10, 2011)

28. Describe how you think Social Presence (sp) impacts your ability to learn and supports your cognitive learning skills to acquire knowledge?
[Social Organization of Learner]
[Cognitive Learning unrelated to sp]
[Sp no effect on learner's domain]
CODE=Sp delays learning, inhibitor, distracter

- o F1 - I personally am not a sp person, so I don't find that it impacts in any way with my learning. I will participate in Moodle on line, when it's a course requirement, but when it isn't I prefer to just ah..I like having different the chats with friends, classmates but I'm not into the real social .. I just want to get my learning done and not really into the social side of it. I will participate.

[Social Organization of Learner]
[Cognitive Learning unrelated to sp]
[Sp no effect on learner's domain]

28 a) Researcher: So you have the chats but you find, what do you find they provide to you, the chats, what does it do for you?
[Social Organization of Learner]
[Sp no effect on learner's domain]
[Collaboration distracts deep meaningful learning (dml)]
CODE=Connection for familiarity, sp for support, time consuming, useless responses, multiple perspectives online

- o F1 – Well some of the discussions was on Some of the courses I was in last year instructional designing where it was discussing that in work and what we were doing, it provides a connection. It provides a connection with people who are going through the same thing. I guess that's the bottom line…Ok..you know, lack of time, lack of food..so there is that support there, but as far as learning..umm..I guess there is some learning that occurs when you are on line, I won't say that I haven't learned, but I've participated in group discussions..because everybody brings something from their life to the

discussion..um I just find that sometimes it takes so much time to catch up if you miss a couple of days and that's where I find it ..ahh and can go back after you know in 2 or 3 days and then you find you have 120 postings and then ok I really don't have time to read.. read..then so when you know you just skim through and see yes and no and to me it's just useless responses..– a lot of on a personal side chit chat that could be done on the side, on the side and not in the discussion

[Social Organization of Learner]
[Sp no effect on learner's domain]
[Collaboration distracts deep meaningful learning (dml)]

28 b) Researcher, ok, do you find it to be detrimental to learning?
[Sp no effect on learner's domain]
[Cognitive learning unrelated to sp]
CODE=non-relevant posts, digression in discussion distracts learning, time consuming, non-relevant learning in sp

- o F1: No, I just find it because there are so many posts that if people want to discuss what we are supposed to discuss that's great and a couple of side comments is fine but then when they start to go off on their own personal side conversations ummm. In the discussion area when they could be doing it in social café or some other spot..I would find it more beneficial because I don't really want to have to weed through what is relevant and what isn't and then yes I agree comments are kind of a waste of time.

[Sp no effect on learner's domain]
[Cognitive learning unrelated to sp]

29. Referring to the definitions of Social Presence and deep meaningful learning, what online activities did you engage in to develop deep meaningful learning?
[Self-directed learning]
[Learner strategy]
[Cognitive learning unrelated to sp]
CODE=dml requires personal reading, research, self-research, self-discovery, self-learning

- o F1: I do a lot of research outside of what I really need to be doing, I get a little carried away sometimes…ummm. So I discuss one of the books on line in the discussion, I will do my own research and start digging quite deep into that topic– and other readings, journal articles..So I find that ahhh, I'm curious, so I have to go farther then what through the surface..

[Self-directed learning]
[Learner strategy]

[Cognitive learning unrelated to sp]

29 a) Researcher: So do you find the journal articles and everything on line?
- o F1 – yep…I've pretty well… I'm taking my 39th online course since 2002..One certificate of Bach. Of Ed and now MED.

29 b) Researcher: So to get to your deep meaningful learning, it's basically your own research…
[Self-directed learning]
[Social organization of learner]
CODE=own research for dml, self-initiated discussion to reinforce learning
- o F1 – yah well, I like talking to friends and family about some of the subjects, I find that that reinforces what I am learning…

[Self-directed learning]
[Social organization of learner]

29 c) Researcher: But not your peer students?
[Sp no effect on learner's domain]
[Social organization of learner]
[Cognitive learning unrelated to sp]
CODE=sp sidebar chat distracts dml, prefer face to face
- o F1 -- sometimes I will, if it's. like I say it depends on the situation, I just find that the topic that we're supposed to be discussing may not be what I really want to be discussing..so I will do the side bar type discussions with some people, not on the discussion group, but umm – see I find that also sometimes having the face to face discussions with somebody – ummm you can really get into a really good dynamic in that type of discussion

[Sp no effect on learner's domain]
[Social organization of learner]
[Cognitive learning unrelated to sp]

29 d) Researcher: So you say you sometimes do the sidebar discussions, is that initiated by you or a requirement?
[Social organization of learner]
[Learner strategy]
CODE=self-initiated discussions offline
- o F1 – no that's usually initiated by me. Or one of the other students who wants to discuss and say hey – it can be reciprocal.

[Social organization of learner]
[Learner strategy]

30. How do you create deep meaningful learning?

[Learner strategy]
[Self-directed learning]
CODE=dml connect to own knowledge, connection prior knowledge, connection to life experience, reading for connections, dml is personal connection
- o F1: Hmmm..I have to make connections to what I know, at least partially and then take the information that further and quite often days I look at what it really means then go back and reread article or journal or wherever I got the information but umm I'm unsure of, but I do find that if make a connection to what I know in some way it may not be 100% of what they're talking about or some type of personal connection – oh like that means that or whatever a psychology course or whatever it happens to be you can connect it here to life experience or prior learning it makes more sense.

[Learner strategy]
[Self-directed learning]

31. Describe how participating in a community of other learners, thus a social presence exists, helps you understand complex theory?
- o F1: Not sure what you mean by complex?

- o Researcher: Complex meaning something very high end learning such as Heidegger's theory of existence or something very high, not simple like how you tie a string.

[Sp no effect on learner's domain]
[Social organization of learner]
CODE=mandatory online sp not for dml, affirms similar questions
- o F1: Ok so read the question again.. Yes it does, umm...because I'm thinking back to a course I took at UVic and it was a course in philosophy and stuff like that and got into a discussion with some of the other classmates online and by discussing it, it clarified some of the concepts and ahhh. So yeah I do find that you can... When you're unsure of something, having that SP and knowing that there's another student who has the same question, does help..
[Sp no effect on learner's domain]
[Social organization of learner]

31 a) Researcher: So I'm looking at your previous response where you said it doesn't because you learn on your own?
[Teacher presence dependency]
CODE=online discussions with professor
- o F1 – For certain indepth analysis and I'm just thinking of philosophy is one of them, I find that having online discussions with the professor and students did help and I guess professional ethics was another one..

[Teacher presence dependency]

31 b) Researcher: Now, are you talking about the Master's degree program?
- o F1 – No, this was under my bachelor of Education.

- o Researcher: Ok that's a little bit different because it's undergrad, I'm talking here about the Master's degree, so higher end learning for the Master's degree.

[Teacher presence dependency]
[Sp no effect on learner's domain]
[Collaboration distracts dml]
CODE=forced social online not useful, forums not structured, too many discussions cause no dml, mandatory sp discussions not useful, dml asking questions of professor
- o F1 – Yep, I could go back to the Instructional design course again, where there was 3 of us, we were assigned as a group but we participated in a lot more conversations in skype, outside of the group activity, because we enjoyed talking to each other and just getting into some of the more deeper discussion on how we could approach things from the instructional design aspect.. There's certain levels of learning that…Overall, I find that the forced social online, you know..I was just reading an article on IROL –International Research online Learning-it's up for discussion. Overall I find that the online mandatory discussion forum are not useful because they're not structured to really.. You ask a question, it's not really structured to provide any type of learning or deeper learning is the way I look at it.

[Teacher presence dependency]
[Sp no effect on learner's domain]
[Collaboration distracts dml]

- o Researcher: Ok, so I want to go back to SP to make sure everything is clear, what they're talking about for SP, in a community of inquiry to project their personal …it's the social aspect of it to understand complex theory that's the difference here.

[Social organization of learner]
[Sp no effect on learner's domain]
CODE=online sp doesn't help dml, sp not linked to dml
- o F1: I would say the social side helps is the fact that you get to know someone through the online aspect and be able to go outside the lesson to discuss things but not necessarily online SP.. the forced online SP.

[Social organization of learner]
[Sp no effect on learner's domain]

31 c) Researcher: So the online SP for you does not help or does help?
[Sp no effect on learner's domain]
CODE=sp not linked to dml
- o F1 – it doesn't no.

[Sp no effect on learner's domain]

31 d) Researcher: Because going outside is really an initiative on your own?
- o F1 – yes exactly.

32. In a distance learning course, if group peer discussion (representing social presence) did not exist do you think cognitive learning would occur for you? Explain.
[Collaboration distracts dml]
[Cognitive learning unrelated to sp]
[Learner strategy]
[Social organization of learner]
CODE=sp causes distraction, sp distraction to dml or cognitive learning, independent concentration for knowledge
- o F1: Yes. Well, there is with some of the courses for the Master's in particular the qualitative research courses ….very little online participation and I learned far more in 602 then I did in a lot of the other courses, because I was getting into the information rather than ..being distracted having to participate online. I just remember when Tom emailed saying you don't have to participate and I remember saying thank-you and sigh of relief and the same when the other ones …in 701 and 702 because he's the same professor..yeah I sort of like ….SP aspect can quite often be a distraction it's like another form of procrastination for me…ummm oh gee let's check out what's on Moodle tonight rather than working on the..when then I know I don't have to check it and I can concentrate more on what I want to be learning and expanding my knowledge in a particular subject.

[Collaboration distracts dml]
[Cognitive learning unrelated to sp]
[Learner strategy]
[Social organization of learner]

33. Do you gain any deep meaningful learning from interactive DE discussions supported by socially projecting your personal characteristics as a real person (use of emoticons and building relationships)?
- o F1: Ummm I do some emicons because you don't want to offend somebody and you don't know if they are going to take it as being funny or even partially humourous. I guess because of my personality..I spend a lot of time in customer service where I have to be friendly..I'm an introvert when not to

be friendly so when I get to the online side, I tend to be more of a lurker, I participate a little bit but I tend to be lurking and seeing what other people are saying and not into a lot of that social..

33 a) Researcher: So does it help you to get to deep meaningful learning if you were to do that?
[Sp no effect on learner's domain]
[Building relationships inhibits dml]
CODE=online sp doesn't gain dml, building relationships doesn't gain dml
  o F1 – To be more social online?

[Sp no effect on learner's domain]
[Building relationships inhibits dml]

33 b) Researcher: To use like emoticons and build relationships, would that help you to get more deep meaningful learning?
  o F1 – no I don't feel it would.

34. Do you rely on the presence of other learners to support your learning (describe with examples)?
[Sp no effect on learner's domain]
[Learner strategy]
[Self-directed learning]
CODE=non-reliance on peers, self-discovery, self-learning
  o F1: No. Lke I say it's nice to know people are there, but most of time I do what I have to do and you know every once and awhile I will send someone an email and I have done it occasionally, but most of the time by the time I think of sending an email to a fellow learner, I've usually figured it out for myself. Or somebody else has asked the question online and I say ok that's my answer...

[Sp no effect on learner's domain]
[Learner strategy]
[Self-directed learning]

35. As an online Master's Degree Education learner, do you need to build relationships with fellow on-line learners to enable idea generation?
[Building relationships inhibits dml]
[Self-directed learning]
[Sp no effect on learner's domain]
CODE=building relationships detriment to learning, enabling ideas, focus on learning independently, self-learner
  o F1: No. I've not done any of that at all and it might be in a sense of detriment in not making connections for later areas but I've just been focusing on the

learning.

[Building relationships inhibits dml]
[Self-directed learning]
[Sp no effect on learner's domain]

35 a) Researcher: And would you say when you're focusing on the learning, do you obtain that from SP or yourself independently?
[Self-directed learning]
CODE=learn independently
- o F1: Myself independently.

[Self-directed learning]

36. Do you require a teacher to moderate on-line discussions to enable development of deep meaningful learning?
[Teacher presence dependency]
CODE=teacher as equal participant, teacher as subject matter expert, teacher access for questions
- o F1: No. If they participate as an equal participant, I guess best of describing it I don't think they need to be doing anything other than responding as if they were carrying on a regular conversation as everyone else, I don't expect them to be.. they may have insight having been in the field for a long time…more than anyone else but I don't think it's worthwhile they have to participate in that particular role, they can participate but not necessarily as a teacher but more as you know, not even authority, but in essence, as subject matter expert. But equally there could be other people in that particular group or class who are also subject matter experts.

[Teacher presence dependency]

36 a) Researcher: Now, if it was only you and the teacher and you just knew that the teacher was there for access if you had questions but not necessarily requiring you to have online discussions all the time would that work for you?
[Teacher presence dependency]
CODE=teacher support for learner inquiry, access to teacher for questions
- o F1: Yep definitely, yeah it's nice to know the teacher was there if you really need it but umm or somebody you can ask questions knowing you are going to get a response.

[Teacher presence dependency]

36 b) Researcher: Do you have anything else you want to add?

- o F1 – No I don't think so…

F2 = Respondent – # **2** Gender – female (personal communication, March 9, 2011)

28. Describe how you think Social Presence impacts your ability to learn and supports your cognitive learning skills to acquire knowledge?
[Cognitive learning unrelated to sp]
[Self-directed learning]
[Sp no effect on learner's domain]
[Teacher presence dependency]
CODE=sp no impact on cognitive learning, self-learner, independent, sp doesn't help but inhibits learning, teacher for questions, learning increased with teacher, more focused and enhances learning, introverted, one-one with instructor advanced learning

   o F2: I don't really know that it does effect my learning. I learn very well on my own. Umm I think that chats and that you know that they set up for us to have and trying to set it up as a classroom discussion, it's what they're really trying to do and I don't that it really helps that much. I mean it's interesting and stuff but I did correspondence through *a distance education university* which has nothing as far as interaction with other students and I did quite well at it. To me the most important thing is to have a good instructor that you can turn to if you have questions..to me that's really impacted my learning and I almost think that I learnt more because it was my questions that were important umm I found that I was better able to ask my questions and it enhanced my learning better when it was just one on one with me and the instructor rather than having to go through moodle or go through the landing for me that almost inhibits my learning. I mean I'm not going to speak up in classroom that's why I like to take … I am an introverted person, I'm just not going to ask those type of questions just in case you'll get laughed at or those kind of things but I found that being able to talk one on one with an instructor really advanced my learning and Moodle I found wasn't quite as bad as the landing..there was you know it's just your classroom and I'm finding the landing we're participating in it right now and I'm finding I'm really anxious about it just because more than just our class had access to it, it stays on there forever unless I go in and delete it…there just doesn't seem to be any protection.

[Cognitive learning unrelated to sp]
[Self-directed learning]
[Sp no effect on learner's domain]
[Teacher presence dependency]

28 a) Researcher: So can I ask is it the technology where you feel that you're learning would be you know diminished or is it the whole process of discussion groups is less?
[Sp no effect on learner's domain]
[Teacher presence dependency]

[Cognitive learning unrelated to sp]
[Collaboration distracts dml]
CODE=peer reliance, sp no learning, learning diminished without teacher presence, sp less focused learning, value time with teacher, enhanced learning with teacher, multiple perspectives defocuses learning, learners actively acquiring knowledge from teacher, ask questions from teacher

- o F2: I'm finding there is less ummm one on one with the instructor through this program compared to when I did umm some of my courses…undergraduate courses when they didn't have the technology that they have now …I'm finding that there really relying on learning from your peers, where they didn't rely on that before, if you had any questions…I mean sometimes I didn't have any questions… and I could breeze through the course and didn't have as much contact with an instructor, other times I had more contact umm when I really valued that time I had with my instructor and I could call them..but I'm finding now that there really relying on learning from your peers, that kind of learning.. that kind of learning..it's just a different type of learning. I'm not afraid of the technology.. I just don't like everyone reading my responses..in the whole I just seems …it's a sense of vulnerability, especially with that landing, I'm finding at least for me…

[Sp no effect on learner's domain]
[Teacher presence dependency]
[Cognitive learning unrelated to sp]
[Collaboration distracts dml]

28 b) Researcher: So back to your comment about you value the time with the instructor and you're finding there is less one on one instruction or less one on one interaction with an instructor…you're, they're relying more on learning from peers…this learning from peers.. so do you find that's diminishing your learning? Do you find it would be better with an instructor or do you find it's better with your peers.
[Cognitive learning unrelated to sp]
[Sp no effect on learner's domain]
[Teacher presence dependency]
CODE=sp less focused learning, teacher more focused, multiple perspectives defocuses learning, unstructured peer learning, unfocused peer learning

- o F2: I find my learning is a lot more focused when it was one on one with an instructor. I find the learning with the peers, because everyone is different point in learning, I can find it unless it is very structured and I found Moodle to keep it very structured everything goes every which way and it's really hard to follow.. I just found my learning was much more focused when it was just me and my instructor. So it's good to see your peers and it is good to see where you there at and stuff like that but I like the focused learning.

[Cognitive learning unrelated to sp]
[Sp no effect on learner's domain]
[Teacher presence dependency]

28 c) Researcher: So then if you had a better instructor to provide that higher complex learning..do you think that you would get to that cognitive point where your understanding is really surpassing? So you get to that higher complex learning with the aid of an instructor or with the aid of your peers?
[Teacher presence dependency]
[Sp no effect on learner's domain]
[Learner strategy]
CODE=complex learning one-one with teacher, value time with instructor, non-reliant on peers, independent learner, non-peer learning
   o F2: I guess I would say it probably depends..for me I would probably get there faster just with the aid of an instructor. I mean I think once you're there maybe then the peer thing maybe that would enhance the learning, I'm not sure I can only speak for myself..I'm quite independent but it was just having that.. I just found before that when it was just one on one when you had questions, you get the question answered and I could go on myself and keep learning.

[Teacher presence dependency]
[Sp no effect on learner's domain]
[Learner strategy]

29. Referring to the definitions of Social Presence and deep meaningful learning, what online activities did you engage in to develop deep meaningful learning?
[Learner strategy]
[Self-directed learning]
[Collaboration distracts dml]
[Sp no effect on learner's domain]
CODE=self-initiated reading, sp distracts learning, multiple perspectives defocuses learning, evaluate based on personal knowledge
   o F2: I think for me it's a lot of reading…I will use the internet..I don't want to see what other people are thinking but I want to do it.. I guess more passive type of learning… so me reading and going online and finding journal readings or just do a really quick websearch just to see what others are thinking and then I can evaluate.. You have to have a certain level of knowledge to be able to evaluate that yourself right…

[Learner strategy]
[Self-directed learning]
[Collaboration distracts dml]
[Sp no effect on learner's domain]

29 a) Researcher: So where do you get that knowledge from?
[Self-directed learning]
[Sp no effect on learner's domain]
CODE=knowledge from reading, self-learning, non-peer reliant
  o F2: Lots of reading…for me it's lots of reading and thinking about
    things…umm…

[Self-directed learning]
[Sp no effect on learner's domain]

29 b) Researcher: If you were socially interacting with your peers…you know social
presence being like a real person, you're a real person…
  o F2: I guess you are learning a little bit from them…I'm learning more on my own

29 c) Researcher: Ok, what about if there was an instructor that explained some of the
knowledge or referred to some of the journals that you are reading? If the instructor
provided that?
[Teacher presence dependency]
CODE=instructor initiated reading packages
  o F2: Well I guess they do in a sense when they give you your reading packages and
    they give you a list of extra reading you know that you could look at so I guess
    they are providing extra resources for you in the package that they give you.

[Teacher presence dependency]

29 d) Researcher: So would you socially interact with a peer to help you?
[Social organization of learner]
[Self-directed learning]
CODE=perspective independent interpretation, sp only because required, required
participation
  o F2: So I do interact like when they ask you to ask questions.. like they have that
    component so I guess you are interacting with your peers but sometimes my
    thinking is quite a bit different then what other people are thinking and so I post
    that ..

[Social organization of learner]
[Self-directed learning]

29 e) Researcher: So is it because it's required you do that?
  o F2: I do it because it's required.

29 f) Researcher: So if it wasn't required you wouldn't go out seeking for someone to
socially know them as a person in order to get to deep meaningful learning for yourself?
[Sp no effect on learner's domain]

CODE=non social presence seeker
- o F2: I don't think so.

[Sp no effect on learner's domain]

30. How do you create deep meaningful learning?
[Self-directed learning]
[Learner strategy]
[Sp no effect on learner's domain]
CODE=reading for viewpoints from articles, published journals, participation withdrawal, create dml on own, self-learner
- o F2: I do a lot of reading, I want to see what other different viewpoints are,

[Self-directed learning]
[Learner strategy]
[Sp no effect on learner's domain]

30 a) Researcher: From your peers or published journals?
[Self-directed learning]
[Learner strategy]
[Sp no effect on learner's domain]
CODE=reading for viewpoints from articles, published journals, participation withdrawal, create dml on own, self-learner
- o F2: Published journals. I would tend to turn there first. Umm…I mean the discussion groups that we have and stuff are interesting and stuff..don't get me wrong.. but I don't feel I would, if they were not required I would just glance at them but I probably wouldn't participate much in them..umm.. unless I had really strong thoughts on something but that's just reflective of my personality too.

[Self-directed learning]
[Learner strategy]
[Sp no effect on learner's domain]

30 b) Researcher: But if you look outside of your personality do you think other learners would be able to learn in the same way…if we were to remove that social presence do you think they would still get to the complex learning as long as they had a good instructor?
[Sp no effect on learner's domain]
[Teacher presence dependency]
CODE=complex learning with teacher, complex learning without social presence, discussions inhibit learning in social presence environment, social presence distracts learning
- o F2: Yep..I think so. But even in classroom learning you have learners that take things in more and others that tend to discuss things more right, so I think that

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some of this maybe has to do with the personality of the learner and how they learn better too. I mean I've been in classrooms where some of the students just won't be quiet. You know what I mean they need more at that active learning maybe.

[Sp no effect on learner's domain]
[Teacher presence dependency]

30 c) Researcher: But can you be active in learning without interacting?
[Sp no effect on learner's domain]
[Social organization of learner]
CODE=internal, passive learner, non-interactive
  - o F2: I think when I think of active learning I think of the students that need to have that discussion and they really need to be hashing things out with someone else or thinking maybe you're right maybe there is more active learning that is more internal. They don't usually look at it as active because students who speak up are seen as active learners and the others are seen as passive learners, I don't know..I think each is learning just as much I just think when you moded in a different way and I think both are valuable.

[Sp no effect on learner's domain]
[Social organization of learner]

30 d) Researcher: Do you think one is better than the other to get to that deep meaningful learning portion do you think that socially interacting would for you, would you need to have that social presence piece of it?
[Sp no effect on learner's domain]
CODE=sp not necessary for dml, self-learning
  - o F2: You mean to discuss with my peers and stuff to get there, I don't think so. I mean I could be wrong but I don't think so at this time though.

[Sp no effect on learner's domain]

31. Describe how participating in a community of other learners, thus a social presence exists, helps you understand complex theory?
[Collaboration distracts dml]
[Self-directed learning]
CODE=multiple sp discussions hinders learning, multiple perspectives inhibits complex learning, self-review of literature for complex learning
  - o F2: I'm just thinking back to all my education and..complex theory… I think they give different ways of looking at it…each person brings their own viewpoint to it which can sometimes be a hindrance too. I mean if they're thinking wrong you might start thinking wrong. I mean I think it's nice to get different viewpoints, that you can from the literature too, but whether it really helps me to understand, I

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think it helps me to understand better to have a an instructor who is able to explain things in simple terms. I mean I think getting a base and then you build on that.

[Collaboration distracts dml]
[Self-directed learning]

32. In a distance learning course, if group peer discussion (representing social presence) did not exist do you think cognitive learning would occur for you? Explain.
   o   F2: And you could discuss things one on one with your instructor?

   o   Researcher: Oh yes that's fine, just other students and peers.

   o   F2: And you said they would take that away.

32 a) Researcher: Yes and you would have access to your teacher and the literature, all is the same, all they would do is take out the component of social presence would cognitive learning occur for you?
[Teacher presence dependency]
[Cognitive learning unrelated to sp]
[Learner strategy]
CODE=teacher required for complex learning, instructor provides base to build on learning, cognitive learning with teacher, no cognitive learning with sp
   o   F2: I think so.

[Teacher presence dependency]
[Cognitive learning unrelated to sp]
[Learner strategy]

32 b) Researcher: So just to clarify in a distance learning course where you you're your group peer discussion and everyone comes in as a real person and these are all your peers..and the teacher is still there. Your teacher says you won't have to do any required chats or discussions, it will just be the instructor and you and the instructor would work individually work with each person as required. If you have a question the instructor would answer, would you have cognitive learning?
[Cognitive learning unrelated to sp]
[Self-directed learning]
[Teacher presence dependency]
CODE=no required sp, definitely cognitive learning, teacher one-one for cognitive learning, independent learning
   o   F2: Definitely there would be cognitive learning. Yes, yes….

[Cognitive learning unrelated to sp]
[Self-directed learning]
[Teacher presence dependency]

33. Do you gain any deep meaningful learning from interactive DE discussions supported by socially projecting your personal characteristics as a real person (use of emoticons and building relationships)?
[Sp no effect on learner's domain]
[Building relationships inhibits dml]
CODE=sp doesn't create dml, building relationships doesn't create dml, sp not for dml
   o F2: No, it doesn't help my learning at all.

[Sp no effect on learner's domain]
[Building relationships inhibits dml]

33 a) Researcher: what about building relationships?
[Building relationships inhibits dml]
[Cognitive learning unrelated to sp]
CODE=building relationships no help to dml or learning, sp nice but doesn't enhance learning
   o F2: I don't see how it will help my learning, I guess it's interesting stuff if you like that person or if your friends or something, but I don't think it really enhances my learning.

[Building relationships inhibits dml]
[Cognitive learning unrelated to sp]

34. Do you rely on the presence of other learners to support your learning (describe with examples)?
[Sp no effect on domain of learner]
CODE=non-peer reliance for learning, self-reliant, self-learner
   o F2: I don't think so.

[Sp no effect on domain of learner]

34 a) Researcher: If you did rely on other learners to support your learning do you have examples where you would have that?
[Collaboration distracts dml]
[Sp no effect on learner's domain]
[Learner strategy]
CODE=group work not helpful, group work distracting, prefer self-learning
   o F2: I think Group work when you have to rely on other learners. I wouldn't seek out group work only if I had to do group work. I would only do it if required. I find group work really distracting. I just do better on my own and that was in classroom and in distance. I prefer to do it on my own. It's not that I don't like working with people I just find it's easier to go ahead and do it on your own unless you have really good group members.

[Collaboration distracts dml]
[Sp no effect on learner's domain]
[Learner strategy]

34 b) Researcher: And how do you define good?
- o F2: Good group members, everyone carrying their own weight, everybody can sit down and this is what we're going to do and everyone can sort of go ahead and then go back ummm. When you have someone that's just not carrying their own weight it get's really frustrating…umm so I just found it's just easier to do it on my own.

34 c) Researcher: And if you did work in a group, do you find that your deep meaningful learning would increase?
[Collaboration distracts dml]
[Sp no effect on learner's domain]
CODE=group work doesn't increase learning, no dml with group work, group work for compatibility, no dml, dml from self
- o F2: My experience so far it hasn't increased. I mean I don't think group work increases your learning at all, it's just a different way of learning. It helps you get a long with people, I guess that's why their having you do it and umm that kind of thing but has it increased my knowledge of subject matter that we were doing..I don't think so.. It gives you different skills such as group learning, but as far as learning I think I could have learned just as much on my own.

[Collaboration distracts dml]
[Sp no effect on learner's domain]

34 d) Researcher: With help of instructor?
[Learner strategy]
[Teacher presence dependency]
CODE=subject matter dependent, instructor for questions, teacher for direction, prefer teacher over peers (sp), self-learn depends on subject matter, access to teacher for direction, clarification
- o F2: Ahh a lot of times it depends on the subject matter, a lot of times you can just go ahead and do it on your own. It's nice to have a really good instructor and you have questions and you're feeling a bit lost then I'd say you just need a clarification. You know, am I thinking right about this, am I missing something about this, what am I missing, something seems to be missing, they can help you with the cases and at least direct you where you need to go and sometimes there is a gap there like I'm thinking this but then I might be missing something and then they say oh yeah you are or you are on the right track, now just think about this and now maybe read this.

[Learner strategy]
[Teacher presence dependency]

34 e) Researcher: So you don't get that from your peers just your instructor?
[Teacher presence dependency]
CODE=self-learning with help from teacher
   o F2: I would prefer to get that from my instructor.

[Teacher presence dependency]

35. As an online Master's Degree Education learner, do you need to build relationships
with fellow on-line learners to enable idea generation?
[Building relationships inhibits dml]
[Learner strategy]
[Sp no effect on learner's domain]
CODE=no online relationship for idea generation, self-idea-generator, non-peer reliance,
self-learner, generate own thoughts
   o F2: I get ideas, oh no I have plenty of ideas on my own and always wandering
      about something. I'll often be reading something and jot down notes beside it and
      I wonder this or this is like this or I'm always generating my own thoughts.

[Building relationships inhibits dml]
[Learner strategy]
[Sp no effect on learner's domain]

36. Do you require a teacher to moderate on-line discussions to enable development of
deep meaningful learning?
[Teacher presence dependency]
[Self-directed learning]
[Collaboration distracts dml]
[Learner strategy]
[Sp no effect on learner's domain]
CODE=teacher presence for structure, focus, multiple viewpoints inhibits learning,
confirm knowledge with teacher, confusion without teacher, instructor as guide,
independent thinker, confirm learning with teacher, self-learner
   o F2: Ahhh. When the instructor does moderate the discussion I think there is more
      structure. I think that helps. I think when there isn't a strong presence, the
      discussions go in so many different ways that to me it inhibits my learning, you
      just can't follow it. And I think an instructor can also go well you know so and so
      posting and that's a good thought or you know what think about it this way. I
      learn just well on my own and it's nice to have an instructor there just as a guide.

[Teacher presence dependency]
[Self-directed learning]
[Collaboration distracts dml]

[Learner strategy]
[Sp no effect on learner's domain]

M3 = Respondent – # **3** Gender – Male (personal communication, March 10, 2011)

28. Describe how you think Social Presence impacts your ability to learn and supports your cognitive learning skills to acquire knowledge?
[Sp no effect on learner's domain]
CODE=dml unlrelated to sp, sp doesn't impact dml, sp doesn't enhance ability to learn, don't rely on sp for learning
  o M3: Social presence (SP) does not impact my ability to learn or engage in deep meaningful learning (dml). Umm, yes umm, if you want my personal view when I answer this question?

[Sp no effect on learner's domain]

  o Researcher: Yes, it's for you. I mean if you want to give me outside of yourself, you can, but generally this is directed towards you.

[Sp no effect on learner's domain]
[Learner strategy]
[Social organization of learner]
CODE=don't require sp for dml, learn with access to information, self-learner, sp not for learning, sp to test ideas, not for dml, sp doesn't impact dml, dml unrelated to sp, experience learning unrelated to sp
  o M3: I fundamentally believe that learning is almost fabricated. That we don't require necessarily the presence of others to process information but nor entirely do we learn on our own. It's a two-fold process. Umm.. so I can learn quite happily on my own and have access of information and most of my learning has been self-taught in almost everything..ah.. as long as I have access to information, I can learn. The idea of SP while sometimes engaging in order to test certain ideas that you might have, it's sometimes nice to bounce some of these ideas off others, I don't require a SP in order to learn, process information and experience as you described deep meaningful learning. Sometimes I'm quite happy to be completely anonymous.

[Sp no effect on learner's domain]
[Learner strategy]
[Social organization of learner]

29. Referring to the definitions of Social Presence and deep meaningful learning, what online activities did you engage in to develop deep meaningful learning?
[Sp no effect on learner's domain]
[Cognitive learning unrelated to sp]
CODE=no online engagement for dml, no sp for dml, sp not required for learning, participation withdrawal, sp not for enjoyment of learning, sp not for ability to learn, sp doesn't invoke dml, forums unrelated to dml

- M3: Well, given what I just said, my answer would be None. Now that having been said, ummm, certainly in the context of the MDE program at *a distance university*, there were some forums that were engaging and fun and enjoyable but they weren't required for me to learn nor was my SP required in order for me to learn. So in other words, if my name in the forum was simply participant X, I would have been as happy in that forum as my name being Matthew Asser with a full profile that people could access. You know, so the SP definition is not germain to my ability to learn or my enjoyment of learning or necessary to invoke dml.

[Sp no effect on learner's domain]
[Cognitive learning unrelated to sp]

30. How do you create deep meaningful learning?
[Self-directed learning]
[Learner strategy]
[Lifelong learning]
[Sp no effect on learner's domain]
[Cognitive learning unrelated to sp]
CODE=dml created research, self-research, dml from reading, dml from personal knowledge, self-absorbing for dml, calibrate information to create dml, create dml by reading, thinking, create dml from self knowledge that is absorbed, dml from self-discovery

- M3: I create dml through research, I create dml through reading ahhh.. books and papers, I create dml through being able to calibrate what I'm bringing in, number one with what I already know almost to an analogic form of learning…um.   I create learning experiences also through engaging with others but it's not required. I create learning for myself through writing and thinking through the information that I'm picking up and absorbing. I'm just thinking how else, I think also it ummm.. I should also mention that another way that I create learning for myself is through reading the opinions of others.. umm. But I don't…it's not required that people know that I am reading them, I don't need to have a SP there but I will read what other people have written and formulate it through even if it's completely off from what I believe, it helps me to continue to calibrate and understand and provide context around what it is that I'm wrestling with either intellectually or mechanically.

[Self-directed learning]
[Learner strategy]
[Lifelong learning]
[Sp no effect on learner's domain]
[Cognitive learning unrelated to sp]

31. Describe how participating in a community of other learners, thus a social presence exists, helps you understand complex theory?
[Social organization of learner]
[Sp no effect on learner's domain]
CODE=personality exchange not for dml, sp not for dml
- o M3: Well again going back to the definition of SP just to remind myself of the definition, it's the necessity or the need or the requirement my others in that community to understand me and see me and my personality in order to facilitate and engage dml..is my understanding of that definition correct?

[Social organization of learner]
[Sp no effect on learner's domain]

- o Researcher: Yes it is.

[Sp no effect on learner's domain]
[Self-directed learning]
[Learner strategy]
[Teacher presence dependency]
[Lifelong learning]
CODE=engage in community of learners not for dml, personal discovery for dml, personal drive for dml, teacher good facilitator for dml, self-learning for dml, self-reading for dml, self-discovery for dml, self-engagement for dml, non-community participant for dml, self-learner, personal perspective, creating learning experiences on own
- o M3: Ok..Well it doesn't. I can give you an example. I re-engaged in a formal learning program in 1992, in 1977, I enrolled in university for about a year and ahh failed almost everything and quit and then went around the world..and it always bothered me that I never finished so in 1992 I went back to university and it took me 5 years and I graduated in 1997 and it was wonderful and I graduated with a bachelor of science and economics and environmental science..So I love telling people it took me 20 years to get my undergrad. So the thing was that a remarkable learning experience for me. I had to go to classes and that was fine, but I had a particularly gifted teacher, in two classes that was instrumental in facilitating. He was a wonderful class facilitator and this was 1992 so I had an old mac that I used and I had a cd-rom with an encyclopedia software, and there was a particular question having to do with the creation of app molecules and the human bio chemistry which is basically the fuel cells of the body and how those molecules are created through the cycle and umm there was a question in the labs. Nobody was…I mean I had a couple people asking me if I had the answer to it and I didn't but it really bothered me that I didn't know the answer so I just started reading through this cd-rom encyclopedia until I stumbled upon the life cycle.. it wasn't part of the course material and course notes I had so far and I

discovered this information on my own and it was the answer to the question and then I wrote it up and the teacher was delighted and I was delighted and that was a defining moment for me. What it made me realize and I always knew this because going back to school when I was in school when and I had been in business for many years so all that time I had been learning on my own and would study courses through old school distance other programs – finish and mail it in..yes the old correspondence. But I had been learning but for made me that was the real watershed and the day I completely realized that I could learn absolutely anything. And for me it was a defining moment I finished my program and I was on the dean's list and after that, anything I turned my attention to I found that I could master. I'm not saying this to be intellectually arrogant. It was an incredible moment and it was a moment I created on my own. And working that complete anonymity and that basis so it was wonderful. It was a wonderful thing...

[Sp no effect on learner's domain]
[Self-directed learning]
[Learner strategy]
[Teacher presence dependency]
[Lifelong learning]

32. In a distance learning course, if group peer discussion (representing social presence) did not exist do you think cognitive learning would occur for you? Explain.
[Cognitive learning unrelated to sp]
[Sp no effect on learner's domain]
[Learner strategy]
[Social organization of learner]
CODE=cognitive learning from group peer discussion, sp not needed for cognition, forums are tedious, unbalanced participation from teacher, participation only when course requirement, learn with the presence of others, self-thinker, use forums as mechanism to aid others, create cognitive levels by helping others, increase understanding by helping others
- o M3: Absolutely. Well I mean I pity the person who can only learn in the presence of others. Well I think my last example would illustrate. In the context of the MD and I know this is not an assessment of the MDE, but just using it as an example, I started to find the forums extremely tedious. I didn't think they were weighted properly in terms of the grading.   I found the participation I found an unevenness in how the instructors approached their presence in the forum… I just completely lost interest in them. I started to participate in them simply because the marks and I wanted to get good grades..if it wasn't required, very likely I would not have participated in any meaningful way. Sometimes there was If it was a particularly provocative question that would require me to go away and

think about and cogitate and then I thought it was kind of cool or interesting and I might want to post my response..umm sometimes I was use the forums as a mechanism to aid other classmates who were having a difficulty with a certain concept. I remember in one course, it was an adult learning course, it was an awful course …the textbooks were very political but other than that it was a really great course not the least to which some of the reading material, you know the writing can be difficult so some concepts that people were struggling with and I was too and I kind of read through it all until I kinda worked it all out, so I would contribute in that forum as a way of kinda helping others but and I guess that creates a learning environment because it helps me to articulate my understanding which facilitates learning. Because that presence was required.

[Cognitive learning unrelated to sp]
[Sp no effect on learner's domain]
[Learner strategy]
[Social organization of learner]

32 a) Researcher: But you were helping others but not yourself?
[Social organization of learner]
[Cognitive learning unrelated to sp]
CODE=sp to help others, no self-learning, no reciprocal learning
   o M3: I was helping others but it wasn't really helping me.

[Social organization of learner]
[Cognitive learning unrelated to sp]

33. Do you gain any deep meaningful learning from interactive DE discussions supported by socially projecting your personal characteristics as a real person (use of emoticons and building relationships)?
[Sp no effect on learner's domain]
[Social organization of learner]
CODE=dml is ludicrous from sp, sp is generation specific
   o M3: No. not at all, that's almost ludicrous. I mean the funny thing if you were to ask that question of a particular generation, then the answer would be yes; The reason I say that is that I'm reading an excellent book right now by Sherry Kirkle called Alone Together and many of the examples are drawn from much a young demographic. Now she has a certain position she is illustrating given her work, but it's interesting to see some of the perspective of these young people who require a certain SP in order to gain core elements of your personality. So the short answer is no not at all.

[Sp no effect on learner's domain]
[Social organization of learner]

34. Do you rely on the presence of other learners to support your learning (describe with examples)?
[Sp no effect on learner's domain]
[Self-directed learning]
[Teacher presence dependency]
CODE=non-peer reliance for sp, direction from teacher for dml, access to teacher for learning, create ideas on own, peer-review not for learning
   o M3: Not at all. No Not at all. My example of not relying on them is In course 604, an instructional design course. In that course, I had Susan, in fact I won the award for highest mark achieved– 99.4%. But in 604, you are asked to do something in Moodle. Once I understand from the instructor the scope we were allowed as creators. That was it, I was off an running. I created an entire company, an entire brand, an image representing my company which was called the Jolly Good Repair Company. And I created an entire curriculum for the journeymen apprentices within the Jolly Good Repair Company of which my particular course was only one course in the overall curriculum. And um… it was just completely popped out of my head. I have an interest in repairing electrical motors you see, so I created a course in electrical motor repair and ummm.. it was so much fun, Susan was so great to provide that leeway. She said you can do whatever you want and once she said that I was off and running and I required nothing else other than the permission to proceed. I had a couple of questions on the way of Susan but ummm no I didn't require anybody else at all,, I was off and running. There was one assignment where we had to a peer review of one another's course and that was useful but umm not in any way required. And again, I hope I'm not sounding like some kind of arrogant, it was just that it was not at all required.

[Sp no effect on learner's domain]
[Self-directed learning]
[Teacher presence dependency]

35. As an online Master's Degree Education learner, do you need to build relationships with fellow on-line learners to enable idea generation?
[Building relationships inhibits dml]
[Learner strategy]
CODE=no relationships for idea generation, self-idea generator, prefer assignments, self-learner, personal thinking
   o M3: Absolutely not. I can generate ideas just on my own. I can generate ideas just reading popular press, even umm even wired magazines can be useful in generating ideas as well as more conventional. And the assignments are great.. I love the assignments.

[Building relationships inhibits dml]
[Learner strategy]

35 a) Researcher: "Why do you love the assignments?"
[Learner strategy]
[Teacher presence dependency]
CODE=no teacher for dml, forum quality better with teacher presence
- o M3: Because it's umm there was a requirement for me to sit down and articulate my thoughts in a way that was meaningful to me and the reader. Now, ummm yeah.

[Learner strategy]
[Teacher presence dependency]

36. Do you require a teacher to moderate on-line discussions to enable development of deep meaningful learning?
 [Teacher presence dependency]
CODE=teacher for subject matter expert, quality improves with teacher presence, forum absent with teacher is useless
- o M3: The answer is No, but I do find the forums are better when there is a teacher there, a subject matter expert there. I had some courses when teacher was completely absent from the forums and they were useless but where there is a teacher present I find that the quality of the forums improves.

[Teacher presence dependency]

36 a) Researcher: Now that being said, if there was only teacher presence and yourself and teacher present as in access to the teacher to bounce ideas off so if you're going in the right direction, would that work?
[Teacher presence dependency]
CODE=teacher presence and learner is great, one-one with teacher is better, group work enables working with others
- o M3: Great, love it.

[Sp no effect on learner's domain]
[Collaboration distracts dml]
CODE=sp is bogus, sp is social interaction, no dml
- o M3: Yes I think SP is bogus. I mean I think for some people. One of the things nice about *distance education university* is that there is a blend. But saying is the absolute key that the learner has to have option to choose. I mean one of the things I came to dread was the group work in these courses. You know, I don't need group, I know how to work in a group, I'm 52 years old, I've been in business for over 25 years, I've worked in groups, I know how to work in groups, I don't need *a distance education university* to teach me how to work in groups

with others. That's great for 1st year undergrad, I don't need that requirement, there's way too much hassle you have to gotta to find somebody. In order for that to work, you.. the group has to be small and especially in the same time zone. So I came to dread that aspect.. Ahh but then the forums can be nice, if it's a lively forum it can be fun and it does provide a level of social interaction which is kind of nice but as a requirement for learning -- no.

[Sp no effect on learner's domain]
[Collaboration distracts dml]

M4 = Respondent – # **4** Gender – male (personal communication, March 10, 2011)

28. Describe how you think Social Presence impacts your ability to learn and supports your cognitive learning skills to acquire knowledge?
[Cognitive learning unrelated to sp]
[Learner strategy]
[Sp no effect on learner's domain]
[Social organization of learner]
CODE=no ability to learn with sp, self-learner, rely on self for learning, irrelevant to learn with others, self-reliance for dml

- o M4: Actually, I don't put a lot of stock in Social Presence (SP) to be able to learn. Almost all of my studies, my Bachelor in Engineering, my Masters of Engineering and my Masters of Education , they all required me needing to study on my own and learn my material. Because certainly in field of engineering, the individual is legally responsible for their work and can go to jail if they make a mistake. So you know, whether or not it's done with other individuals or not is irrelevant, I find…my background is probably unique in that I've worked for myself on and off for almost 25 years so you know, all of my.. I really only had myself to rely on, to learn things and to get things done.

[Cognitive learning unrelated to sp]
[Learner strategy]
[Sp no effect on learner's domain]
[Social organization of learner]

- o Researcher: So just to clarify. What my thesis is I'm testing the validity of whether SP is needed. I am bracketing out my experience. Building relationships and we can exchange ideas and build complex learning.

[Sp no effect on learner's domain]
[Social organization of learner]
CODE=dislikes forced participation, sp to reduce isolation, participate by requirement, technology not inhibitor to learning, text based forums not helpful, ignore sp online text, independent learning

- o M4: I know certainly at *a distance education university*, in the MDE with all of the courses having such a reliance and a forced participation in forums ahhh.. that I believe they need to seriously rethink the role of these forums. I see these forums…the basic purpose that they serve to reduce any isolation in distance learners, so in that case it gives learners a chance to just go on line and kid each other, wink, wink, nudge, nudge and that's fine but to actually learn the material – I don't think so. My approach to these forums was there would be some question and I would type up my response to the question in advance and post it in the forum and then never look at the forum again. Because first of all I don't read

very well and well I can read, I read quite slowly so it's a chore for me to go through the text based forums. However, I've offered the idea instead of having these text based forums that ahhh synchronous, real time forums might, would be much more useful. Well you can do it on Skype… I can remember when I was taking the 602 course, one of the things with *the professor* said, was that the discussion forums were supposed to be like graduate seminars where you would get a group of graduate students in a room and then you would discuss, hash out and debate given topics and certainly if you did it in …I participated in my last Master's degree and they were actually quite useful, quite useful ahhh but this whole text based thing does not make it equivalent to graduate seminar and that's why I'm thinking an alternative to that would be just a group of people in a class, I don't want to do the text thing, I want to do a synchronous informally set up as a group and me like Skype, I have an add on that can record the whole thing and you can always submit it as proof that you actually had your discussion. I guess being an engineer, the technology doesn't get in my way. I'm totally open to it. I don't see it coming from asynchronous discussion, I see it coming from eureka moments and aha moments where a bunch of people are talking where the sum of the whole is better than the sum of the parts.

[Sp no effect on learner's domain]
[Social organization of learner]

29. Referring to the definitions of Social Presence and deep meaningful learning, what online activities did you engage in to develop deep meaningful learning?
[Self-directed learning]
[Learner strategy]
[Sp no effect on learner's domain]
CODE=self-study, reading for dml, construct self-thought for dml, no online engagement for dml, self-thought invokes dml, build own thoughts for dml
- o M4: Whenever possible or often when there is say for a given week's forum there is a range of topics about which one can post, I often like to go and pick one, a topic that appears to have meaning for me and then I go off, I study it and I do my readings and I construct a well thought out response and that whole process is what brings about the deep meaningful learning.

[Self-directed learning]
[Learner strategy]
[Sp no effect on learner's domain]

29 a) Researcher: So the process of you studying on your own?
[Self-directed learning]
[Learner strategy]

[Sp no effect on learner's domain]
CODE=self-study for dml, decode process for dml, self-determination and analysis for dml, non-peer reliant for dml, intimate understanding for dml, build own thoughts for dml
- o M4: It's the process of me studying on my own to bring about the deep meaningful learning (dml). Did you take 613? Adult education and life long learning? Ahhh well, you know I had, there was one, the next to last modules of the forum and there was 12 topics to choose from and you had to explain and talk about transformational learning. So what I did was I actually went out and built a system diagram of the whole field of transformational learning and then in the construction of that diagram I became intimately, I had an intimate understanding of what that field was and I would say that when I posted the diagram I actually had a couple of people in my group say, gee..because we couldn't figure this out at all but then they said when they looked at my diagram it then provided them a pathway then looked at the material and gain the understanding that they were supposed to gain but it was the fact that I went out and built a system model of the whole that brought it into very sharp focus for me and for other people.

[Self-directed learning]
[Learner strategy]
[Sp no effect on learner's domain]

29 b) Researcher: So it's the independent side of the, your own independent thinking not the social part of it that helps you to get to dml; it's doing it on your own?
[Sp no effect on learner's domain]
CODE=independent thinking for dml, self-exploration for dml, self-thinker
- o M4: Correct.

[Sp no effect on learner's domain]

30. How do you create deep meaningful learning?
- o M4: Through exploration of a topic.

30 a) Researcher: Yourself or with others?
[Learner strategy]
[Teacher presence dependency]
[Sp no effect on learner's domain]
CODE=peer reliance inefficient, access to teacher for dml
- o M4: Ahhh usually by myself. I don't have anybody to really talk with and I find it ineffiecient to have to rely on other people to wander in over the course of 1 or 2 weeks and give me a reply on a posting in the forum, but I will say is that I'm not afraid to take a particular question and fire it off to the professor and say look this is where I'm thinking and then I get an answer back and so ahh I…

[Learner strategy]
[Teacher presence dependency]
[Sp no effect on learner's domain]

31. Describe how participating in a community of other learners, thus a social presence exists, helps you understand complex theory?
[Social organization of learner]
CODE=group participation for clarification

- o M4: Ok I can think of one instance where ummm involvement in not necessarily in an entire community of learners but if I think back to my 603 course; the groups that we had to build a course…ummm I have to admit that in my reading I missed one, really important concept, that in the end actually defined my instructional design philosophy, I didn't realize it.. it was about the advanced organizer. This stuff was flying around in my head and I wasn't absorbing it as I was doing 3 courses a term. And that is one of the primary tools that I've kept throughout my studies, it plays a big part in my design, the test website for my thesis. Ahhh and I honestly would have missed it If I wasn't participating in a group.

[Social organization of learner]

31 a) Researcher: Now what about complex theory, really complex theory?
[Learner strategy]
[Sp no effect on learner's domain]
CODE=incremental thinking process for dml, self-analysis for dml, self-discovery, synthesize ideas for dml, self-reliant, self-learner, independent thinker, non-peer reliance for dml, perspective is independent, forums not learning mechanism

- o M4: Well, I would have to say that I never grasped complex theories, complex ideas on the first pass. I'm an iterative, incremental type of person and so what I need to do is peel it back in layers. And so ummm this is why I need my alone time, because nobody can do that peeling back for me in a manner that has meaning to me. Ok so you know it's a just that nobody can do for you, it's a job that one must do at least for me I must do myself…and uhhh I have to say that my experience in the MDE is that most of my classmates were not deep thinkers and so I don't believe that I won't way that they had anything to offer but I say that many of them were able to conceptualize ideas sufficiently to so that I could engage and interact with them. I know that they really think these forums are the best learning mechanism but I have my doubts about that.

[Learner strategy]
[Sp no effect on learner's domain]

32. In a distance learning course, if group peer discussion (representing social presence) did not exist do you think cognitive learning would occur for you? Explain.
[Cognitive learning unrelated to sp]
[Learner strategy]
CODE=sp not required for cognition, learn with projects, independent thinker, cognitive learning without sp

- o M4: Would it occur, Most definitely, most definitely. I'll give you another insight in the way I learn, being an engineer and worked in engineering, everything is project based. And another aspect is, I have ADD (attention deficit disorder), ok so I only found out when I was 46, not 6 or 16 and it's actually effected my life terribly but I don't want to get into that. But one of the downside of ADD is I can't write exams, I can't do well on them. So I'd much rather work 100 hours on a project than study 30 hours studying for an exam. Ok projects are how I learn, there the fundamental way I learn, and no matter what an assignment is, I always turn it into a project and I then manage it as a project.

[Cognitive learning unrelated to sp]
[Learner strategy]

32 a) Researcher: Ok on your own or with other people?
[Learner strategy]
[Self-directed learning]
[Cognitive learning unrelated to sp]
CODE=self-learner, independent, self-thinking, self-discovery, self-taught, motivation by self, creates own initiatives, cognition without sp

- o M4: Well on my own. You know, for 4 years I taught project management and you can bet that all of my classes had projects to do. Yes, it could just as easily be done with other people but this is for me and I would have to say that you know in my first masters degree in software engineering, I had 2 or 3 group projects and you know I ended up doing most of work and everybody else just stood around and watched and it wasn't as if I didn't include the people, I'm honestly not one of these people who takes over a project ok . I'm really happy to share the load, so you're working on a time deadline and it's gotta get done and the thing about projects is it's the project that comes first and honestly the feelings of other people second, so if I gotta do some more so that they don't s… me down the drain that's what I'm going to do. So you know there is, the catch to learning in a project to get the project done you have to do whatever is required to get it done.

[Learner strategy]
[Self-directed learning]
[Cognitive learning unrelated to sp]

33. Do you gain any deep meaningful learning from interactive DE discussions supported by socially projecting your personal characteristics as a real person (use of emoticons and building relationships)?
[Sp no effect on learner's domain]
[Building relationships inhibits dml]
CODE=no dml from interactive distance education, no dml from building relationships
- o M4: No. No. You know when I teach my classes, I always tell them there's only room for one class clown and I'm it.. but the profs at *a distance education university* they don't seem to have much of a sense of humor.

[Sp no effect on learner's domain]
[Building relationships inhibits dml]

33 a) Researcher: Now, what about with your other peers, do you think if you interacted with them in a community of inquiry and all of your other students together and building relationships with them and sending emoticons and happy faces do you think that would help you to get to dml?
[Sp no effect on learner's domain]
[Building relationships inhibits dml]
[Self-directed learning]
[Social organization of learner]
CODE=non-peer reliance for dml, self-reliant for accomplishing learning, sp for friendly environment but not for dml, sp emoticons reduces boredom, self-thinking, self-reader, independent perspective, non-reaction for sp, project relationship for sp has no impact, emoticons cause dml deterrence, building relationships – sp reduces isolation, sp eases tension
- o M4: Well like I said, I don't look to others for that learning, I've come to rely solely on myself to accomplish that learning. Rightfully or wrongfully it's the way things have worked out. I'll, let me give you two examples of say, how I project myself, my personality into a course, you can use this.. – so one of the things, there was one topic of discussion in 613 where we had to talk about oh it was even talk about ghosts and myths. I was reading it and it was just pathetic and I said folks this is what it reminds me of. And I went online and I put a picture from the opening scenes of ghost busters and the guys are there with their guns and they going after an apparition in the basement of a library or something like that the old grandmother..it was something like that. And I projected my social presence and I didn't get a reaction back so I don't know whether it was appreciated or not but you know what it made the course a little easier to take. And the other one was when I was taking 604, instructional design and I was taking advanced technologies and the first week of the course I was in Mexico on the beach and so my wife took a picture of me sitting in the lounge chair with my instructional design textbook and my yellow hi-liter oh and I said, oh folks I participated in the forum and I posted a picture of me in there and everybody

seemed to find it quite funny and one person wrote back in the advanced
technology and said I see you're really using that advanced technology
highlighter there. And I was able to generate a response from that and ever since
that when people…we had a more friendly and intimate discussion but it didn't do
anything for learning. It just made the course a little easier to take..You can use
that as an example as to how someone projects personality into a course.

[Sp no effect on learner's domain]
[Building relationships inhibits dml]
[Self-directed learning]
[Social organization of learner]

34. Do you rely on the presence of other learners to support your learning (describe with
examples)?
[Sp no effect on learner's domain]
CODE=non-peer reliance for learning
  o M4: No. That's a one word answer.

[Sp no effect on learner's domain]

35. As an online Master's Degree Education learner, do you need to build relationships
with fellow on-line learners to enable idea generation?
[Building relationships inhibits learning]
[Self-directed learning]
[Sp no effect on learner's domain]
CODE=non-peer reliance for learning, no peer reliance for ideas, self idea generator, self-
creator, self-thinker, self-inventive, no help from peers
  o M4: No. I'm a very creative and inventive individual. I don't need anybody's help
     in fact …one of the things about the ADD I can rapid fire new ideas and so I don't
     need anybody else to be creative, inventive or anything like that. I can do that all
     by myself..it's like neuro networks, they just keep firing until they come up with
     an answer. My answer is no.

[Building relationships inhibits learning]
[Self-directed learning]
[Sp no effect on learner's domain]

36. Do you require a teacher to moderate on-line discussions to enable development of
deep meaningful learning?
[Teacher presence dependency]
CODE=teacher presence is non-active, teacher for moderating forums, teacher lack of
ideas, dml only in post community engagement
  o M4: Ahhh…I would say that in the few times that I saw that, that it could be
     useful. But I found most of the professors just tended to "lurk" and ahhh interject

from time to time. But in terms of throwing out new ideas, and things like that it didn't happen during the discussion and like in 613, Michael Welton would post the summary of all of the discussions at the end of the module so anything meaningful learning that was coming from him was coming from post community engagement.

[Teacher presence dependency]

36 a) Researcher: And that's helpful or not helpful?
[Teacher presence dependency]
[Social organization of learner]
[Sp no effect on learner's domain]
CODE=teacher presence to provide perspective, teacher is useful for ideas, teacher presence gives opportunity for new understanding, use of forums is procrastination, participate by requirement only, sp forums are non-constructive, sp no dml or learning, sp for required marks, sp forums reduce isolation, sp for comraderie, sp for sense of belonging

- M4: Like I said It could be helpful, I don't have enough experience with it. Ahhh.. I did participate in a forum on Reids, I think in September, and it was about a discussion about qualitative vs quantitative research and I actually had an ongoing discussion with Marty..and uhhh what I found useful with that is that she did help me..I don't know how much learning was going on but she did offer up interesting, new aspects that I could comment on, so in that case, say the presence of an instructor was useful to me because it forced me no it didn't force me it gave me an opportunity to stretch my understanding of the topic.

- M4: As is my practice I don't usually withhold anything.. I wonder if a lot of people don't see these forums as an opportunity to appear busy, there is some ulterior motives to people participating in these forums..yes it's required, these people will just go on as or just back and forth…and back and forth as two line without really construct a thesis and defend it and discuss it which to me is the purpose of these forums. I find that they are used predominantly as social support.. So you can put that on or off the record..it's quite ok you can use that too.. You know, they're used to give people some time of a social life that they might get if they're attending a bricks and mortar institution..ummm. Well you know when I studied engineering,, gee I started that 40 years ago, that you know the engineers we had such a heavy workload, we had no time for much of a social life, but we normally gathered together and studied together in one area of the school and basically, we became like a fraternity so there was a social thing involved but it was just engineers only because we were in a completely different boat than everyone else. I went to school in Quebec, at that time university was 3 years, it still ended up as 12 years but it was done differently. All the other

faculties needed 90 credits to graduate, engineers needed 145..So does that tell you that we were just a little busier than everybody else. The dean had a policy, that no one would pass to the next year until you passed in any given year so and you know a lot of pressure. So there wasn't really anybody that really understood what we were going through other than the other engineers but I have to say that most of us are still in touch with each other 35 years after graduation. You know we still have a reunion that we started 20 years and do them every 5 years, we'll be having a 35th next year. So I'm wondering if the intent if the whole social aspect of these forums and things is to give people a sense of belonging or camaraderie or something that they might get from a bricks and mortar school, you know, staying in touch with each other that that's what they're trying to get.

[Teacher presence dependency]
[Social organization of learner]
[Sp no effect on learner's domain]