

PERFORMANCES OF TRUST
AMONG LEARNERS IN THE CONTEXT OF ONLINE SOCIAL LEARNING

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Doctor of Philosophy

by
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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

PERFORMANCES OF TRUST

AMONG LEARNERS IN THE CONTEXT OF ONLINE SOCIAL LEARNING

presented by Margarida E. Kanaris,

a candidate for the degree of doctor of philosophy

and hereby certify that, in their opinion, it is worthy of acceptance.

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DEDICATION

This dissertation is dedicated to my brothers and sisters in Christ who inspired in me a love of learning, a love of all people, forgiveness, and trust.

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It is with bittersweet joy that I share this dissertation with you. It has been an interesting passage, with many wonders. Sometimes I felt like I lost my way and could barely find my footing. At other times, everything was clear, and I stood on solid ground. I have certainly learned a lot, academically as well as personally. It has been one of the most meaningful experiences of my life!

Sometimes I shared this passage with others; at other times, I walked alone. Sometimes, I serendipitously crossed paths. I thank everyone for walking along with me, and, at times, carrying me.

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TABLE OF CONTENTS

ACKNOWLEDGMENTS	ii
LIST OF FIGURES	viii
LIST OF TABLES	x
ABSTRACT	xi
CHAPTER ONE: INTRODUCTION.....	1
Background and Context.....	2
Research Problem.....	3
Purpose of the Study and Research Questions	4
Conceptual Approach.....	6
Research Approach	7
Rationale and Significance of the Study	9
Limitations of this Study.....	12
Summary of Chapter One.....	13
Key Terms	14
CHAPTER TWO: LITERATURE REVIEW.....	16
Networked Sociality: A New Form of Sociability	18
Research on Trust in the Context of Online Social Learning	25
Challenges to Performances of Online Trust: Absence of Visual Cues, Social Presence.....	27

Sociability as System Design: Designing for Sociability and Social Presence.....	31
Sociability as Human and Technological Design: Designing for Sociability through Empathy, Trust, Social Capital, and Social Ability.....	35
Summary: Research on Trust in the Context of Online Social Learning	37
Research on Face-to-Face Trust	39
Psychological and Social Psychological Conceptualizations of Trust: Trust as a Personality Trait, Rational Choice, and Cooperation	44
Sociological Conceptualizations of Trust: Trust as a Property of Relationships	59
Summary of Chapter Two	85
CHAPTER THREE: METHODOLOGY	86
Statement of the Problem	89
Purpose of the Study	89
Research Questions	90
Process for Identifying and Characteristics of the Sample	90
In Practice: Participants in this Study.....	92
Challenges to Online Synchronous Text-based Computer-mediated Communication.	93
In Practice: Addressing the Challenges to Online Synchronous Text-based Computer-mediated Communication during the Interview Process	97
Responsive Interview Model.....	98
Responsive Interview Questions: Main, Probes, Follow-ups.....	99
Structure of the Responsive Interview: Interviewing Patterns	112
In Practice: Asking Main, Probe, and Follow-Up Questions in Interviews that are Structured in a River and Channel-Picking up the Twigs Interview Pattern	114

Data Collection: Conversational Guides	115
In Practice: Implementing the Conversational Guide	116
Data Analysis	116
In Practice: Performing Data Analysis	118
Trustworthiness and Limitations	121
Research Ethics	123
Summary of Chapter Three	124
CHAPTER FOUR: FINDINGS	126
Overview of Findings	129
Findings 1-3: Performances of Trust and Distrust	130
Findings 4-6: Trusting and Trust-Compromised Social Relationships	131
Findings 7-9: Computer Mediated Textual Communication.....	133
Findings 10-12: Social Construction of Knowledge in Trusting and Untrusting Contexts.....	135
Detailed Description of Findings	136
RQ1: How do learners perform trust in social interactions in the context of online social learning?	136
RQ2: How does trust shape the social relationships that learners form in this particular context?	149
RQ3: How does computer-mediated textual communication shape learners’ performances of trust in an online context?	160

RQ4: How does trust shape the social construction of knowledge? That is, how does trust mediate learners’ social construction of knowledge in online social learning?	179
Summary	194
CHAPTER FIVE: ANALYSIS, INTERPRETATION, AND SYNTHESIS OF THE FINDINGS	198
Research Question 1: “How do learners perform trust in social interactions in the context of online social learning?”	202
Psychological Dimension of Trust	205
Relational Trust: Learners’ Social Theory of Trust	208
Community: Culture of Trust	226
Learners’ Need to be Socialized as Social Learners	230
Summary of Research Question 1	237
Research Question 2: “How does trust shape the social relationships that learners form in this particular context?”	238
Trust as the Default Condition in Academia and Friendships.....	240
Breaches of Trust.....	249
Interdependence: The Need for Others.....	255
Summary of Research Question 2	259
Research Question 3: “How does computer-mediated textual communication shape learners’ performances of trust in an online context?”	260
Social Presence: Creating a Self through Pictures and Text	262
Teaching Presence: The Role of the Instructor as Partner, Nurturer, and Guide	269

Deconstructing Barriers to Computer-mediated Textual Communication.....	274
Summary of Research Question 3	281
Research Question 4: “How does trust shape the social construction of knowledge? That is, how does trust mediate learners’ social construction of knowledge in online social learning?”	282
Who Owns the Conversation?	282
Relying on Each Other	287
Social Loafing: A Way of Learning	292
Summary of Research Question 4	295
Summary of Research Questions 1-4	296
Theoretical Implication of this Study.....	298
Practical Implications	300
Revisiting Limitations of this Study.....	302
Summary and Conclusion to this Research Study	304
Suggestions for Further Research.....	306
REFERENCES	307
APPENDIX A.....	338
APPENDIX B.....	339
VITA.....	340

LIST OF FIGURES

Figure	Page
1	Areas of research framing this study 18
2.	Differentiating virtual communities from communities of interest (based on and adapted from von Krogh, 2006) 22
3.	Online social learning updated from the lens of Castells's network thesis 25
4.	On the Internet, Nobody Knows You're a Dog (NYT, July 5, 1993, p. 61)..... 28
5.	Usefulness of a technology system in terms of its affordances as reconceptualized by Kirschner, Martens, and Strijbos, 2005 (based on and adapted from Nielsen, 1994)..... 35
6.	Factors shaping sociability and performances of trust online 39
7.	Sample definitions of trust from different research traditions as well as their key attributes 43
8.	Characteristics of performances of trust..... 44
9.	Factors that shape psychological performances of trust..... 47
10.	Factors that shape social psychological performances of trust 59
11.	Three Dimensions of Sztompka’s Model of Trust 66
12.	Factors shaping psychological trust from the sociological literature 67
13.	Factors shaping relational trust..... 69
14.	Factors shaping cultural trust: Sztompka’s model of the social becoming of trust (source: Sztompka, 1999, p. 133) 77
15.	Overview of Sztompka’s Theory of Trust..... 79
16.	3-stage model of the social construction of trust in interpersonal relationships (Weber & Carter, 2003). 84

17.	Chat example illustrating use of electronic paralanguage to mediate lack of non-verbal cues	98
18.	Guidelines for developing main questions (Rubin & Rubin, 2012)	100
19.	Navigation Pane excerpt from Lily’s chat	119
20.	Data Summary Table for Research Question	120
21.	Excerpt from the Consistency Chart of Findings, Interpretations, and Conclusions of this Study	122

LIST OF TABLES

Table		Page
1	Responsive Interview Question Model (source: Rubin & Rubin, 2012, p. 119)	99
2	Types of probes, their use, and examples	107
3	Triggers for follow-up questions and sample questions (source: Rubin & Rubin, 2012, pp. 153-165)	111

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ABSTRACT

This study contributes to the conversation on how to potentially make online learning more satisfying and successful. To this end, this study focuses on trusting relations because research indicates that trust binds all social relations and facilitates risk taking and deeper, more critical thinking in collaborative learning. The conceptual framework is informed by a broad literature base on trust. Qualitative, open-ended interviewing with snowball sampling is used to explore 30 learners' emergent, interactive, social construction of trust. In the tradition of qualitative research, data from these interviews were subjected to several levels of analysis to elicit findings and interpretations. The findings suggests that learners socially construct moral theories of trust, consisting of rational and affective components. The rational component shaped their assessments of others' trustworthiness. The affective component shaped a moral lens through which they viewed rational trust. The effect of this affective component is that *positive affect* created bonds of friendship among learners that facilitated the social appropriation of technology and transactive conflicts which contributed to deeper, critical thinking. The lack of *positive affect or presence of negative affect* resulted in trust-compromised learning, characterized by ongoing breaches of trust.

CHAPTER ONE: INTRODUCTION

This study explored how learners' trusting acts shaped their social interactions, relations, and learning in the context of text-based computer-mediated online social learning. The purpose of this study is to try to understand learners' interpretations of trust and its role in mediating their learning experiences. It was anticipated that the knowledge gained from this inquiry would help inform educators about the conditions and factors that encourage trusting social relationships which may improve learners' retention, satisfaction, and outcomes in online social learning contexts.

This research study employed a qualitative descriptive and grounded theory approach. Snowball sampling was used to invite 30 participants in a conversation about their online learning experiences. This conversation was structured as online open-ended interviews which were designed to explore the issues articulated in the research questions.

This chapter begins with an overview of the background and context that frame this study. It is followed by the research problem, the purpose of the study and research questions, the conceptual approach, the research approach, and rationale and significance of this study. The chapter concludes with the limitations of this study, definitions of key concepts, and a summary of the chapter.

Background and Context

Learners' social interactions "are predictive to outcomes [e.g., collaboration, quality of learning] of [computer-supported] collaborative learning" (Weinberger, Ertl, Fischer, & Mandl, 2005, p. 2). Furthermore, they are instrumental in shaping successful online social learning experiences (Cohen, 1994; Dabbagh & Bannan-Ritland, 2005; Fischer, Ehn, Engeström, & Virkkunen, 2002; Hill, Song, & West, 2009). In reviewing the research on social learning theory and web-based learning environments (WBLEs), Hill, Song, and West (2009) found that social interactions within WBLEs "help to initiate, sustain, and support associated social learning processes" (p. 89) such as risk-taking. There is an element of risk involved in any social interaction because each interaction involves revealing something about one's self—one's identity, knowledge, capabilities. Guenther and Möllering (2010) argue that trust is a key factor in overcoming such risk and, thereby, in shaping constructive social interactions. They note: "beyond a rational choice, routine behavior, or past experience—there has to be a kind of leap of faith; i.e., the suspension of remaining doubt, uncertainty, and ignorance" that others will not harm us (p. 24). In the context of learning, trust facilitates the risk-taking behaviors needed for deeper learning (Chevalier, 1994).

Trusting social interactions encourage learners to take risks in learning such as disclosing their strengths and vulnerabilities by openly sharing what they know as well as what they do not know. Trust, therefore, encourages sociability and reassures learners that others will not harm them when they share their strengths and vulnerabilities (Luhmann, 1991; Möllering, 2001b; Simmel, 1964; Sztompka, 1999). Such disclosures

help learners to get to know each other and to build common knowledge (Lambropoulos, 2006). Identity and trust are closely linked together and emerge in social interactions.

Research Problem

Although an extensive research base on trust exists and its value in shaping social interactions is widely accepted, researchers still struggle with defining *what* trust is; how to *operationalize* it; how to *create* it; its different *manifestations*; what *rules* to follow in deciding whom and when to trust; how to *enact* it in everyday experiences; and how to *differentiate* it from related constructs such as competence, reliance, and confidence (Baier, 1986; Blomqvist, 1997; Kramer, 1999). It appears “trust is as differentiated as the social relations of which it is part” (Frederiksen, 2012, p. 733). For these reasons, Blomqvist (1997) concludes that it “would be most challenging in the future research to study *how trust is assessed, signalled and created*” (p. 284).

Researchers report that when learners attempt to develop trust online it is even more challenging for them than in person (Bos, Olson, Gergle, Olson, & Wright, 2002; Handy, 1995; Nardi & Whittaker, 2002; Olson & Olson, 2000; Rocco, 1998; Sztompka, 1999). Trust, to some degree, relies on getting to know the other person—getting to know the other person’s identity. People typically rely on face-to-face encounters and the physical clues revealed in such encounters to get to know one another and to determine whether they can trust each other (Mann & Stewart, 2009). If others, for example, look like them, then they identify with these others and are more likely to trust them (Putnam, 2000). Technology-mediated learning environments often reframe face-to-face communication and social interactions with disembodied, faceless others (Ess, 2011). Some researchers voice the concern that if embodiment no longer exists, then embodied

practices are reduced to cognitive deliberations which preclude the development of trust (Ess, 2011; Ess & Thorseth, 2011). As Handy (1995) concluded in his studies of trust and the virtual organization, "[t]rust needs touch" (p. 46).

There is certainly merit in this argument; however, as Ess and Thorseth (2011) point out:

today's online interaction is quite different from the conditions discussed in the earlier literature on Internet friendship and trust. Because of this, textual communication, the idea of the self, and relationships have changed and, therefore, challenge the findings of earlier Internet research. Now people often use web cameras and speak together rather than write, presumably adding several of the 'embodiment' elements claimed to be necessary for trust" (p. 132).

Therefore, these "disembodiment" concerns may no longer be applicable. Furthermore, Web 2.0 networked technologies have ushered in a secondary orality-literacy phase where textual communication is written, but has the characteristics of oral language and face-to-face interaction. Because of this oral quality of textual communication, there is a return to the relational

sense of self affiliated initially with oral cultures.... Such a self ... understands itself primarily in terms of the *relationships* that define it. This is to say ... *I am my relationships*.... In ways that anticipate and are thus reinforced by Goffman's notion of the self as performative, the relational self is thus understood to indeed show a different 'face,' depending precisely on the primary relationship(s) that are in play in a given (and socially defined) context (Goffman, [1959]1990...) (Ess, 2011, p. 17).

Concerns regarding traditional disembodied text may, therefore, be mediated by this new orality-literacy.

Purpose of the Study and Research Questions

Given the importance of trust in shaping learners' social interactions and questions about how contemporary technology reshapes social worlds and trust, there is a need to conduct research that qualitatively examines the emerging, interactive, social

construction of trust among learners in the context of online social learning in the Web 2.0 landscape; that is, in the tradition of Goffman, how learners perform trust in their online social interactions.

The current study contributes to this area of trust research. We are especially interested in learners' performances of trust; that is, all of the activities in which they engage in social action and interaction, in the context of online social learning that utilizes a text-based component as part of its computer-mediated communication (CMC). In addition, we are interested in the impact these trust-infused social interactions have upon learning. Because trust and identity are inextricably linked, we adopted Goffman's understanding of performance of identity; that is, the sociological notion of "constructing the self" in social interaction (Goffman, 1959; 1983) and extended it to the social construction of the self that emerges in social interactions and performances of trust in the context of online social learning.

The rationale for viewing identity and trust as performances lies in one of our social learning assumptions which proposes that social learning involves reshaping our "selves," our identities, and our understandings of the world we live in based on the new knowledge that we construct (Goldstein, 1981; Wenger, 1998). There is a "reflexive relationship between social interaction and understanding of self in networked learning environments" (Koole & Parchoma, 2013, p. 14). The rationale for focusing on learners' interpretations is supported by Song, Singleton, Hill, and Koh's (2004) finding that "Continued studies of learners' perspectives of online learning environments are needed in order to build more effective Web-based instruction that can optimize the learning experience within this ever-changing landscape" (p. 60).

The following research questions guided us in exploring the emerging, interactive, social construction of trust from the learners' point of view:

1. How do learners perform trust in social interactions in the context of online social learning?
2. How does trust shape the social relationships that learners form in this particular context?
3. How does computer- mediated textual communication shape learners' performances of trust in an online context?
4. How does trust shape the social construction of knowledge? That is, how does trust mediate learners' social construction of knowledge in online social learning?

Conceptual Approach

Our research approach is consistent with sociological approaches to studies of trust which maintain that the self that one brings into and socially constructs in interactions shapes one's decisions to trust. Our philosophical conceptualization of trust as a "leap of faith" and social constructivist approach are consistent with Sztompka's (1999) sociological theory of trust and Weber's and Carter's (2003) study of the social construction of trust in friendship and love relationships. Although Sztompka's sociological theory of trust is quite comprehensive, it was important to complement it with Weber and Carter's study for two reasons. First, academia is a context in which individuals develop close friendships that support them throughout their learning and life courses. Weber and Carter, more so than Sztompka's theory of trust, address such friendship relations in detail. Second, Weber and Carter note that their research represents

the only study with an emergent constructivist focus of trust. As such, their study serves as a theoretical and methodological model for our research.

Although both studies are contextualized in face-to-face social interactions, they can be used to begin to build an online learning theory of trust as well as the social lens for studying it. Both studies identify factors that shape trust formation and empirically verify these factors in the context of a social understanding of trust in Poland (Sztompka, 1999) and friendship and love relationships (Weber and Carter, 2003). We used their findings, not as a “recipe” of trust (Blomqvist, 1997), but, instead, in the tradition of Blumer (1954), as sensitizing concepts, or heuristic ideas, to point us in the ‘directions along which to look’ (Atkinson & Housley, 2003, p. 9). This allowed us to use a sound theoretical foundation to guide our study without imposing meanings upon it. Following Weber and Carter’s (2003) lead, we interviewed learners to explore their performances of trust and its role in learning. In the tradition of grounded theory, we allowed meaning and theory to emerge from learners’ social constructions of trust.

Research Approach

Because trust is a sensitive subject of a very personal nature and requires self-disclosure, we used snowball sampling (Cohen, Manion, & Morrison, 2007) to identify learners who wanted to participate in this study. We also used text-based online interviewing to ensure some degree of anonymity, privacy, and self-reflection. The requirements for participation were that learners had engaged in some form of online social learning at the higher education level which included text-based computer-mediated communication.

We do not feel the need to further specify a particular form of online social learning (e.g., blended, asynchronous, synchronous) for two reasons. First, Means, Toyama, Murphy, Bakia, and Jones (2009) in their meta-analysis and review of online learning studies for the US Department of Education found that “[b]lended and purely online learning conditions implemented within a single study generally result in similar student learning outcomes” (p. xvii). Second, relationships today are multimodal; learners use a variety of communications systems within their relationships (Walther, 2011). Hooley, Wellens, and Marriott (2012) observe that the current generation of Internet users, blend online and offline social life and interactions. In fact, “social life and social interaction is something that happens online as much, or more, than it happens face-to-face” and “online interactions are part of a wider, more inclusive, sense of the social” (Hooley, Wellens, and Marriott, 2012, “Introduction” section, ¶2). Therefore, from both relational and learning perspectives, the current generation of Internet users seamlessly integrate off/online relations. In addition, experimental/quasi-experimental studies comparing blended and purely online learning conditions show that student learning is “usually comparable” (Means, Toyama, Murphy, Bakia, & Jones, 2009, p. xvi).

We proposed to use Rubin and Rubin’s (2012) responsive interviewing approach to conduct intensive, online open-ended interviews that solicited learners’ performances of trust and its effects on online social learning (Case, 2012). This approach allowed us to structure interviews around three types of linked questions: main, probes, and follow-up that elicited “material that has depth and detail and is nuanced and rich with vivid thematic material” (p. 101). Furthermore, the responsive interviewing approach invited

participants to be co-researchers, presented interviews as conversations, used ordinary conversational language in interviewing learners, and supported a flexible design so that interview questions could be updated in response to what we learned from each interview (Rubin & Rubin, 2012). These interviews were designed around the research questions.

Rationale and Significance of the Study

Research on online learning indicates that there is still much to be learned before its anticipated potential can be reached. Many learners report low satisfaction rates, academic institutions report inferior student-student interactions as well as struggles to retain students in online courses, and research shows mixed results concerning the effectiveness of online learning (Allen & Seaman, 2011; Gleason, 2004; Phipps & Merisotis, 1999; Roach & Lemasters, 2006; Wallace, 2003). One of the key factors shaping the success of online learning is the social dimension of online teaching and learning. Researchers have explored the development of communities of learners (Wenger, 1998); the social roles of teachers and students (Anderson, Rourke, Garrison, & Archer, 2001); the creation of online social presence, social interaction, and transactional distance (Short, Williams, & Christie, 1976; Gunawardena, 1995; Moore & Kearsley, 1996; Rourke, 2000); and social ability (Laffey, Lin, & Lin, 2006) to understand how the social dimension of online learning can be mediated to improve the online learning experience and outcomes. Although the findings from these studies have been helpful, online learning still faces substantial challenges in learner satisfaction, retention, social interaction, and quality of learning.

A common thread among the research findings is that the quality of social interaction matters and that trust is a critical component characterizing successful social

learning interactions (Kreijns, 2004). As Rourke (2000) notes: if learners are expected to share their tentative ideas with other learners, then all learners need a caring, trusting environment that will assure them that their ideas and critiques will be valued. Such trust-infused social interactions result in more critical and deeper learning (Chevalier, 1994; Corritore, Kracher, & Wiedenbeck, 2003; Hodgson, 2009; Johnson & Johnson, 1989; Kirschner & Kreijns, 2005; Kreijns, Kirschner, & Jochems, 2003; Peterson & Sellers, 1992; Preece, 2004). Some researchers believe that developing trusting social interactions is challenging for learners online as technology mediates their efforts to interact socially, to determine with whom they are interacting, and to make the decision to trust others. The decision to trust is based on both knowing something about others and getting to know them (i.e., their identity) through emergent, social interactions (Weber & Carter, 2003).

Some researchers feel that social interactions, getting to know one another, and learning are compromised in online learning that is characterized by text-based interactions. Very simply, they think that the richness and immediacy of face-to-face interaction are missing (Short, Williams, & Christie, 1976). More current online research, however, reports that the connectivity of the Web 2.0 context and “its communication bridging facilities (the easy and ready to use online tools)” make it relatively easy for us to learn about others, to get to know them, and to interact with them (Costa, 2011, p. 86). Although text-based communication dominates, we have found ways (e.g., emoticons, images, videos) to enrich our communication (Gunawardena, 1995) and to simulate conversational speech (James & Busher, 2009).

Regardless of which research perspective one takes, the fact remains that the traditional online environment mediates social interactions and that Web 2.0 has initiated significant changes in the ways one socially interacts online. Web 2.0 has emerged as a participatory medium—a “user-centered platform for integration and congregation ...[which] is changing some of the fundamental aspects of how people connect, interact, share, and work” (Costa, 2011, p. 81; Hooley, Wellens, & Marriott, 2012). Rather than living in traditional, centralized, hierarchical communities, we are transitioning to decentralized, fluid, heterarchical networked societies defined by a network sociality based on common interests (Castells, 1996; Hodgson, 2009;Wittel, 2008). “Network sociality is a technological sociality insofar as it is deeply embedded in communication technology, ... and technologies to manage relationships. ... Network sociality is delocalized, it is a sociality on the move, a sociality over distance, a sociality based on [technologically-mediated nearness]” (Wittel, 2008, p. 177).

Because of trust’s critical role in shaping social interactions and learning, it is important to explore how learners perform trust in this networked online environment colored by network sociality and how these performances differ because of the online context. Wittel (2008) provides insights into what changes one may expect. He points out that in traditional research on trust, social structures, social roles, shared biographies, extended time, and extensive knowledge of someone’s character have been key factors in shaping decisions to trust. However, online trust seems to be based on other factors; specifically, repeated short interactions and personal resources, or one’s social capital.

There is, therefore, an even more particular need to study learners’ performances of trust as they emerge in learners’ social interactions from a network perspective.

Consistent with the Web 2.0 ideas of sociality and learning, we take a network lens of society (Castells, 1996), identity, relationships, and learning which provide an updated perspective on the traditional research on trust and more closely complements learning and living in the Web 2.0 world. The results of this study aim to help educators, learners, and administrators understand how and why learners perform trust in a networked learning environment. This knowledge can then be used to reconceptualize the online learning curriculum from a social perspective and to design technologies such that they transition from “a means of managing information” to “a medium of relationships” (Rudestam & Schoenholtz-Read, 2002, p. 15).

Limitations of this Study

There are a number of limitations in this study. These include: learners’ memories of their performances of trust and their knowledge about trust. In addition, their ability to tell their stories about their experiences with performances of trust, as well as its influence on their learning. Finally, their comfort in participating in a research study with someone whom they might see in their academic, professional, or social circle after the interview.

The difficulty in gaining access to a population to research a sensitive topic as well as the success of other researchers in using snowball sampling to study sensitive topics encourages us in using this method (Cohen, Manion, & Morrison, 2007; Weber & Carter, 2003). We recognize that, by using snowball sampling, our sampling group may degenerate into a convenience sample which may compromise the generalizability of the results of our study. Convenience sampling typically involves interviewing whoever is available.

Insofar as the interview will be conducted online, using Skype text chat, the characteristics of the sample require that learners be fluent in writing in English and familiar with using Skype text. Our qualitative study depends on garnering rich descriptions of the emergent, interactive, social construction of trust which can only be achieved if participants are fluent in writing English such that they can articulate their everyday understandings.

Although using a textual, online interview approach can have its challenges in terms of communicating affectively, non-verbally, and comprehensively (cf. Kozinets, 2010), research supports that learners can make “emotional and state-of-mind commentaries” as well as form reflective responses textually (Stevens-Long & Crowell, 2010, p. 261). Such responses can also be encouraged by using specific techniques for responsive interviewing.

Summary of Chapter One

To summarize our approach, we proposed that trust is a social form (Simmel, 1906) and that learners perform in ways that present and construct different selves, or identities, as they socially interact with others (Costa, 2011). When they present themselves as trustworthy, for example, they elicit trusting social interactions which result in more meaningful learning (cf. Goffman, 1983; Miller, 1995; Misztal, 2001).

We engaged in conversations with 30 learners to gain insights into their understandings of trust and how it may have mediated their interactions, relations, and learning experiences in online social learning. Insofar, as text-based computer-mediated communication is a prevalent communication approach in online social learning, we also focused on how this communication choice may have shaped learners’ performances of

trust and trusting learning experiences. It is hoped that the findings from this study would help educators to understand performances of online trust from a learners' perspective and, thereby, inform them of the conditions and factors that encourage trusting social relationships, improve retention, improve learners' experiences with online learning, and may result in improved learning outcomes in the context of online social learning.

Key Terms

Altruism	“the pleasure of the individual is always contingent upon the joy of others; here, by definition, no one can have his satisfaction at the cost of contrary experiences on the part of others” (Simmel & Hughes, 1949, pp. 256-257).
Collaborative Learning	“a collection of perspectives that emphasize the following (Spector, 1999, p. 4): <ul style="list-style-type: none"> • Joint construction of knowledge... • Joint negotiation of alternatives... • Student reliance on both other students and teachers as learning resources” (Dabbagh & Bannan-Ritland, 2005, p. 44).
Computer-Mediated Communication (CMC)	“Communication between two or more individuals with text-based tools such as e-mail, instant messaging, or computer-based conferencing systems” (Spector, Merrill, Merrienboer, & Driscoll, 2008, p. 819).
Computer-Supported (Cooperative) Collaborative Learning (CSCL)	“The instructional use of technology combined with the use of cooperative [collaborative] learning” (Spector, Merrill, Merrienboer, & Driscoll, 2008, p. 819)
Embodied Practice	Using the body to interact with others.
Empathy	Mentally placing oneself in another's place.
Identity	A sense of self presented in a particular context, for a particular purpose, and for a particular audience.
Living Network	A dynamic, fluid network of associations facilitated by communication technologies and interacting for the purpose of resource sharing.
Networked Sociality	A new form of sociability as “the central form of

organizing interaction” in living networks (Castells, 2001, p. 127). It is embedded in communication technologies and characterized by very dynamic, fluid social interactions, emerging within similarly dynamic and fluid social networks and redefining identity, social interactions, social capital, and trust.

Online learning	“An open and distributed learning environment in which pedagogical tools enabled by Internet and Web-based technologies are used to facilitate learning and knowledge building through meaningful action and interaction” (Dabbagh & Bannan-Ritland, 2005, p. 331).
Performance	A dramaturgical model of life developed by Erving Goffman to portray social action and interaction. Performance includes all activities an individual engages in during social action and interaction.
Responsive Interviewing	A framework for qualitative interview research based upon asking three types of questions: main, probes, and follow-up. These types of questions support a flexible design that continuously adapts to new information and insights revealed during interviews, facilitate relationship building based on trust and equality between the researcher and interviewee, and ensure a depth of understanding (cf. Rubin & Rubin, 2012).
Social Presence	A sense that the other is an embodied person.
Teleproximity	A sense of social presence facilitated by technology; technological nearness.
Trust	“The multidimensionality of trust...include[s] (a) integrity, honesty, and truthfulness; (b) competence, technical, and interpersonal knowledge and skills required to do one’s job; (c) consistency, reliability, predictability, and good judgment in handling situations; (d) loyalty or benevolent motives, willingness to protect and save face for a person; (e) openness or mental accessibility, willingness to share ideas and information freely” (Butler Jr. & Cantrell, 1984, p. 19). A leap of faith.

CHAPTER TWO: LITERATURE REVIEW

Our study of learners' performances of trust in the context of online social learning situates the notion of a network society and networked sociality in relation to discourses and theories of trust and its correlative constructs sociability, identity, and social capital (Castells, 2001; Wittel, 2008). The *network society thesis*, allows us (1) to organize learners' social interactions as individual "living" social networks (Capra, 2004) of technology-mediated communication, (2) to conceptualize learners' social interactions as the flows within these networks and (3) facilitates our empirical study of trust and its related concepts as constituted in and through these technology-mediated social interaction flows.

Castells's (2001) conceptualization of social relations organized as individual living social technological networks highlights the idea of a new sociability that is both individual and social as well as unceasingly creates and recreates social relations and constantly innovates the networks that comprise these social relations based on the needs and interests of the moment (Wittel, 2008). The living network not only has implications for how network members relate to each other (sociability), but also how they define themselves (identity), the value they perceive in these relations (social capital), and, for our study, what kinds of trust can be performed within these social interactions and how such trust may mediate the quality of learning for learners engaging in online social learning. We propose to use the motion chart, or dynamic bubble chart, as a visual

metaphor for this type of living network—a network that consists of living bubbles constantly moving, constantly interacting, creating and recreating their identities and relationships as needed in the moment. Figure 1 represents such a visual metaphor. It identifies the diverse and rich research fields that interact to inform this study.

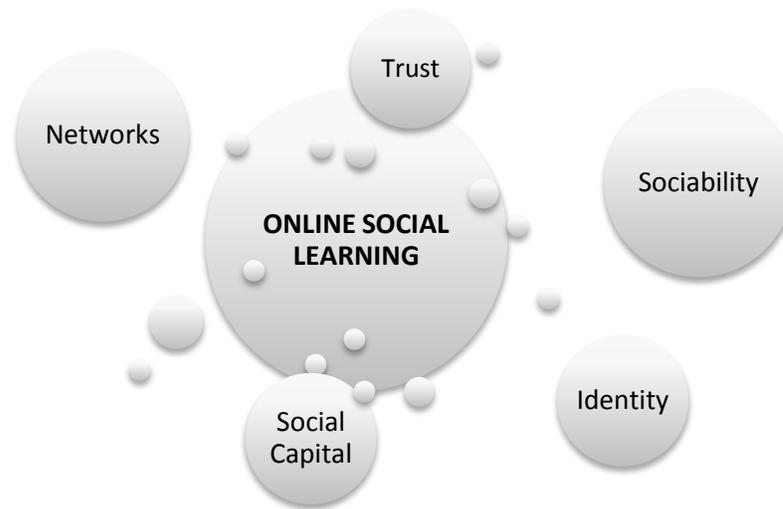


Figure 1. Areas of research framing this study

The social interactional and emergent nature of the living network construct complements the *social constructivist learning theory* that frames our study’s social learning lens and the epistemological assumptions that shape it. Specifically, that (1) learning has a social dimension wherein “participants seek opportunities for private and open interactions in the learning environment that promote community and learning” (Schwier & Dykes, 2007, p. 160), (2) learning involves the social construction of shared understandings, and (3) learning involves reshaping our “selves,” our identities, and our understandings of the world in which we live (Goldstein, 1981; Wenger, 1998).

In the sections that follow, we develop Castells’s (2001) idea of the network society and networked sociality to understand it more fully and to create a lens through which we will critically examine existing research on trust and online social learning. We

continue with a review of the research of trust in the context of online social learning. We then contextualize this research on a broader, multidisciplinary foundation of research on trust—face-to-face and online—to examine how researchers have studied trust, what they have discovered concerning the attributes of trust, and what their understanding is concerning performances of trust. In particular, we focus on Sztopka’s (1999) sociological theory of trust and Weber’s and Carter’s (2003) emergent, social interactional research on trust to inform our understanding of trust in the context of online social learning. Such knowledge paves the way for developing a rigorous framework for the study of trust that is consistent with the prevalent literature and research on trust as well as reveals how trust is confounded with other constructs.

Although our study focuses on a sociological perspective of trust, we provide a broad and extensive literature on trust outside sociology because we expect learners will perform different understandings of trust, including psychological and social psychological understandings. Such an extensive literature review will also facilitate the study of learners’ different performances of trust.

Networked Sociality: A New Form of Sociability

Castells (2001) proposes network sociality as a new form of sociability and as “the central form of organizing interaction” in living networks (p. 127). It is embedded in communication technologies and characterized by very dynamic, fluid social interactions, emerging within similarly dynamic and fluid social networks and redefining identity, social interactions, social capital, and trust. The intensity and fluidity of Castells’s (2001) conceptualizations of sociability and social organization distinguish it from contemporary ideas of networks and community which are popular in social constructivist learning. In

particular, whereas Wellman (2001) envisions networks as communities that leverage technology to span time and space, Castells (2001) envisions networks as informational networks where “the practice of informational networking constitutes a social transformation of the greatest importance” (Stalder, 2006, p. 185). For Castells, communication technologies are redefining social interaction, social space, and social organizations.

Furthermore, whereas community connotes belonging and groupness and social interactions among members who share a culture, history, and identity, network sociality is based on difference and the integration and disintegration of the network, often among strangers, for informational sociality (Wellman & Gulia, 1999). Social relations in a living network

are not narrational but informational; they are not based on mutual experience or common history, but primarily on an exchange of data and on ‘catching up.’ Narratives are characterized by duration, whereas information is defined by ephemerality. Network sociality consists of fleeting and transient, yet iterative social relations; of ephemeral but intense encounters ... the social bond ... is created on a project-by-project basis (Wittel, 2008, pp. 158-159).

Patterns of sociability are structured by networked individualism, or “*personal communities* that supply support, sociability, information and a sense of belonging separately to each individual” (Wellman, 2001, p. 238). The new pattern of sociability is, therefore, characterized by networked individualism (Castells, 2001). Social interactions are “ephemeral, but intense ... social bonds ... continuously produced, reproduced, and ... consumed” (Wittel, 2008, p. 179) for the purpose of participating in a shared project—the “shared project provides the frame of reference against which the internal negotiations of the network take place” (Stalder, 2006, p. 189). Social relations are

played out in media space. The dynamic, fluid nature of living networks and networked sociality are facilitated by the design and affordances of modern technologies:

new technologies tend to be more open, flexible, amenable to being configured and transformed. They also penetrate more deeply into the user's experience, into the very structure of how people relate to one another and to the world. Technology is becoming personal and intimate. ...it is becoming increasingly difficult to distinguish clearly the boundaries between the social and the technical (Stalder, 2006, pp. 20-21)

Furthermore, social relations are both individual and shared; it is “the synthesis between the affirmation of an individual-centered culture, and the need and desire for sharing and co-experiencing” (Castells, 2004, p. 223). Networked individualism recognizes both individual agency and shared agency. Networked sociality blends work and play (Wittel, 2008).

This view represents a paradigm shift in how people and organizations are connected because it proposes that everything—society, communication, and identity—are organized as spatially-dispersed, loosely bound informational networks (Koku & Wellman, 2004). Participation in living networks involves low entry barriers, low opportunity costs, and a low level of commitment. Participants can dynamically flow from one network to another, socially constructing their identities and forms of social interaction based on their current ‘portfolios of sociability’ (Castells, 2001, p. 132). Because technology mediates communication in these social networks, the role of distance diminishes and people in the peripheries have the opportunity to become as well connected as those in the centers of the networks (Koku & Wellman, 2004).

Wellman and Giulia (1999) report that North Americans typically have over 1,000 interpersonal ties of which 12 represent intimate ties and less than 50 represent strong ties. Associations based on long-term relationships have given way to fluid associations

based on shared interests. Social capital, emanating from homogeneous networks, and strong ties have given way to heterogeneous webs of networks based on shared interests and weak ties. We create online “communities of interest,” characterized by more dynamic social interactions than “virtual communities.” In comparing virtual and interest-based communities, von Krogh (2006) distinguishes these two types of communities as follows (see Figure 2):

Virtual Communities	Communities of Interest
<ul style="list-style-type: none"> •Based in the Internet •Often formed around shared interests •Limited f2f interaction and no shared physical workspace •Attributes such as status, gender, or occupation are irrelevant for interaction •Strong focus on technical performance among members 	<ul style="list-style-type: none"> •Based on shared interests and relationships •Focus on shared learning •Sporadic social interaction •No collective engagement

Figure 2. Differentiating virtual communities from communities of interest (based on and adapted from von Krogh, 2006)

Since participation in networks is interest-based, members do not need to reveal their identities nor to create fake identities (Castells, 2001). Participants in living networks do not interact as anonymous others, but, instead, as “occupants of situationally relevant identities” (Francis & Hester, 2004, p. 14). Castells (1997) clearly distinguishes such identities from roles and role sets as follows:

Their [identities’] relative weight in influencing people’s behavior depend upon negotiations and arrangements between individuals and these institutions and organizations. Identities are sources of meaning for the actors themselves, and by themselves, constructed through a process of individuation. ...identities are stronger sources of meaning than roles, because the process of self-construction and individuation that they involve. In simple terms, identities organize the meaning while roles organize the functions. I define *meaning* as the symbolic

identification by a social actor of the purpose of her/his action. I also propose the idea that, *in the network society*, ... meaning is organized around a primary identity (that is an identity that frames the others), that is self-sustaining across time and space. ... It is easy to agree on the fact that, from a sociological perspective, all identities are constructed (Castells, 1997, p. 7).

Since identity is not inherited, but constructed, “the self becomes a reflexive project and a drive towards self-actualisation ensues, founded upon basic trust, in which one individual self ‘opens out’ to another” (Loyal, 2003, p. 118). Wellman and Gulia (1999) found that members of networks share a generalized reciprocity; they help each other and in doing so express their identity. In addition, “[n]et members are distinctive in providing information, support, companionship and a sense of belonging to persons they hardly know off-line or who are total strangers. ... Net users usually trust strangers” (Wellman & Gulia, 1999, p. 175).

Although trust in networked sociality retains similar motivations as modern trust, it is performed differently. Because social interactions in networked sociality are even more dynamic and among people who do not know each other well, social interactions are characterized by even more uncertainty, vulnerability, and risk than traditional, modern relationships (Luhmann, 1991; Putnam, 2000). Trust continues to act as a critical strategy that one uses to manage the uncertainty and risk inherent in others’ actions. It continues to be a “pure social construction which answers to our need for security” (Lewis & Weigert, 1985b, p. 982). Trust also continues to act as a “stabilizer of social order because it reduces social complexity” and as a “lubricant for cooperation because it mutually reinforces expectations about reciprocity” (Misztal, Normality and trust in Goffman's theory of interaction order, 2001, p. 313). Performances of trust in the context of social interactions in living networks and networked sociality, however, require new

types of performances trust. Wittel (2008) provides insights into what changes we may expect:

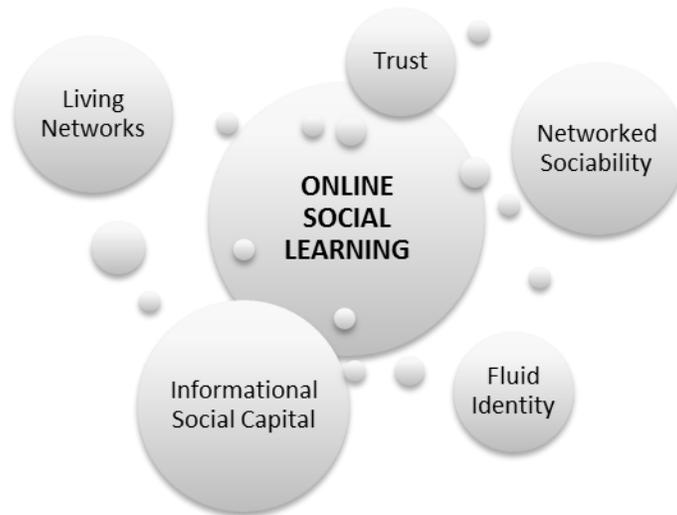
[t]rust [in these relationships] . . . might be based less on continuous work relations of long durations and more on iterated work relations of a short duration, less on the knowledge of someone's character and more on the knowledge of someone's resources and his/her position in the social field. Trust here is constructed and produced as a social relation rather than already pre-given or reproduced (p. 175).

Castells' (2001) notion of a living network also has implications for its study.

Whereas traditional studies of networks examine the nodes and ties using classic network metrics and methods such as the strength or number of links, the density of connections, the symmetry of communications, the topography of the network, or small worlds, Castells examines networks from a different perspective. Castells studies the processes by which networks create and recreate themselves to reveal "the formation of distinct patterns of interaction over time" in a living network and to understand their identity (Stalder, 2006, p. 177). This approach has methodological implications for our study as it distinguishes the type of network and its associated social interactions that we are interested in exploring as well as how we wish to approach this effort. Rather than assessing social interactions from classic network metrics and approaches (i.e., social network analysis), we studied learners' social interactions to potentially glean formations of distinct patterns of interaction that reveal learners' performances of trust and how these performances shape living learning networks.

To summarize, Castells's (2001) conceptualization of the living network and network sociality as a new form of sociability propose a different sociological understanding of social interactions and social relationships than have been explored in online social learning. There is concern in online learning that strangers interact, in a

medium that lacks humanity, at a fast pace which may compromise the performances of trust and learning. Castells's (2001) network thesis provides a social, interactional lens from which to view learners' social interactions from a more dynamic, fluid perspective and the performances of trust based on new understandings of the social construction of information and knowledge (see Figure 3):



- *Trust as a social relation*
- *Social interactions/relations embedded in communication technologies*
- *Social interactions organized as living networks, constantly evolving*
- *Active, social construction of identities*
- *Ephemeral, intense interactions*
- *Relations of short durations based on resource needs*
- *Play/work integrated*

Figure 3. Online social learning updated from the lens of Castells's network thesis

The following section provides an overview of the research on trust in the context of online social learning. It begins by identifying the challenges to learners' social interactions and proceeds to solutions that facilitate learners' performances of trust.

Research on Trust in the Context of Online Social Learning

The research on online trust, in general, is similarly diverse, though not as extensive, as face-to-face trust (Grabner-Krauter & Kaluscha, 2003).¹ Furthermore, there are significant gaps in the research on trust in online social learning (Corritore, Kracher, & Wiedenbeck, 2003). This research has explored the technological and relational aspects of trust from a social psychological perspective. Technological research has focused on how technology can support sociability (Kirschner & Kreijns, 2005; Kreijns, 2004). Relational research has focused on how technology shapes communication and interactions among learners (see computer-mediated communications research; Bos, Olson, Gergle, Olson, & Wright, 2002). Earlier research on online social learning has been especially concerned that technology is having a negative effect on learners' social interactions and identity perception. Subsequent research has suggested that designing collaborative learning activities, embedding discourse strategies to manage learner interaction and to scaffold their learning, as well as online community building, are potential solutions to building meaningful social interactions and improving learning outcomes.

Kreijns and his colleagues (2002, 2003, 2004, 2007) express concern that educators have neglected the social dimension of online social learning, and they seek to explore technical design elements that may nurture social interaction. Kreijns and his colleagues are interested in researching the social interactions of the socially embedded

¹ Examples of research areas involving online trust (Guenther & Moellering, 2010): e-commerce in management, marketing and organization (McKnight & Chervanny, 2002, Shankar et al. , 2002, 2003), design of user interfaces (Brinkmann & Seifert, 2001; Gefen et al., 2003), effects of interlinkages among websites (Stewart, 2003), reputation systems (Matzkat, 2009), privacy and surveillance issues (Zimmer, 2008), online communities (Thiedeke, 2007).

individual and, therefore, take a social psychological perspective. Preece and her colleagues (2001, 2004; Preece & Maloney-Krichmar, 2003) are also interested in the socially embedded individual, but propose that sociability is mediated by both technology and humans and can best be encouraged by explicitly managing the elements of social structures such as the purposes and policies which bind people. Stahl, Rohde, and Wolf (2007) also find “the social issues dwarf the technical support issues” in building learning communities (p. 3). By focusing on explicitly managing sociability, Preece and her colleagues, in effect, allude to social deficits, or socialization gaps, among community members as reasons that social interactions online are compromised. They propose that sociability needs to be shaped explicitly.

Laffey, Lin, and Lin (2006) share Preece’s and her colleagues’ concerns about the sociability of both systems and learners. They conceive of a new construct, social ability, as a system affordance and learner skill that may facilitate or constrain online social learning. They define social ability as learners’ “experience and perception of social interaction” and incorporate it as part of a larger umbrella of sociality, or “the state of the community (policies, etc., that make it inviting for social interaction)” (p. 166). They further identify social navigation, social presence, and connectedness as key factors comprising social ability. An exploratory factor analysis of learners’ responses to questions about these factors revealed that social ability scores increased as courses incorporated more collaborative pedagogies and more social technologies.

The next section begins with a traditional understanding of the challenges facing online sociability. It is followed by individual sections reviewing the research by Kreijns

and his colleagues (2002, 2003, 2004, 2007), Preece and her colleagues (2001, 2004; Preece & Maloney-Krichmar, 2003), and Laffey, Lin, and Lin (2006).

Challenges to Performances of Online Trust: Absence of Visual Cues, Social Presence

Some researchers recognize that the online learning environment poses unique challenges to social learning because technology mediates social interactions and the formation of trust, both of which rely, to some extent, on the embodied presence of a human being and visual and vocal cues to determine if someone is trustworthy (Bos, Olson, Gergle, Olson, & Wright, 2002; Handy, 1995; Nardi & Whittaker, 2002; Olson & Olson, 2000; Rocco, 1998; Sztompka, 1999). Traditionally, the development of trust relies on face-to-face interaction where the trustor can use visual cues (e.g., appearance of the trustee) and glean information about the trustee (e.g., the trustee's reputation) to inform performances of trust. Online, however, trustors often have to trust an anonymous and invisible other, which may complicate the decision to trust. As Peter Steiner, a New York Times cartoonist, aptly captured in this dialog between two dogs: "On the Internet, Nobody Knows You're a Dog" (see Figure 4).



Figure 4. On the Internet, Nobody Knows You're a Dog (NYT, July 5, 1993, p. 61)

The theme of anonymity and its correlate risks lie at the foundation of online research, in general, and online trust research, in particular. Furthermore, the latter research seems to explore how to manage both technologies and relationships to promote trust (Riegelsberger, Sasse, & McCarthy, 2007). Online learning research on sociability, social presence, identity, social capital, and interactivity has especially focused on how to reduce anonymity and mitigate associated risks by improving the degree of salience; that is, the degree to which we perceive others as “real,” online (Gayol, 2010), and the degree of civility guiding our interactions (Preece, 2004). Preece (2004), for example, recommends that teachers incorporate explicit lessons (e.g., social scripts) on empathy and etiquette to foster trust online.

Researchers have examined the challenges to online social interactions from the channel perspective which considers the richness of the communication channel in supporting relationship building and trust development. This research incorporates two theories: Media Richness Theory and Social Presence Theory. Media Richness Theory posits that the richer a medium is, the more effective the communication will be in fostering social interactions. Social Presence Theory contends that the greater sense one has of others as real people, the easier it will be for one to develop social relations with them (Rice, Shepherd, Dutton, & Katz, 2007). The results from the channel research is mixed, depending on whether CMC is studied from a ‘cues filtered out’ or relational perspective (Gunawardena, 1995). The following paragraphs highlight some of the studies from this research area.

Bos, Olson, Gergle, Olson, and Wright (2002) compared the effects of offline, video, audio, and text communication media on trust formation in a social dilemma game.

They found that text-based chat fared significantly worse than audio, video, and face-to-face. Audio and video conferencing were equally successful to offline conferencing in establishing trust; however, it took more time to do so and represented a more fragile trust. Rocco (1998) conducted an experiment to compare how groups achieved cooperation (i.e., trust) in offline and online contexts. Rocco found that, in the offline context, the group achieved cooperation quickly and maintained cooperation throughout the experiment. In the online context where group members used email to communicate, they were unable to achieve cooperation. Wilson (2000 as cited in Bos, Olson, Gergle, Olson, & Wright, 2002) reports that initial trust was inhibited in the email context but not in the offline context.

Other researchers find that one can have meaningful social interactions online as well as present one's self in a socio-affective manner that promotes building trust. In her studies of beginning teachers' use of an electronic conferencing system, Beals (1991) describes that teachers "had no trouble communicating easily." They used paralinguistic emphasis and emotion, including overuse of punctuation ("Rita!!!!", "Whoa!") and strong adverbs and adjectives ("amazingly alone" and "to be so utterly ignored ... is sickening"), to communicate socio-affective visual and vocal cues. Some teachers, in fact, preferred online social interactions as they "did not have to mask facial expressions or physical responses that they did not wish to share with others. Members did not have to show agreement or disagreement, and were free to quietly ignore other's opinions" (Beals, 1991, p. 76).

Short, Williams, and Christie (1976) developed the concept of social presence; that is, "the degree of salience of the other person in the interaction and the consequent

saliency of the interpersonal relationships” (p. 65), to study how the characteristics of the communication medium shape the degree to which one perceives others to be real people. Despite “the limited social presence of on-line ties, companionship, emotional support, services and a sense of belonging are abundant in cyberspace” (Wellman & Gulia, 1999, p. 185). Gunawardena (1995) adds:

[r]esearch on social presence and CMC has indicated that despite the low social bandwidth of the medium, users of computer networks are able to project their identities whether “real” or “pseudo,” feel the presence of others online, and create communities with commonly agreed on conventions and norms that bind them together to explore issues of common interest (p. 156).

To summarize, research from the technology deficit perspective points to the deficits of technology-mediated communication (TMC) and its impact on social interaction; however, a large empirical research body supports the view that TMC enriches social interaction because it complements, rather than supplants, face-to-face social interaction (Wellman, et al., 2003). TMC was found to have a positive impact on sociability (see Castells, 2001 for a review). Results from survey analyses suggest that TMC users “have higher levels of generalized trust and larger social networks than nonusers” (Uslaner, 2000, p. 316). Studies of technology-mediated sociability, therefore, have to be “situated within the context of the transformation of patterns of sociability in our society...[the] space, organizations, and communication technologies” that support social interaction (Castells, 2001, p. 125). Papadakis (2003) proposes that as participants engage in computer-mediated social interaction, they “build trust and character through narrative” (p. 43). Language becomes the primary medium through which interaction and action are performed (Francis & Hester, 2004). The next section reviews research on technological and human design intended to support learners’ social interactions online.

Sociability as System Design: Designing for Sociability and Social Presence

Kreijns and his colleagues (2002, 2003, 2004, 2007) recognize that social interaction is “considered to be the dominant factor affecting collaboration in groups and thus learning performances in those groups” (Kreijns, Kirschner, Jochems, & van Buuren, 2007, p. 188) and that sociability and social presence are key factors shaping the social interactions in online social learning. They propose the design of sociable computer-supported collaborative learning (CSCL) systems to facilitate social interactions online; that is, they propose that CSCL systems have social affordances² embedded in their designs which facilitate social interactions and better learning outcomes. Given this context, they define sociability as “the extent in which a CSCL environment is perceived to be able to facilitate the emergence of a sound social space with attributes as trust and belonging, a strong sense of community, and good working relationships” (Kreijns, Kirschner, Jochems, & van Buuren, 2007, p. 176).

Their understanding of sociability differs somewhat from traditional research on sociability in collaborative learning³. Whereas the latter explore the importance of task-related socio-emotional activities conducted by learners performing academic roles, Kreijns, Kirschner, and Jochems (2003) take a Simmelian perspective (Simmel & Hughes, 1949) of sociability as “pure” social interactions, a “play form of association” (p. 254) which has “no ulterior end, no content, and no result outside itself” (Simmel & Hughes, 1949, p. 255); yet, has wide-ranging benefits, including improved learning

² Kreijns, Kirschner, and Jochems (2002) define social affordances as the “properties of a CSCL environment that act as a social-contextual facilitators relevant for the learner’s social interactions” (p. 13).

³ See Cohen, 1994 for a conceptual review.

outcomes. In this understanding of sociability, we relate to each other on a personal, but somewhat anonymous level, never truly revealing our private identity.

Sociability is critical as it shapes empathy and altruism within us—“the pleasure of the individual is always contingent upon the joy of others; here, by definition, no one can have his satisfaction at the cost of contrary experiences on the part of others” (Simmel & Hughes, 1949, pp. 256-257). Through sociability, one associates with others, gets to know their public identities, develops empathy for others’ needs, and places their needs before one’s own. And one’s primary form of sociability is language, or sociable conversation, the “indispensable carrier of the stimulation” for social interaction, for sociability (Simmel & Hughes, 1949, p. 259). By associating in this manner, one develops trustworthiness. Others learn that one can be trusted because one will care for their needs (Baier, 1986). Performances of empathy, altruism, sociability, and trust are, therefore, intricately related.

Kreijns, Kirschner, Jochems, and van Buuren (2007) explicitly associate sociability with trust; trust is an attribute of sociability; trust is a social affordance of a sociable CSCL system. Kreijns and his colleagues conduct survey research on trust, incorporating Price and Mueller’s Work Group Cohesion Index (1986; as cited in Kreijns, Kirschner, Jochems, & van Buuren, 2007). They asked online learners in the context of CSCL: “To what extent did you trust your team mates?” (Kreijns, Kirschner, Jochems, & van Buuren, 2007, p. 190). Their results indicate that learners trust their team members “very little” ($m = 4.16/5.00$, 1-a great deal ... 5-no trust at all) which reinforces their contention that CSCL systems lack sociability and, therefore, have neglected to

adequately foster learners' socio-emotional needs (Kreijns, Kirschner, & Jochems, 2003).

Rourke (2000) expresses the implications of this lack of trust on social learning:

if students are to offer their tentative ideas to their peers, if they are to critique the ideas of their peers, and if they are to interpret others' critiques as valuable rather than as personal affronts, certain conditions must exist. Students need to trust each other before they will engage willfully in collaboration and recognize the collaboration as a valuable experience (p. 2).

Johnson and Johnson (1989) agree: "To disclose ones reasoning and information, one must trust the other individuals involved in the situation to listen with respect" (p. 72).

Research in a variety of areas—information sharing among global virtual teams (Jarvenpaa & Leidner, 1999), online group behavior and learning (Kling & Courtright, 2003), and sociability within online communities (Matzat, 2010)—repeatedly confirm the relationship between trust and sharing.

Kreijns and his colleagues (2002, 2003, 2004, 2007) also explore sociability in the context of online social learning. However, they do so from the perspective of social presence. In particular, they analyze how teleproximity may be an indicator of social presence and a predictor of system sociability (Kreijns, Kirschner, & Jochems, 2002). Their rationale is that learners' awareness of each others' online presences promotes social interaction. Kreijns and colleagues propose to embed "awareness" design features in CSCL software to facilitate social interaction and online social learning (Kreijns, Kirschner, & Jochems, 2002).

Kirschner, Martens, and Strijbos (2005) extend Jacob Nielsen's (1994) model of the usefulness of a system by placing it in an educational context and adding the idea of affordances as another design dimension (see Figure 5). In particular, they include social

affordances as those design features of a CSCL system that supports teleproximity, or social presence.

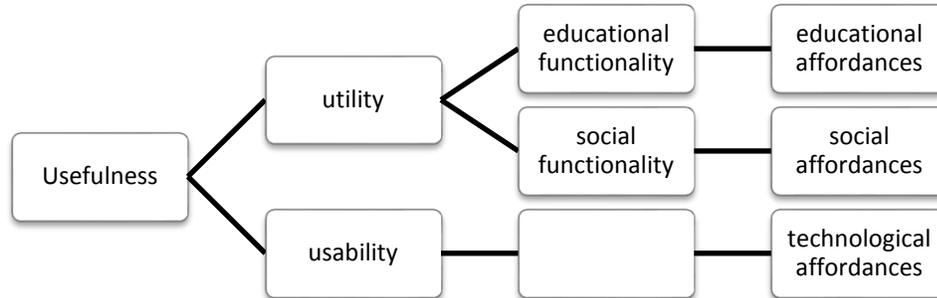


Figure 5. Usefulness of a technology system in terms of its affordances as reconceptualized by Kirschner, Martens, and Strijbos, 2005 (based on and adapted from Nielsen, 1994).

They refine utility as educational and social functionality in order to capture the idea that technology systems must address the social aspect of social learning, not just the task aspect. Furthermore, they reconceptualize the usefulness of a system in terms of its affordances; that is, (1) “What educational affordances are designed into the system such that it supports educational functionality?” (2) “What social affordances are designed into the system such that it supports social interaction among learners?” and (3) “What technological affordances are designed into the system to ensure that it is easy to use?” This approach emphasizes that one needs to embed opportunities for sociability in the design of educational technology systems in order promote the social construction of trust and social learning.

To summarize, the research on sociability as system design recognizes the importance of the social dimension of learning, in general, and social interaction, in particular, in the context of online social learning. It suggests that CSCL systems be designed as sociable systems that include design features intended to increase awareness

of others and to facilitate social interaction. Sociable CSCL systems encourage sociability through the inclusion of a sound space where learners can develop trust. The following section extends the notion of sociability as system design to include sociability as human design, or the explicit socialization of learners to promote sociability and trust.

Sociability as Human and Technological Design:

Designing for Sociability through Empathy, Trust, Social Capital, and Social Ability

Preece and her colleagues (2001, 2004; Preece & Maloney-Krichmar, 2003) study usability and sociability from a slightly different perspective. Preece (2001) uses sociability as an umbrella term that encompasses software usability, community policies, and community practices that facilitate social interactions online. Preece (2001), therefore, views sociability as a “new genre of usability” which is focused on “human-human interaction supported by technology” (Preece, 2001, p. 5). Preece (2001) suggests that software is not sufficient to create a community; instead, policies need to be created to encourage good etiquette, empathy, and trust among members of online communities: “software does not equate with community. Software provides only a place where community happens when *people* come together for a *purpose* guided by *policies* that help to shape their online behaviors” (Preece, 2004, p. 300). More specifically, software

houses online communities...but social interactions also depend on who is involved, what their goals are, their personalities and the community’s norms and policies. By paying attention to these sociability issues, community members can influence how their community develops. Norms that lead to good online etiquette, empathy, and trust between community members provide stepping-stones for social capital development (p. 294).

Preece and her colleagues (2001, 2004; Preece & Maloney-Krichmar, 2003), therefore, take a normative view of sociability which maintains that if learners develop and abide by “caring” norms, then their social interactions and relationships will be

characterized by empathy and trust (von Krogh, 2006). Empathy appears to be the vehicle through which trust develops (Feng, Lazar, & Preece, 2004). Specifically, learners who relate to each other (i.e., share a common ground, norms) are more likely to develop an empathic relationship which, in turn, fosters trust. Empathy and trust, in turn, foster altruism and a focus on collective needs. Individual identities transform into community identities, community members form an interdependent social network, and, in doing so, develop community social capital (Preece, 2004). Community members can leverage the social capital from their network associations for individual and collective gain.

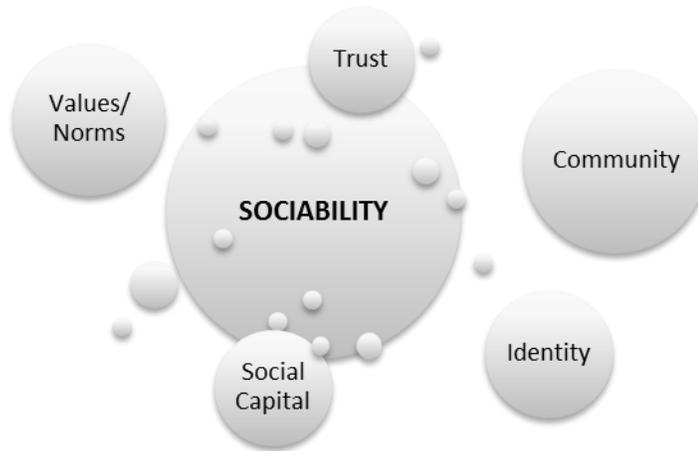
Laffey, Lin, and Lin (2006) approach sociability as human and technological design from a somewhat different perspective. Whereas Preece and her colleagues identify empathy, altruism, and trust as key factors shaping sociability, Laffey, Lin, and Lin seek to explore a different facet of sociability; that is, social ability, which facilitates or constrains learners' social interactions. They review the literature on social presence and social navigation to identify what signals learners use to perceive others' presences, how these signals can be facilitated in the design of social technologies, and how learners' social interactions are mediated by their perceptions of these signals and technology. Social ability is then constructed as (1) social navigation, (2) social presence, and (3) connectedness as an attribute of social capital. Social navigation is measured as a "student's report of being influenced or having their actions in the system shaped by the actions of others in the system," social presence as "the sense of comfort and immediacy associated with social presence in online learning," and connectedness as "a sense that the participants formed a group and felt connected with each other" (p. 169).

In a related study, Tsai, Kim, Liu, Goggins, Kumalasari, and Laffey (2008) reported that social awareness tools embedded as part of the design of social navigation in technology systems nurture social interaction among learners in online social learning. In doing so, these tools support learners in developing a sense of other learners' presences and to feel more connected; that is, to create a community. Social awareness tools, therefore, promote social ability that is critical for encouraging collaborative learning online.

To summarize, the research on sociability as human and technological design acknowledges that social interaction among members of an online community needs to be facilitated through the design of technology and explicit opportunities for socialization.

Summary: Research on Trust in the Context of Online Social Learning

The research on trust in online social learning environments recognizes the importance of social interaction in mediating online relationships, community building, and online learning outcomes. It is valuable in terms of showing how technology mediates social interactions and acknowledging that trust is an important part in shaping such interactions. The research recognizes that trust is part of a larger umbrella of socialization and recommends that educators need to complement their course content with socialization content. Sociability, norms of empathy and altruism, community, social capital, identity, and trust are linked as factors that shape each other as well as social spaces and promote positive social interactions (see Figure 6). Although creating sociable technologies are a start, educators also need to scaffold social interactions that facilitate performances of trust.



- *Opportunities for socialization*
- *Technology with a sound social space*
- *Scripts for sociability*
- *Playful associations*

Figure 6. Factors shaping sociability and performances of trust online

There is a concern about the methodological approaches used to study trust in online communities and online social learning. Whereas studies of social learning, in general, use a social constructivist approach along with naturalistic, contextual, and interactional methods, studies of trust in social learning have been predominantly conducted by using a “specific empirical site (e.g., laboratory trust game, innovation teams, simulations, piles of survey responses)” which lack naturalistic explorations of trust and make “connections to everyday life ... less obvious and less robust.” (Mehra, 2008, pp. 271-272). These latter methods, therefore, are not the most appropriate ones for studying dynamic, social, and emergent performances of trust which are the focus of this study. In light of this, it becomes obvious that we need both a methodological and conceptual shift in order to gain a better understanding of learners’ performances of trust in the context of online social learning.

The next section examines research on offline trust to broaden and deepen our understanding of the research on trust and to inform our framework of learners' performances of trust in the context of online social learning. In particular, we focus on Sztompka's (1999) sociological theory of trust and Weber's and Carter's (2003) emergent, social interactional research on trust to inform our understanding of trust in the context of online social learning. Although our study focuses on a sociological perspective of trust, we provide a broad and extensive literature on trust outside sociology because we expect that learners will perform various understandings of trust, including psychological and social psychological understandings. Such a rigorous literature review will also facilitate the analysis of learners' diverse performances of trust.

Research on Face-to-Face Trust

Many researchers on offline trust agree that trust is "indispensable" in social relationships (Hosmer, 1995; Lewis & Weigert, 1985b, p. 968) and "vital" for maintaining cooperation in society (Zucker, 1986, p. 56):

Trust has been identified as a major factor influencing such things as capital investment, the sales of high-value investment goods, relationship marketing, cross-cultural communication, learning and various types of cooperation such as high-tech development projects, as well as transaction governance and costs. It is one of the basic variables in any human interaction (Blomqvist, 1997).

The reason that trust is essential in social relationships is because we are social, interdependent beings "who can only satisfy most of their needs by means of coordinated and cooperative activities" (Benn & Peters, p. 279). As such, trust acts as the "social glue" that binds us in times of dependency, risk, and uncertainty (Govier, 1997).

Regardless of whether we know the people upon whom we are interdependent or not, such interdependence involves uncertainty and risk. We can never know everything about

other people to make a rational decision, with total certainty, about how they will behave (Simmel, 1950, 1964). In the absence of such complete knowledge, we trust others; in general, we tend to believe that others will behave as expected, that they will behave in an altruistic manner, placing our needs and interests above theirs, and that they will not exploit the trust placed in them (Baier, 1991; Earle & Cvetkovich, 1995). Trust acts as a “leap of faith” to mitigate uncertainty and risk in cooperating (Guenther & Moellering, 2010); trust is, therefore, a “pure social construction which answers to our need for security” (Lewis & Weigert, 1985a, p. 982). It is “an acceptance of vulnerability to harm that others could inflict but which we judge they will not in fact inflict” (Baier, 1991, p. 137).

Because of its ubiquity and importance, trust has been studied by researchers in practically every domain, in the context of face-to-face relationships. This is evident by the extensive and diverse research base on trust, which has produced a myriad of definitions, conceptual understandings, and methodological approaches to its study within and among domains (Lyon, Möllering, & Saunders, 2012; McKnight & Chervany, 2000). As Hosmer (1995) observes “[c]ertainly there is no agreement on a single definition of the concept, and certainly many researchers have taken multiple paths in attempting to reach such a definition” (p. 380). In traditional education (i.e., face-to-face), for example, trust has been found to forge social interactions such that they promote interdependence, increased cooperation, and improved learning outcomes (Johnson & Johnson, 1989). In their study of group processes, Golembiewski and McConkie (1975) conclude that “[t]here is no single variable which so thoroughly influences interpersonal and group behavior as does trust” (Golembiewski & McConkie, 1975, p. 131). They add:

“[e]fforts to measure trust ... are so variegated that the results of any two or more studies are not necessarily comparable” (p. 132). In addition, trust is a term that is used in everyday language with, yet, an even more variable set of understandings (Weber & Carter, 2003). For these reasons, the study of trust becomes challenging and context-specific.

The *Handbook of Trust Research*, edited by Reinhard Bachmann and Akbar Zaheer, for example, offers 22 different conceptualizations of trust by 38 trust scholars (Mehra, 2008; see Figure 7).

Sample Definitions of Trust

Deutsch, 1958

“An individual may be said to have trust in the occurrence of an event if he expects its occurrence and his expectation leads to behavior which he perceives to have greater negative motivational consequences if the expectation is not confirmed than positive motivational consequences if it is confirmed” (p. 266).

Rotter, 1967

“An expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon” (p. 651).

Butler Jr. & Cantrell, 1984

“The multidimensionality of trust...include[s] (a) integrity, honesty, and truthfulness; (b) competence, technical, and interpersonal knowledge and skills required to do one’s job; (c) consistency, reliability, predictability, and good judgment in handling situations; (d) loyalty or benevolent motives, willingness to protect and save face for a person; (e) openness or mental accessibility, willingness to share ideas and information freely” (p. 19).

Baier, 1986

“Trust ... is reliance on others’ competence and willingness to look after, rather than harm, things one cares about which are entrusted to their care.” (p. 259).

Gambetta, 2000

“Trust...is a particular level of the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action.... When we say we trust someone or that someone is trustworthy, we implicitly mean that the probability that he will perform an action that is beneficial or at least not detrimental to us is high enough for us to consider engaging in some form of cooperation with him” (p. 217).

Coleman, 1990

“A rational actor will place trust if the ratio of p (the probability that the trustee is trustworthy) to $1-p$ is greater than the ratio of potential loss if the trustee is untrustworthy to potential gain if the trustee is trustworthy” (p. 99).

Sample Definitions of Trust

Putnam, 2001

“I am in agreement with Michael Woolcock that social trust is not part of the definition of social capital but it is certainly a close consequence, and therefore could be easily thought of as a proxy” (p. 47).

Fukuyama, 1995

“Trust is the expectation that arises within a community of regular, honest, and cooperative behavior, based on commonly shared norms, on the part of other members of that community” (p. 26).

Hosmer, 1995

“Trust is the expectation by one person, group, or firm of ethically justifiable behavior—that is, morally correct decisions and actions based upon ethical principles of analysis—on the part of the other person, group, or firm in a joint endeavor or economic exchange” (p. 399).

Mayer, Davis, & Schoorman, 1995

Trust is “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (p. 712).

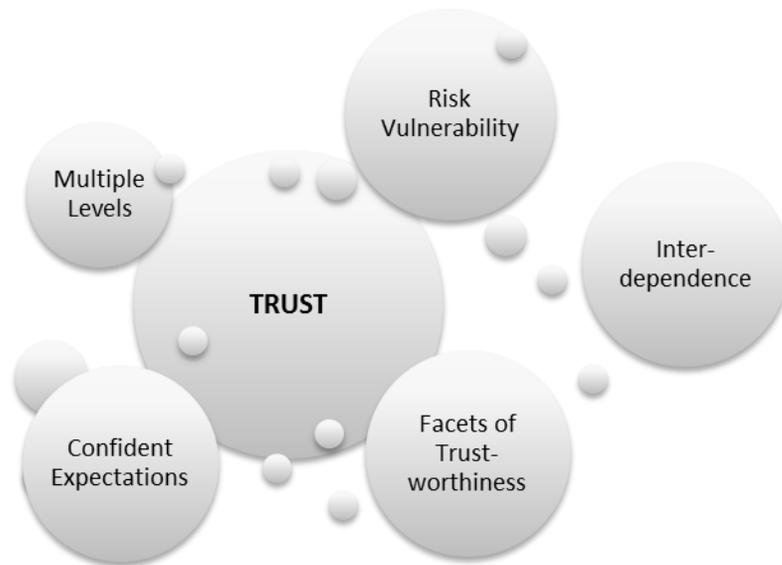
Figure 7. Sample definitions of trust from different research traditions as well as their key attributes

Although some researchers are disturbed by this variability, Blomqvist (1997) does not share their concern. He feels that this variability is to be expected because trust is context-specific and, therefore, demands a context-specific, rather than universal, definition. Corritore, Wiedenbeck, and Kracher (2001) illustrate this point:

different fields focus on different parts of the concept. For example, psychologists tend to study trust in an interpersonal context (Deutsch, 1960). Public administration looks at people's trust in public institutions (Lewis & Weigert, 1985). Business researchers tend to focus on factors that influence willingness to trust in commercial relationships, ... (Swan, Bowers, Richardson, 1999; Doney and Cannon, 1997). Trust research in the medical field focuses on provider-patient relationships (Thorn & Campbell, 1997; Mechanic, 1998) (p. 504).

Even though different fields study trust through different lenses, researchers⁴ generally agree that trust can be characterized as follows (see Figure 8):

⁴ See Baier, 1986; Fukuyama, 1995; Giddens, 1990; Hardin, 2004; Hosmer, 1995; Kramer, 1999; Lewis & Weigert, 1985b; Luhmann, 1991; Mayer, Davis, & Schoorman, 1995; McKnight & Chervany, 2000; Sztompka, 1999; Weber & Carter, 2003; Zucker, 1986.



- *Trust involves risk and vulnerability*
- *Trust requires interdependence*
- *Trust incorporates multiple facets of trustworthiness: benevolence, reliability, competency, honesty, and openness*
- *Trust has confident expectations in others' competence and goodwill*
- *Trust occurs at multiple levels (e.g., individual, group, and organization) among different referent roles (e.g., teachers, students, colleagues) (Forsyth, Adams, & Hoy, 2011, p. 17)*

Figure 8. Characteristics of performances of trust

Most of the research, in both face-to-face and online contexts, have been conducted from psychological and social psychological lenses which conceptualize trust as either a psychological predisposition or a rational choice based on our expectations of others and transaction costs (i.e., cost-benefit analysis of “What’s in my best interest”; cf. Deutsch, 1949; Hardin, 1992; Rotter, 1967). Sociological studies of trust have instead focused on trust as a social phenomenon that emerges from social interactions. Therefore, sociological research on trust frames the theoretical basis and social lens we need to study learners’ performances of trust from an emergent, contextual perspective. Depending on whether researchers study performances of trust from a psychological, social psychological, or sociological approach, they may conceptualize trust as (1) a personality

trait, (2) rational choice, (3) cooperation, and (4) a property of social interactions.⁵ We will explore these perspectives in the sections that follow.

Psychological and Social Psychological Conceptualizations of Trust:

Trust as a Personality Trait, Rational Choice, and Cooperation

The psychological and social psychological research on trust has used experimental, survey, and game-theoretic approaches to studying the attributes of trust as well as to understand how trust develops. In this tradition, trust has been studied as a (1) personality trait, (2) rational choice, and (3) means to cooperation for individual benefit. Although the body of literature on psychological and social psychological trust is valuable in terms of understanding how trust has been studied, it lacks a social constructivist perspective and naturalistic contextualization and, therefore, cannot best inform our study of trust in social learning. Its value lies in painting a broad brush stroke of the literature on trust, identifying key factors to consider in the study of trust, and confirming a shared theme among all trust research: “the necessity for and the ubiquity of trust in human relations and the impossibility of building continuing social relations without some element of trust and common meaning” (Eisenstadt & Roniger, 1984, pp. 16-17). The following sections provide an overview of the prevalent perspectives of trust from psychological and social psychological lenses to reveal the role that trust plays in collaboration and cooperation.

⁵ See Baier, 1986; Fukuyama, 1995; Giddens, 1990; Hardin, 2004; Hosmer, 1995; Kramer, 1999; Lewis & Weigert, 1985b; Luhmann, 1991; Mayer, Davis, & Schoorman, 1995; McKnight & Chervany, 2000; Sztompka, 1999; Weber & Carter, 2003; Zucker, 1986.

Psychological Trust: Trust as a Personality Trait

Trust as a personality trait highlights the social and ethical facets of trust. It refers to the trustor's impulse to trust someone, regardless of who the trustee is, the particular trust decision to be made, and the context in which the trust need arises. In the context of trust as a three-part relation, *A trusts B to do p*, this view of trust ignores the particular B and p and assumes a generalized other (Putnam, 2000). It focuses, instead, on people's propensity to trust someone based on a general trust attitude toward others, shaped by the normative culture of the social structures in which the trustor lives. It ignores the specific other and the specific context warranting trust. It is not dynamically and socially constructed. McKnight, Cummings, & Chervany (1998) explain it as a "faith in humanity [that] reflects the extent to which one believes that nonspecific others are trustworthy" (p. 478). The decision to trust, therefore, is determined by people's general beliefs about human nature and norms of human conduct (cf., Deutsch, 1958; Rotter, 1967). These beliefs are shaped by what society considers "good" ethical and moral behavior as specified by normative philosophies such as the Aristotelian virtues of honesty, openness, and truthfulness; St. Augustine's religious injunctions of compassion and kindness toward others as well as following the "Golden Rule;" Rawls' Distributive Justice of 'Never take any action in which the least among us are harmed in some way;' among others (Hosmer, 1995, p. 397).

Our socialization; that is, our norms—a set of "socially learned and socially confirmed expectations that people have of each other, of the organizations and institutions in which they live, and of the natural and moral social orders that set the fundamental understanding of their lives"—convince us to trust, to take the risk and

expose our vulnerability because our norms assure us that others will act competently and dutifully (Barber, 1983, pp. 164-165). Experiences with trust further reinforce or challenge our beliefs. Trust “thickens” or “thins” depending on cumulative interaction histories (Kramer, 1999). Mayer, Davis, & Schoorman (1995) consider our “propensity” to trust as an antecedent to trust. Figure 9 visually captures the key factors that characterize and shape psychological performances of trust.

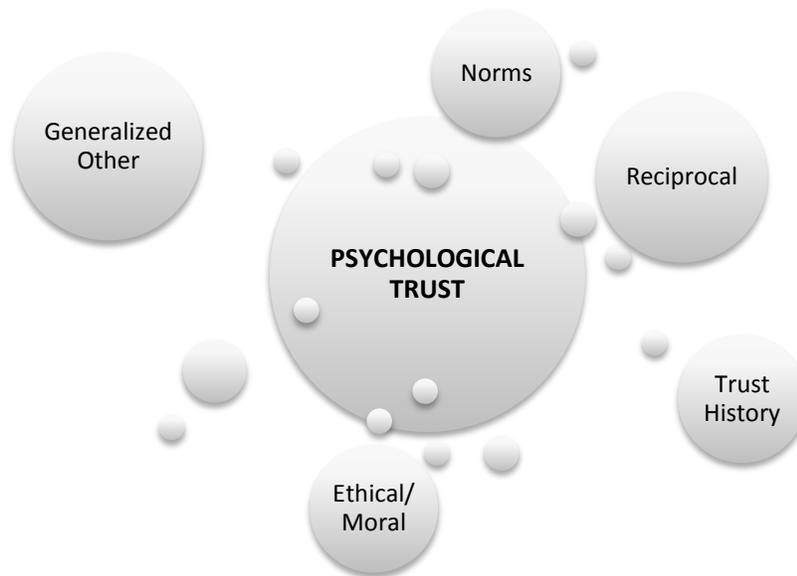


Figure 9. Factors that shape psychological performances of trust

Psychological trust is typically studied using experimental and survey methods. Experimental research has linked reciprocity with trust. It examines trust interactions to determine whether they include reciprocity, which is believed to enhance the propensity to trust. The absence or violation of reciprocity, conversely, is believed to erode the propensity to trust (Kramer, 1999). Survey research includes the General Social Survey (GSS) and World Values Survey (WVS), two longitudinal surveys that assess people’s trust attitudes. These surveys ask such general questions as: ‘*Some people say that most people can be trusted. Others say you can’t be too careful in your dealings with people.*

How do you feel about it? (Earle, Siegrist, & Gutscher, 2006, p. 13). Responses include: “*Most people can be trusted.*” and “*Need to be very careful.*”

A number of researchers have levied strong criticisms against the psychological perspective of trust. Lewis and Weigert (1985b) note:

There is a large quantity of research on trust by experimental psychologists and political scientists, which, however, appears theoretically unintegrated and incomplete from the standpoint of a sociology of trust. These researchers typically conceptualize trust as a psychological event within the individual rather than as an intersubjective or systemic social reality. They also tend to use methodological approaches that reduce trust to its cognitive content through psychometric scaling techniques or to its behavioral expressions in laboratory settings. (p. 967)

Blomqvist (1997) adds:

[t]rust is measured mainly according to how much, if any, a respondent trusts the other party. But this does not increase our understanding of what trust really is. Respondents may easily ascribe various meanings and contents to trust, thus actually answering different questions. It could well be argued that existing attempts to measure trust are not able to capture the whole phenomenon, trust being both context- and situation-specific, and being perceived subjectively by separate individuals having their own distinct histories (pp. 283-284).

The psychological view of trust is, therefore, an interesting approach, but its conceptualization of trust from an individual perspective, as well as its methodological approaches (i.e., experimental, survey) precludes it from contributing to the present interpersonal, interactive study of trust. It fails to recognize the social constructivist nature of trust and the interactional methodologies needed for our study of social trust. Psychological trust provides “snapshots” of trust (Lewicky, Tomlison, & Gillespie, 2006) instead of exploring performances of trust over time and in the context of interpersonal relationships. Recognizing the limitations of this approach, some social psychological researchers have added a relational, dynamic dimension to the psychological

conceptualization of trust. The following section provides an overview of this research on trust.

Social Psychological Trust: Trust as Rational Choice and Trust as Cooperation

Organizational research has focused on researching the social psychological perspective of trust and proposes that trust is a “choice behavior in various kinds of trust dilemma situations” (Kramer, 1999, p. 572). Trust is conceptualized as either: (1) rational and calculative choice behavior (cf. Coleman, 1990; Hardin, 2004), (2) social and relational choice behavior (cf. Granovetter & Swedberg, 2001; Mayer, Davis, & Schoorman, 1995), or (3) trust as cooperation (cf. Deutsch, 1973; Kramer, 1999; Lewis & Weigert, 1985b).

Trust as rational and calculative choice is framed by Rational Choice Theory, which regards people as rational beings that make rational decisions they deem are in their best interest. Rational Choice Theory proposes that one makes optimal rational choices by weighing the gains and the losses in a given situation (Kramer, 1999). We decide to trust, and others decide to fulfill our trust when both trustor and trustee determine that it is to their benefit to trust or to fulfill trust. Even though the gains and losses are examined rationally and thoroughly, there is still an element of uncertainty involved in this rational calculation. The trustor cannot know with 100% certainty how the trustee will behave. Hardin (1992) attempts to minimize the risk inherent in this lack of certainty by refining rational choice trust as “encapsulated trust.” He reasons that trustors make a rational decision to trust because they are convinced that trustees will behave in a trustworthy manner since it is in their best interest to do so—their trust, therefore, “encapsulates my interest” (Hardin, 1992, p. 189).

Similar to the approaches taken by the researchers in the psychological studies of trust, rational choice trust researchers also use experimental methodologies, especially “prisoners’ dilemmas” games, to predict what trust decisions people will make in different trust dilemma scenarios. The rational choice conceptualization of trust, as well as the methods that have been used to study it, have its share of critics. March and Olsen (1989), as referenced in Kramer (1999), “take exception to the idea that notions of rational expectation and calculation are even central to the phenomenon of trust” (p. 573). They reason that when ‘trust is justified by expectations of positive reciprocal consequences, it is simply another version of economic exchange, as is clear from treatments of trust as reputation in repeated games’ (p. 27)” (Kramer, 1999, p. 573). Kramer (1999) adds that the rational choice approach is narrowly cognitive; it does not consider the emotional and social influences on the decision to trust. Granovetter (1985) also feels that the rational choice approach is “undersocialized” and, therefore, inadequate. He argues that “[a]ctors do not behave or decide as atoms outside a social context” and proposes instead that “their attempts at purposive action are embedded in concrete, ongoing systems of social relations.” (Granovetter, 1985, p. 487). Granovetter (2002) also argues that the rational approach is “theoretically incomplete” because:

any account of human interaction which limits explanation to individual interests abstracts away from fundamental aspects of relationships which characterize economic as well as any other action. In particular, horizontal relationships may involve trust and cooperation...well beyond what individuals’ incentives can explain. Trust ... drive[s] a wedge between interests and action. And this happens in part because norms and identities result from and structure interaction in cognitive and emotional ways that escape reduction to self-interest....(pp. 1-2)

By failing to consider the social, dynamic aspect of interaction, Granovetter (2002) adds that rational choice trust decisions fail to achieve optimal results revealed in the

“paradoxes of rationality.” The paradoxes show that adopting a suboptimal strategy of trust and cooperation results in better outcomes than rational choice based on self-interest because rational choice encourages individuals to “free ride” (Granovetter, 2002).

The social psychological perspective of trust, therefore, as the psychological conceptualization of trust, is also not relevant to our current study of trust as it fails to adequately consider the social, interactive, and contextual nature of trust that is the goal of this study as well as the dynamic methodologies needed to study the social construction of trust in these contexts. Recognizing this gap, Granovetter (2005) infuses rational trust with a social dimension and reconceptualizes it as relational rational trust defined as the confidence that others “will do the ‘right’ thing despite a clear balance of incentives to the contrary...in the context of a social network” (p. 33). Granovetter’s (1985) studies focus on “the extent to which economic action is embedded in structures of social relations” (p. 481) to show how individuals can exploit trust in their social relations and their positions in social networks for economic benefit (Granovetter, 1983).

By embedding individuals in a social network to explore how social embeddedness shapes decisions to trust, Granovetter introduces a more social and complex approach to the study of trust. This “social” view of trust leverages sociability, social networks, norms, identity, and social capital to show how the interactions among these concepts motivate and shape the rational decision to trust (Granovetter, 2002). Decisions to trust are no longer restricted to individual choice or the interaction between two people: the trustor and trustee, but also include the social network(s) to which the trustor and trustee belong. The following section explores this body of research in greater detail.

Trust as social- and relationally-informed rational choice extends the concept of rational trust by incorporating the social embeddedness of trust actors in making rational trust choices (Mayer, Davis, & Schoorman, 1995). Researchers show how macro-level structures, such as networks, have micro-level; that is, individual, implications. Their argument is as follows: we are social beings who “crave” sociability; that is, we desire to be liked and to be connected to others (Granovetter, 2005; Simmel & Hughes, 1949). Simmel and Hughes (1949) referred to this as “association for its own sake” with no ulterior interest (p. 254). We seek membership in social structures where we develop trusting, personal relationships with others. We belong, for example, to family structures and friend structures where “trust and obligations arise from the way a society’s institutions pattern kin and friendship ties” (Granovetter, 2005). These “[c]onnections bring obligations to other people, ... [and] those people then acquire obligations to you” which make them trustworthy (Field, 2008, p. 3). We tend to associate with others who are like us—those who share our common values (i.e., norms) and, therefore, can be trusted to cooperate to achieve our mutual goals.

During social interactions, one defines and negotiates the identity of one’s social network as well as one’s identities in relation to these networks. One also negotiates and renegotiates the “rules” of proper conduct within the social network and express these as norms. In a way, one’s identity is reflected by the networks to which one belongs. For example, if one belong to an alumni network, then one’s identity is alumni. One assumes different role identities as defined by each social network, and one performs each role depending on the context in which one’s social interactions occur and the norms that guide the expectations of each role. How one performs these roles; that is, whether one

adheres to or violates social norms and how others perceive one's performances mold one's reputations. Other members of the social network make decisions to trust one in part based on these reputations. One's reputations act, in effect, as trust ratings.

Although one's memberships may be socially motivated, social relations can also have non-social benefits. For example, while attending alumni functions, one may also discuss non-alumni topics. One may share information about the hiring needs of one's work environment and ask one's alumni friends for recommendations. In doing so, one leverages one's personal relationships in these social networks for "by-product" benefits; that is, job referrals. Granovetter (2002) shows that one is more likely to value these socially-based referrals than professionally-based referrals for a variety of reasons.

First, socially-based referrals are made by people whose "trust rating" is available. As members of a social network, one interacts with other members and, thereby, creates a history of interactions. The nature of one's interactions shape one's reputations, and these reputations are visible to anyone within the network. One does not have to interact with others directly to know their "trust" reputation. Such knowledge is shared within the network through casual conversation. One's reputations provide a lens into what can be expected of one (Field, 2008; Granovetter, 1985). Second, members of one's social networks do not have "ulterior motives" behind their recommendations, which make them more trustworthy. These by-product benefits represent a type of social capital that one can "draw" upon from the connections in one's social network.

Granovetter (2005) captures these ideas as follows:

in most real labor markets, social networks play a key role. Prospective employers and employees prefer to learn about one another from personal sources whose information they trust. This is an example of what has been called 'social capital.'

...Because all social interaction unavoidably transmits information, details about employers, employees and jobs flow continuously through social networks that people maintain in large part for non-economic reasons. Since individuals use social contacts and networks already in place, and need not invest in constructing them, the cost is less than that of more formal search intermediaries (pp. 36-37).

Granovetter (2005) develops four core principles to illustrate how social structures and social networks can affect economic outcomes such as hiring, price, productivity, and innovation. The first core principle develops the relationship between norms and network density. Granovetter (2005) proposes that the denser the network is, the easier it is to enforce norms. Denser networks are more cohesive, discouraging free riding and emphasizing trust. The rationale for this principle maintains that the structure of denser networks consists of many connections among network members so that information, ideas, and influence are easily and consistently shared. Attempts to deviate from normative behavior are harder to hide and, therefore, more likely to be “punished.” One caveat to this is that, as human beings, one has cognitive, emotional, spatial, and temporal limits. For this reason, much larger groups will have lower density. One simply cannot maintain all the possible connections. The implication of this caveat is that larger groups will have more difficulty to “crystallize and enforce norms, including those against free riding” (p. 34).

The second core principle explores the “strength of weak ties.” One’s social networks, in this context, can be conceptualized as information networks. Granovetter (1983) termed our associations/connections as “ties” and developed the “Theory of Weak Ties” to explain that more novel information flows to one through weak ties rather than strong ties. The rationale behind this idea is that strong ties are maintained among people who are similar and, therefore, have access to the same information and share the same

thought patterns. Weak ties, however, represent connections among people who are somewhat dissimilar which means that they have access to different information and think differently. Acquaintances who belong to different social networks, rather than friends who travel in the same circles, “connect us to a wider world. They may therefore be better sources when we need to go beyond what our own group knows” (Granovetter, 2005, p. 34). Trust, in this context, is extended to people one does not know very well because one expects to have better economic outcomes by trusting the novel information from acquaintances rather than similar information from friends. The key message underlying Granovetter’s theory is that shared norms may hinder better outcomes.

The third core principle that Granovetter (2005) proposes focuses on the importance of “structural holes.” In developing this principle, Granovetter turned to Burt’s (1992) extension and reformulation of the weak ties argument. Burt proposed that it is not the quality of a tie within a network that yields a benefit, but rather the connections, or bridges, among different networks. He proposes that individuals who have ties to a variety of networks and, thereby, act as bridges among these networks enjoy strategic advantages. These individuals have access to information and resources that others in each network do not. In this sense, they can exploit “structural holes” in each network, act as the conduit for transmission of critical information and resources among networks, and, thereby, gain significant personal social capital (Granovetter, 2005). They become the “go to” people for innovation.

The fourth, final, core principle, which explains how social structures and social networks shape economic outcomes, develops the idea of the interpenetration of economic and non-economic action. The rationale motivating this principle is that one’s

social embeddedness, sociability, has economic by-product effects (Granovetter, 2005). Sociologists have shown that economic action is socially embedded, for example, in social networks, culture, politics, and religion. Such social embeddedness, characterized by trust, results in economic advantages and gains. As Granovetter (2005) explains:

employers who recruit through social networks need not—and probably could not—pay to create the trust and obligations that motivate friends and relatives to help one another find employment. Such trust and obligations arise from the way a society’s institutions pattern kin and friendship ties, and any economic efficiency gains resulting from them are a byproduct, typically unintended, of actions and patterns enacted by individuals with noneconomic motivations. (p. 35)

To summarize, Granovetter (1983, 2002, 2005) extends and reformulates the traditional rational choice approach to trust. He introduces social elements of trust to advance a social psychological rational choice approach to trust. He shows how social embeddedness can have by-product benefits. One’s sociability, social networks, norms, identity, and social capital interact to inform one’s rational decision to trust.

Coleman (1990) shares the idea of trust as a social and rational choice, but his approach differs from Granovetter’s. Although Coleman agrees with Granovetter in the value of individual social capital, he has a different view regarding the strength of weak ties; in fact, he reasons the opposite: closed networks, or strong ties, instead of networks with structural holes, or weak ties, yield more social capital. Coleman studied “the conditions within schools that helped to create norms that supported academic achievement and school success” (Schneider, 2000, p. 375). In his research on Catholic schools, he found that the parents of the students in these schools encouraged positive achievement norms. Specifically, “[w]hen adult networks in the school community were strong, as was more often the situation in Catholic schools, they provided a resource (which he termed *social capital*) that was important for students’ achievement and for

their commitment to staying in high school until graduation” (Schneider, 2000, p. 375). In Catholic schools, the social ties among parents, teachers, and students facilitated the creation of shared norms that encouraged education. For Coleman, relational social capital encourages trust by establishing shared expectations and norms. The more homogenous a network is, the clearer its expectations and norms and the more cohesive its collective identity. Closed networks, therefore, have more social capital for Coleman.

Again, trust as rational choice, even relational rational choice, also represents an interesting approach, but its social psychological and rational nature precludes it from contributing to the present socially-oriented study of trust. Although rational choice models may provide insights into the normative and prescriptive reasons that trustees use to make decisions to trust, they do not describe how trust is performed in the trustor-trustee relationship (Kramer, 1999). Furthermore, these models conflate trust with rational prediction (Blomqvist, 1997) and, in doing so, reduce the complexities and multi-dimensionality of trust. Rational Choice Theory trust also fails to consider the affective components of trust. As Fine and Holyfield (1996) explain, “[y]et this perspective, which emphasizes the cognitive, evaluative component of trust, is necessary but not sufficient. Interpretation is possible only in a world of cultural meanings, emotional responses, and social relations.... One not only thinks trust, but feels trust” (p. 25). Although trust as a social and relational rational choice through a social network lens appears to provide insights into our study’s relational approach; in fact, it takes a different perspective of relations. Whereas this approach views relationships from an individual social psychological perspective, our study views relationships from a sociological perspective. For these reasons, this view of trust is not directly relevant to the current study of trust in

social learning. Social psychologists have conceived of yet a third perspective of trust—trust as cooperation. The following section briefly reviews this perspective.

Trust as Cooperation. The social psychological approach to trust as cooperation views trust as an interpersonal, but individual, behavioral phenomenon (Lewis & Weigert, 1985b). Deutsch (1973), the most prominent researcher of this type of trust, devised a two-person mixed-motive game called the prisoner's dilemma to study trust. In this game, Deutsch manipulated situational variables to facilitate trust or distrust among game players. He operationalized trust as cooperation and distrust as competition. As game players interact, their trust “thickens” (i.e., increases) or “thins” (i.e., decreases; Kramer, 1999) depending on how consistently they behave as expected. A key criticism of this view is that it simplifies the concept of trust as prediction “produced by the rational machinations of autonomous, calculating individuals” (Lewis & Weigert, 1985b, p. 976).

Summary of the Psychological and Social Psychological Approaches

A major concern with both the psychological and social psychological approaches, for this study, is that they are “socially barren” (Earle & Cvetkovich, 1995, p. 18). As Mehra (2008) explains “[w]hile each argument originates in a specific empirical site (e.g., laboratory trust game, innovation teams, simulations, piles of survey responses), connections to everyday life are less obvious and less robust” (pp. 271-272). Even Deutsch (1973) recognizes that: “[t]here is an obvious need to investigate the development of trust in more complex social situations involving more people” (p. 214).

The psychological and social psychological approaches ignore the spirit of social learning—that learning occurs in the space created by interpersonal and interactional

experiences, and it is, therefore, “necessary to know *who* is learning *what*, *where* it is taking place, *under what conditions*, *in relation to who or what else*, and *for what purposes*” (Goldstein, 1981, p. 234). Both the psychological and the social psychological approaches fail to provide the appropriate social conceptualizations of trust and the appropriate research lenses from which to study social trust. However, they do identify key concepts related to the study of trust: risk, vulnerability, expectation, propensity to trust, reciprocity, norms, reputation, sociability, social networks, social capital, and identity. Figure 10 visually captures key factors that characterize and shape psychological performances of trust.

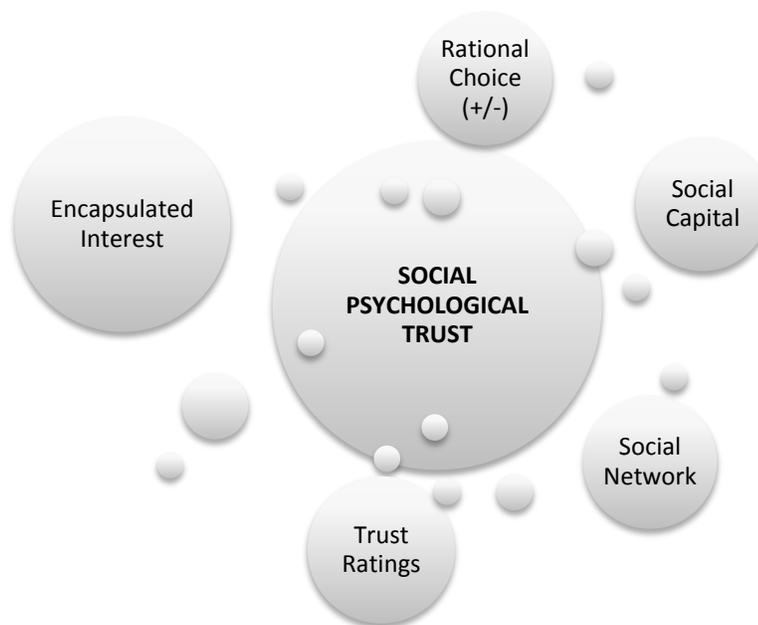


Figure 10. Factors that shape social psychological performances of trust

We now turn our attention to the sociological study of trust, which because of its social interactional lens, common to social learning, seems a good fit to frame our study.

Sociological Conceptualizations of Trust: Trust as a Property of Relationships

Sztompka's (1999) sociological theory of trust and Weber's and Carter's (2003) sociological study of performances of trust in friendship and love relationships, in particular, provide a model for our theoretical and methodological frameworks. What is distinctive about the sociological perspective of trust is that it is contextualized in the tensions of modern life and technology mediated communication. The following sections provide an overview of a general sociological understanding of trust, Sztompka's (1999) particular sociological theory of trust, and Weber's and Carter's (2003) sociological study of trust in friendships and love relationships.

General Sociological Understanding of Trust

The sociological view of trust emerged from the socio-political studies of Putnam (2000), Fukuyama (1995), Giddens (1990), and Luhmann (1979) who concluded that trust is a means to reduce the complexity, uncertainty, anonymity, and risk inherent in modern life shaped by technologies. They conceptualize "trust [as] ... some sort of belief in the goodwill of the other, given the opacity of other's intentions and calculations" (Seligman, 1997, p. 43). Simmel (1906; 1949; 1950, 1964), Luhmann (1979, 1991), Sztompka (1991, 1999), Putnam (1995, 2000, 2001), Fukuyama (1995, 2000), and Seligman (1997), among others, incorporate social constructs such as sociability, social capital, and identity as well as social systems in developing their conceptualizations of socially performed trust. Trust is viewed as a form of sociability (Bourdieu, 1986), a type of social capital (Bourdieu, 1986; Coleman, 1990; Fukuyama, 1995; Putnam, 2000), and intimately linked to identity as we try to "know" the person we intend to trust.

In the absence of knowing people well, we place our trust in their roles and the shared expectations associated with those roles—“roles function to reduce uncertainty regarding the role occupant’s trust-related intentions and capabilities” (Kramer, 1999, p. 578). Or, as Fukuyama (1995) explains, trust is

the expectation that arises within a community of regular, honest and cooperative behavior, based on commonly shared norms, on the part of other members of that community. Those norms can be about deep ‘value’ questions like the nature of God or justice, but they also encompass secular norms like professional standards and codes of behavior. That is, we *trust* a doctor not to do us deliberate injury because we expect him or her to live by the Hippocratic oath and the standards of the medical profession (p. 26).

Putnam (2000) links trust to the connections among individuals and the value—social capital—that inheres in these connections: social capital is “features of social life—networks, norms, and trust—that enable participants to act together more effectively to pursue shared objectives Social capital ... refers to social connections and the attendant norms and trust” (Putnam, 1995, p. 665). He characterizes these connections as social networks and the norms of reciprocity and trustworthiness that arise from them (p. 19). Putnam relates trust to social norms within a community and links them to social relations and networks. He characterizes these connections as social networks and the norms of reciprocity and trustworthiness that arise from them (p. 19). For Putnam, trust is a form of social capital that emerges from one’s sociability, one’s social interactions in the context of social networks. Welch, Sikkink, and Loveland (2007) found that the more embedded individuals are in dense secular social networks, the more likely they are to trust strangers.

Fukuyama (1995), like Putnam, also proposes that trust is built on shared values and norms within a community. He links trust with social capital and sociability: “one of

the most important manifestations of trust as a form of social capital is the spontaneous sociability such trust engenders” (Kramer, 1999, p. 583): “If people...trust one another because they are all operating according to a common set of ethical norms, doing business costs less. Such a society will be better able to innovate organizationally, since the high degree of trust will permit a wide variety of social relationships to emerge” (Fukuyama, 1995, p. 27). Without shared norms and trust, society has to resort to legal means. Fukuyama (2000) says that trust is a phenomenon that arises “because of social capital but not constituting social capital itself” (p. 3).

Although sociologists recognize the value and influence of social structures (e.g., family groups, social networks) and roles in shaping performances of trust, they maintain that, ultimately, performances of trust emerge in social interaction, with a particular other, for a particular reason (Seligman, 1997). For example, people, in general, may trust friends to keep a secret, but they re-negotiate this decision with their friends each time they have a different secret to share. Memberships in social groups and role obligations are not sufficient to shape whom we trust. All friends, for example, cannot be trusted in the same manner, at all times, and in all circumstances. Performances of trust are negotiated “within the *interstitial space* between role and expectation” (Weber & Carter, 2003, p. 11). That is, the need for trust emerges in the space between a role, its associated norms and expectations, and negotiations of this role because it is in this space that others’ agency becomes uncertain and risky (Luhmann, 1991); we trust that the other is who s/he says s/he is—“trust is some sort of belief in the goodwill of the other, given the opaqueness of other’s intentions and calculations” (Seligman, 1997, p. 43). Therefore, although we construct our identities in society, we are not ‘stamped out’ by society

(Bakhurst & Sypnowich, 1995, p. 5). We “produce and build ...[our] experiences, emotions, identities, and social worlds through dialogue and discourse” (Tuominen, Talja, & Savolainen, 2006, pp. 328-329).

In his sociological theory of trust, Sztompka (1999) addresses our vulnerability and risk in interacting with others. He delineates how we can assess the trustworthiness of the trustee to inform our decision to trust. In the following section, we review Sztompka’s model of trust to explicate the factors involved in assessing someone’s trustworthiness.

Sztompka’s Sociological Theory of Trust

Echoing other sociologists and trust researchers⁶, Sztompka (1999) develops a rationale for the need to trust based on the complexity and risks inherent in modern life. Specifically, he refers to global interdependence, the complexity of our social environment, the specialization of roles, and the increasing anonymity and impersonality of those upon whom people depend—the “growing presence of strange, unfamiliar people in our environment”—as impetuses to trust (Sztompka, 1999, p. 14). In the tradition of Putnam, Sztompka envisions trust as a “crucial component” of social capital (Sztompka, 1999, p. 15). Trust “increases social capital” and conversely (Sztompka, 1999, p. 105). The rationale for this can be found in Putnam’s explanation: “The theory of social capital presumes that, generally speaking, the more we connect with other people, the more we trust them, and vice versa” (Putnam, 1995, p. 665).⁷ Bourdieu (1986) expresses a similar connection between social capital and sociability: “the reproduction

⁶ cf. Castells, 2010; Fukuyama, 1995; Luhmann, 1979; Putnam, 2000; Seligman, 1997; Simmel, 1964.

⁷ It is important to note that Putnam is referring to ‘bridging,’ not bonding, social capital (Putnam, 1995, p. 665).

of social capital presupposes an unceasing effort of sociability, a continuous series of exchanges in which recognition is endlessly affirmed and reaffirmed” (p. 250).

Trust, therefore, encourages associations, the construction of social networks, and what Fukuyama (1995) termed “spontaneous sociability.”⁸ Social capital emerges from our sociability in shaping relationships and networks. The networks to which we belong, the external networks with which we interact, the density of our networks, and our positions in the networks have implications for trust decisions. Welch, Sikkink, and Loveland (2007) found that the more embedded individuals are in dense secular social networks, the more likely they are to trust strangers. In addition, the more likely individuals are to trust someone, the more likely they are to participate in associations with others and, in doing so, increase social capital. The networks to which we belong are shaped by and shape our identity. Who we are guides us in selecting the networks that we would like to join. Once we are members of these networks, we then help to shape the identity of the group and the group helps to shape our identity. As Sztompka (1999) explains, the “culture of trust” that is built between individuals and associations contribute to shaping “feelings of identity” (p. 105).

The ideas of social capital, sociability, and identity are quite relevant to this study as they are key constructs in social learning. In this sense, the social construction of trust and the social construction of learning share a key attribute: social relationships. As Bakhurst and Sypnowich (1995) explain:

we are socially constructed beings because our identities are significantly shaped by social or cultural influences. ... the particular mental states of individuals, and the dispositions of their characters, are formed in social interaction. Each of us

⁸ Spontaneous sociability is a subset of social capital that refers to spontaneously trusting communities of interest rather than traditional communities (e.g., families).

believes what he or she believes, wants what he or she wants, and so on, as the result of a complex process of education and socialization. We learn the science and myths of our time and place, and we internalize social values and norms. ... [this does not mean] that we are 'stamped out' by society. We are participants in our own construction and exercise some autonomy in the face of the forces of socialization. ...the influences of social forces is the paramount determinant in the shaping of our identity. ...our very capacities to think and act are themselves socially constituted. ...Lev Vygotsky ... argues that our social being is implicated in the genesis of the intellectual capacities constitutive of consciousness. The human mind is not just shaped by society, it is made in society (p. 5).

Sztompka(1999) integrates the ideas of these prominent trust researchers to provide a “comprehensive theoretical account of trust as a fundamental component of human action” (p. viii) and develops an “eclectic model” (Möllering, 2001a, p. 370) of the factors that shape the formation of trust. He defines trust as “a bet about the future contingent actions of others” (Sztompka, 1999, p. 25) which, at a high level, incorporates two factors: (1) belief in others and (2) a commitment to that belief through action. If people trust someone, then they believe that they can formulate a theory about how the other will behave in the future. When people place their trust in someone, then they act on that belief ‘as if’ they know the future (Sztompka, 1999, p. 25). Faith allows them to bracket the unknown and, hence, to trust (Möllering, 2001b).

Three sources of trust information, or three dimensions of trust, inform beliefs and commitments: (1) psychological trust; that is, the trusting disposition of the trustor, or trust as a property of the trustor, (2) relational trust information concerning the trustor’s and trustee’s trust behavior in past and current relationships, or trust as a property of the relationship, and (3) cultural trust information about the context in which the trustor and trustee negotiate their relationship, or trust as a property of social wholes (see Figure 11).

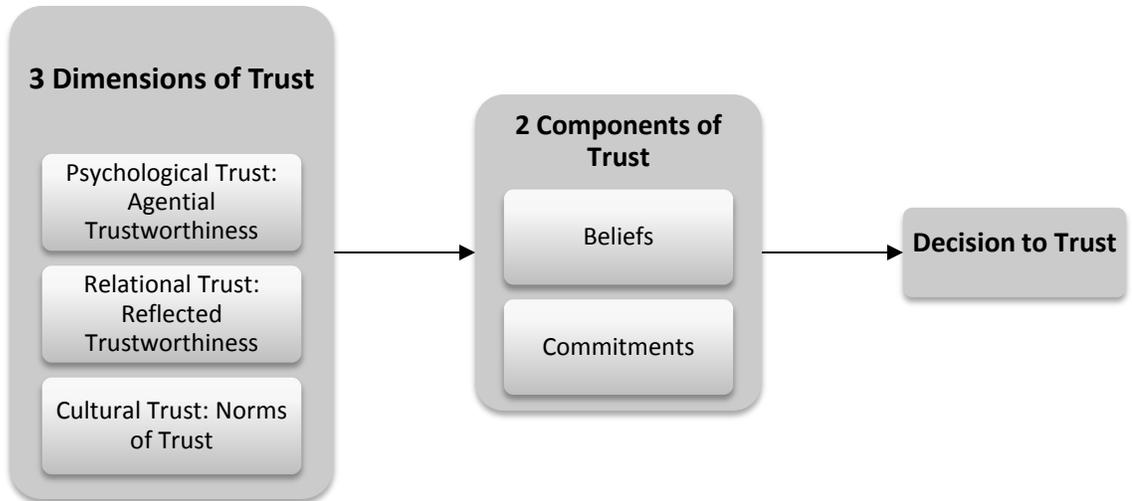


Figure 11. Three Dimensions of Sztompka's Model of Trust

This leads us to articulate the first proposition of Sztompka's model of trust:

Proposition 1: *Trust is multidimensional. It has psychological, relational, and cultural dimensions.*

For Sztompka (1999) trust can only be placed in human beings: “behind all other social objects, however complex, there also stand some people, and it is the people whom we ultimately endow with trust” (Sztompka, 1999, p. 41). This is a distinctive feature of Sztompka's theory of trust. He does not distinguish between trust in individuals (“facework” trust, Giddens, 1990, p. 88) and trust in social objects (“faceless commitments,” Giddens, 1990, p. 88) as has been typically done in traditional trust research (cf. Earle & Cvetkovich, 1995; Giddens, 1990). In the next section, we examine the three dimensions of trust more closely to understand their role in shaping decisions to trust.

Three Dimensions of Sztompka's Sociological Theory of Trust: Trust as a Property of the Trustor (psychological), Trust as a Property of a Relationship (relational); and Trust as a Property of Social Wholes (cultural). Depending on the trust

context, one or more of these three dimensions contribute to the trust decision. *Dimension 1: Trust as a psychological property of the trustor* proposes that trust is a personality trait which is genetically determined. Luhmann (1979) explains that “[r]eadiness to show trust is dependent on the systemic structure of personality” (p. 5). Giddens (1991) refers to it as “basic trust” (p. 38), Fukuyama (1995) as “spontaneous sociability” (p. 27), and Simmel as sociation (Simmel & Hughes, 1949; see Figure 12). Sztompka (1999), however, proposes that the trustors’ “trusting impulses” are shaped by “life experiences with trust” (Sztompka, 1999, p. 98). As Lewis and Weigert (1985a) explain: “trust is analyzed as the product of individuals sequentially reacting to each other’s behavioral displays. From this atomistic perspective, trust resides in individuals, focuses on some social object, and is enacted in behavior” (p. 456).

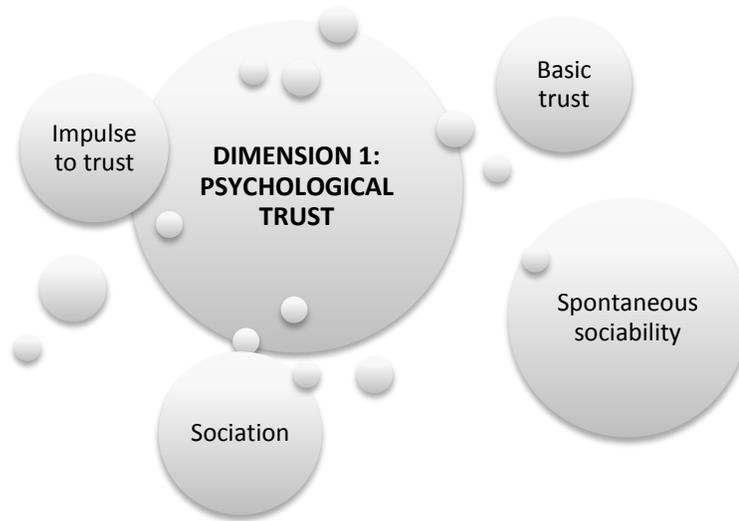


Figure 12. Factors shaping psychological trust from the sociological literature

As a sensitizing concept for this study, we expect that trust as a property of the trustor shapes the initial risks that learners are willing to take in the learning process. Learners’ trusting impulse guides initial efforts to associate and relate to other learners, especially when they are unfamiliar with each other and the learning context. The trusting

impulse acts as a mediating variable in the development of trust and in making a trust decision. Although it sets the foundation for the decision to trust, it does not, alone, determine it. This leads us to add the second proposition of Sztompka's model of trust:

Proposition 2: *Agential trustfulness mediates the decision to trust (psychological dimension of trust).*

Proposition 2a. *Agential trustfulness is shaped by life experiences with trust.*

Proposition 2b. *Agential sociability mediates trustfulness and conversely.*

Dimension 2: Trust as a relationship focuses on the relational perspective of trust—how knowledge about each others' trustworthiness mediates the decision to trust. Sztompka (1999) considers two types of relationships; (1) dyads (or between two people) and (2) group or cooperative trust. The difference between these two types of relational trust centers on the scope of trust. Whereas, in dyads, trust is performed between two people with individual identities, group trust is extended among individuals to each other and the group as a whole. The group itself assumes an identity and trustworthiness.

Knowledge about each others' trustworthiness may be obtained from primary and secondary sources. Primary sources of trustworthiness consist of knowledge about: (1) reputation, (2) performance, and (3) appearance and demeanor. Reputation is the most reliable source of these three as it represents a history of trust behavior. Performance is the second most reliable source as it speaks to the trustee's current trusting behaviors. Appearance and demeanor are the least trustworthy sources as they are external signs that can be easily "faked" (Sztompka, 1999). Secondary knowledge consists of contextual

cues that provide insights into the trustee’s trustworthiness such as: (1) accountability of the trustee, (2) pre-commitment, and (3) trust-inducing situations (see Figure 13).

Reputation	<ul style="list-style-type: none"> • Shared biography • Extensive social interaction • Record of past deeds • Consistency • Social capital • Credentials
Performance	<ul style="list-style-type: none"> • Present conduct
Appearance and Demeanor	<ul style="list-style-type: none"> • Physical presentation
Accountability	<ul style="list-style-type: none"> • Monitoring and sanctioning mechanisms
Pre-Commitment	<ul style="list-style-type: none"> • Ethical codes of behavior
Situational Factors	<ul style="list-style-type: none"> • Visibility and closeness

Figure 13. Factors shaping relational trust

Reputation “is a capital asset. One can build it by pursuing certain courses of action, or destroy it by pursuing certain others” (Dasgupta, 2000, p. 62). Reputation and trust are intimately interwoven. Reputation is a “record of past deeds,” how trustworthily the trustor has acted in the past and, therefore, how likely it is that the trustor will act trustworthily in the future (Sztompka, 1999, p. 71). “Trust accumulates as a kind of capital which opens up more opportunities for more extensive action” (Luhmann, 1979, p. 64). A trustworthy reputation, therefore, evokes trust in others. When assessing someone’s trust reputation, it is also important to look at the consistency of the trust record. Consistency helps us to determine what to expect of someone, or, as Giddens (1991) notes, what would be “out of character” (p. 82). In Sztompka’s (1999) conceptualization of trust, we are more inclined to trust those we know well, have known for a long time, and know to have consistently behaved in a trustworthy manner. Time

and extensive social interaction are important considerations in assessing someone's trustworthiness.

Sztompka (1999), however, also considers scenarios where this might not be possible; that is where trust is shaped among anonymous others, without the benefit of extensive time and social interaction. In these cases, Sztompka (1999) recommends consulting secondary sources of primary knowledge; that is, a person's credentials, to inform the decision to trust. There are three types of credentials that can be examined to determine the trustworthiness of someone: (1) second-hand testimonies, (2) "encapsulated" credentials, and (3) "contagious" trust (Sztompka, 1999, pp. 72-73). Second-hand testimonies include "stories, biographies, accounts by witnesses, CVs, resumes, publication lists...practicing in highly selective professions [e.g., doctor, engineer, professor] ...membership in exclusive associations admitting members through rigorous meritocratic selection (e.g., learned societies....)" (Sztompka, 1999, p. 73). Encapsulated credentials include academic degrees, professional licenses, and medals. Contagious trust represents credentials based on trust extended by others, especially those we trust. In this case, trust is contagious because we extend trust to others simply because someone we trust trusts the trustee.

Although all these sources of trustworthiness are meant to provide credible information regarding the identity of the trustee, Sztompka (1999) and Coleman (1990) warn that all clues of trustworthiness may be manipulated. The construction of false identities to elicit trust has been and continues to be of great concern in face-to-face scenarios as well as on the Internet.

Performance is another cue of primary trustworthiness (see Figure 13).

Performance represents the “actual deeds, present conduct, currently obtained results. The past is suspended, ‘bracketed,’ and one focuses on what the potential beneficiary of trust is doing now” (Sztompka, 1999, p. 77). Performance of trust is not as reliable as a reputation of trust because it focuses on the immediate presence rather than a long-term perspective of trustworthy behavior. Performance nonetheless serves a purpose. In the absence of reputation or where reputation may be irrelevant, performance steps in to inform the trust decision. For example, one learner may collaborate with another learner who has a reputation as a competent, hard-working, collaborative individual. In the present, however, the second learner may be behaving irresponsibly and not contributing to the task at hand. In this case, the second learner’s reputation is irrelevant because, in the current instance, the learner is behaving differently; that is, behaving in an untrustworthy manner.

Appearance and demeanor represent the third type of cue used to estimate a trustee’s trustworthiness and to form expectations of them. Physical presentation through dress, physical makeup, and civility reveal insights into personality, identity, and status. One tends to trust those in uniforms. One also tends to trust those who maintain good bodily discipline—who are clean, look healthy, and so on. Moreover, one trusts those who show good manners and self-restraint in their conduct (Sztompka, 1999). In general, we tend to trust those who are most similar to us—“People tend to trust those who are similar to them and to distrust those who are dissimilar from them” (Earle & Cvetkovich, 1995, p. 17). Similarity in external looks, age, gender, and race, among other factors, shape whether one trusts someone (Sztompka, 1999). Hardin (1992) explains the reason

for this as follows: “we are merely better at predicting the behavior of those most like ourselves” (p. 159). One reason is that those who are similar to oneself share one’s values and, therefore, are more likely to behave as expected.

Because appearance and demeanor constitute external, superficial signs, it is easier for one to “fake” them than reputation or performance (Sztompka, 1999, p. 81). Closeness, intimacy, and familiarity with the trustee reduce the risk of manipulation and deceit (Hardin, 1992; Luhmann, 1979; Sztompka, 1999). They provide unique visibility into the trustee’s identity and, thereby, help the trustor to ascertain whether the appearance and demeanor of the trustee are authentic. “To attain familiarity and visibility, a dense network of groups, communities, voluntary associations, and friendship circles, providing opportunities for personal contacts, seems necessary” (Sztompka, 1999, p. 81). “Perhaps this [visibility] is the causal link that connects trust and a rich network of associations, in the concept of social capital as advanced by Robert Putnam” (Sztompka, 1999, p. 196, note 14).

One of the implications of this is that anonymity and distance obscure one’s visibility and, hence, undermine trust. The Internet appears to be especially vulnerable to distrust: “The borderless anonymity of cyberspace makes transactions over networks more suspect than contracts signed in a local office or purchases made in a Main Street emporium” (IHT, June 22, 1998, p. 11 cited in Sztompka, 1999, p. 82).

Accountability, pre-commitment, and situational factors represent three contextually derived cues that provide further insights into the trustee’s trustworthiness. *Accountability* ensures that mechanisms are in place to encourage the trustees to act trustworthily. These mechanisms include monitoring behaviors and sanctioning them if

trust is breached: “Accountability dampens inhibitions to grant trust and encourages a more open, trustful attitude, because it provides the trustor with a kind of insurance against possible losses, a backup option against potential breaches of trust” (Coleman, 1990; Hardin, 2004; Sztompka, 1999, p. 88). *Pre-commitment* represents actions that trustees take in given contexts in order to enhance their trustworthiness (Sztompka, 1999). These include following certain ethical standards of behavior which guide behavioral expectations. *Situational factors* such as visibility and closeness may exert pressure on trustees to behave in a trustworthy manner. For example, membership in close-knit, small, and intimate communities instead of “anonymous urban crowds” (Sztompka, 1999, p. 93) ensures that members have closer, more intimate, and interdependent relationships where each member’s behavior visible to all other members and, thereby, encourages trustworthy behavior: ‘To the degree that members of society are visible to one another in their performance of social roles, this increases the scope and decreases the cost of both monitoring and sanctioning activities’ (Hechter and Kanazawa, 1993, pp. 460-461 cited in Sztompka, 1999, p. 93). Although the trust decision is between the trustor and trustee, other community members mediate the decision. Visibility and closeness work together to horizontally constrain the behavior of community members to create a trusting context (Sztompka, 1999).

To summarize, a trustee’s reputation for consistent performances of trustworthy behavior, the trustee’s current performance of trust, and similarities in appearance and demeanor between the trustor and trustee represent three primary cues for determining a trustee’s trustworthiness and, thereby, shaping the decision to trust. Accountability, pre-commitment, and trust-inducing situational factors represent three sources of derived

trustworthiness that work in concert with primary sources (i.e., reputation, performance, and appearance and demeanor) to inform the trustor's expectations of trustworthy behavior. Visibility and closeness are two factors that shape these cues of trustworthiness.

This brings us to our third proposition Sztompka's model of trust:

Proposition 3: *Relational trust is manifested individually or collectively. The trustor's epistemological knowledge about the trustee's or collective's trustworthiness shapes the trustor's decision to trust the trustee/collective (relational dimension of trust).*

Proposition 3a. *Primary trustworthiness: The trustor's knowledge about the trustee's past reputation concerning trust, current performance of trust, and appearance/demeanor shape the trustor's perception of the trustee's trustworthiness.*

Proposition 3a1. *The consistency of the trustee's past reputation of trust helps to shape the trustor's perception of the trustee's trustworthiness.*

Proposition 3a2. *The role of the trustee determines norm-based, role-specific congruent expectations and their corresponding trustworthiness*

Proposition 3a3. *The trustor's and trustee's social capital shapes the trustee's trustworthiness. Social capital determines the visibility of the trustee (personal familiarity and direct access). The visibility of the trustees' performance of their roles shapes the trustor's perception of the trustee's primary trustworthiness.*

Proposition 3a4. *The similarities between the trustor's and trustee's identities, as evident from their appearance and demeanor, shape the trustor's perception of the trustee's trustworthiness.*

Proposition 3b. *Derived trustworthiness. The context—accountability of the trustee, precommitment, and trust-inducing situational factors—mediate the trustee's trustworthiness.*

Sztompka (1999) further views relational trust from the perspective of “trust as cooperation” for three different types of cooperative relationships: (1) network relationships-mutual trust, (2) group relationships-generalized trust, and (3)

organizational relationships-abstract trust. These three different types of cooperative relationships may function independently or in concert. For example, when individuals form a cooperative group, each member of the group trusts each of the other members individually to live up to the expectations of the cooperation. A network of mutual trust emerges as members place “bets” about each other. Each member also places generalized trust in the group as a whole to cooperate for the purpose of achieving a shared goal. Each member also has trust in the organizational aspect of cooperation—that the group, in an abstract sense, will organize and manage itself well (Sztompka, 1999). The different types of cooperative relationships also engender different types of trust as is shown in the Propositions below. This brings us to our fourth and fifth propositions of Sztompka’s model of trust:

Proposition 4: *Cooperative relations require mutual trust, generalized trust, and abstract trust.*

Proposition 4a. *Cooperative groups form a network of mutual trust where each member trusts the other members.*

Proposition 4b. *Cooperative members of groups have a generalized trust in the cooperative group as a whole.*

Proposition 4c. *Cooperative members have an abstract trust in the organizational processes that ensure successful cooperation.*

Proposition 5: *The type of relations that shape cooperation among group members determines the type of trust required of its members.*

Proposition 5a. *Cooperative relations based on little interdependence, role identities, and low risk (i.e., mechanical solidarity) require instrumental (rational) trust (i.e., expectations of regularity, reasonableness, and efficiency).*

Proposition 5b. *Cooperative relations based on medium interdependence, social identities, and medium risk (i.e., organic solidarity) require both instrumental and axiological (moral) trust (i.e., additional expectations of moral responsibility, kindness, truthfulness, fairness).*

Proposition 5c. *Cooperative relations based on high interdependence, social identities, and high risk require instrumental, axiological, and fiduciary (caring) trust (i.e., additional expectations of disinterestedness toward self-interests, representative actions, and benevolence and generosity).*

Proposition 5d. *Cooperative relations that have the character of “public goods,” whereby all benefit equally regardless of individual contribution, are at risk of freeriding.*

Dimension 3: Trust as a property of social wholes addresses the cultural dimension of trust; that is, how groups develop a culture of trust which facilitates or discourages trust. Trust as a cultural rule maintains that trust is rooted in the normative systems of society. Decisions to trust, therefore, are informed by the normative rules that shape the cultural context of trust. These normative rules define a group’s obligations to trust and to be trustworthy, credible, and reliable. Typically, normative rules are associated with particular social roles, or role identities. For example, there are normative obligations for lawyers to keep secrets in the form of privileged communication (Sztompka, 1999).

The culture of trust involves more complex considerations in informing the decision to trust than considerations of agential trustfulness or the reflected trustworthiness of the trustee. Sztompka leverages his theory of social becoming (see Sztompka, 1991) to create a hypothetical model of the social becoming of trust—or culture of trust. In this cyclical model (see Figure 14), the culture of trust is shaped by four sets of variables: (1) background variables in the form of historical traditions of trust

or distrust, (2) independent variables in the form of structural opportunities for positive or negative experiences with trust or distrust, (3) mediating variables in the form of agential endowment that is defined in terms of two sets of variables: (a) social mood and (b) collective capital, and (4) dependent variable in the form of cultural effect that provides a feedback loop to the historical tradition.

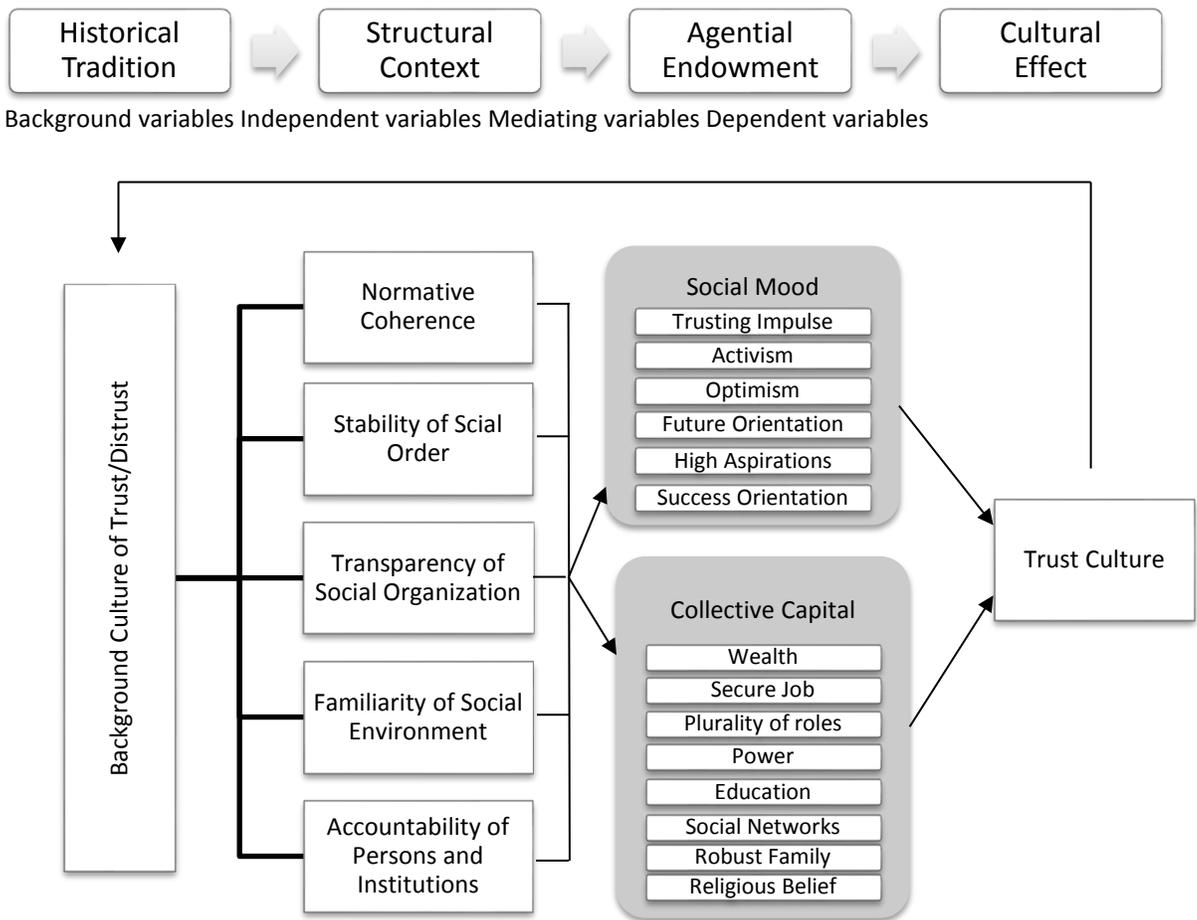


Figure 14. Factors shaping cultural trust: Sztompka’s model of the social becoming of trust (source: Sztompka, 1999, p. 133)

Historical tradition functions as a background variable that represents “some inherited level of trust culture: the tradition of trust or distrust” (Sztompka, 1999, p. 132). These background variables inform the structural context, or structural circumstances—

normative coherence, stability of social order, transparency of social organization, familiarity of the social environment, and accountability of persons and institutions. These circumstances function as independent variables that increase or decrease the likelihood that expectations of trust will be met or betrayed. These suggestions are mediated by the “endowment of the actors” which are classified into two types of mediating variables: “social moods” and “collective capital” (Sztompka, 1999, p. 132). These mediating variables include the social capital, sociability, and social identity of the culture’s members. This brings us to our sixth of Sztompka’s model of trust:

Proposition 6: *The trustees’ memberships in various normative social structures and their roles within these structures determine norm-based role-specific expectations and their corresponding trustworthiness.*

Summary of Sztompka’s Sociological Model of Trust. Sztompka’s (1999) model of trust shows that the trustor's trustfulness shapes the decision to trust, the trustee’s reflected trustworthiness, and the culture of trust that pervades the world of the trustor and trustee. The trustor’s trustfulness is shaped by a psychological predisposition to trust. The reflected trustworthiness of the trustee is the relational component of the trust decision and is formed by the interactions among the trustee, the trustor, and anyone else involved in the trust decision. The trustor’s trustworthiness is based on appearance, performance of trust, and reputation of trust. Trust decisions are also informed by the cultural context in which they are made and the factors that shape the cultural context. These factors are reflected in the factors that embody relational trust. Figure 15 shows our visual understanding of Sztompka’s explication of the process underlying the decision to trust. It begins with Sztompka’s definition of trust and the clues and dimensions of trust that shape the decision to trust.

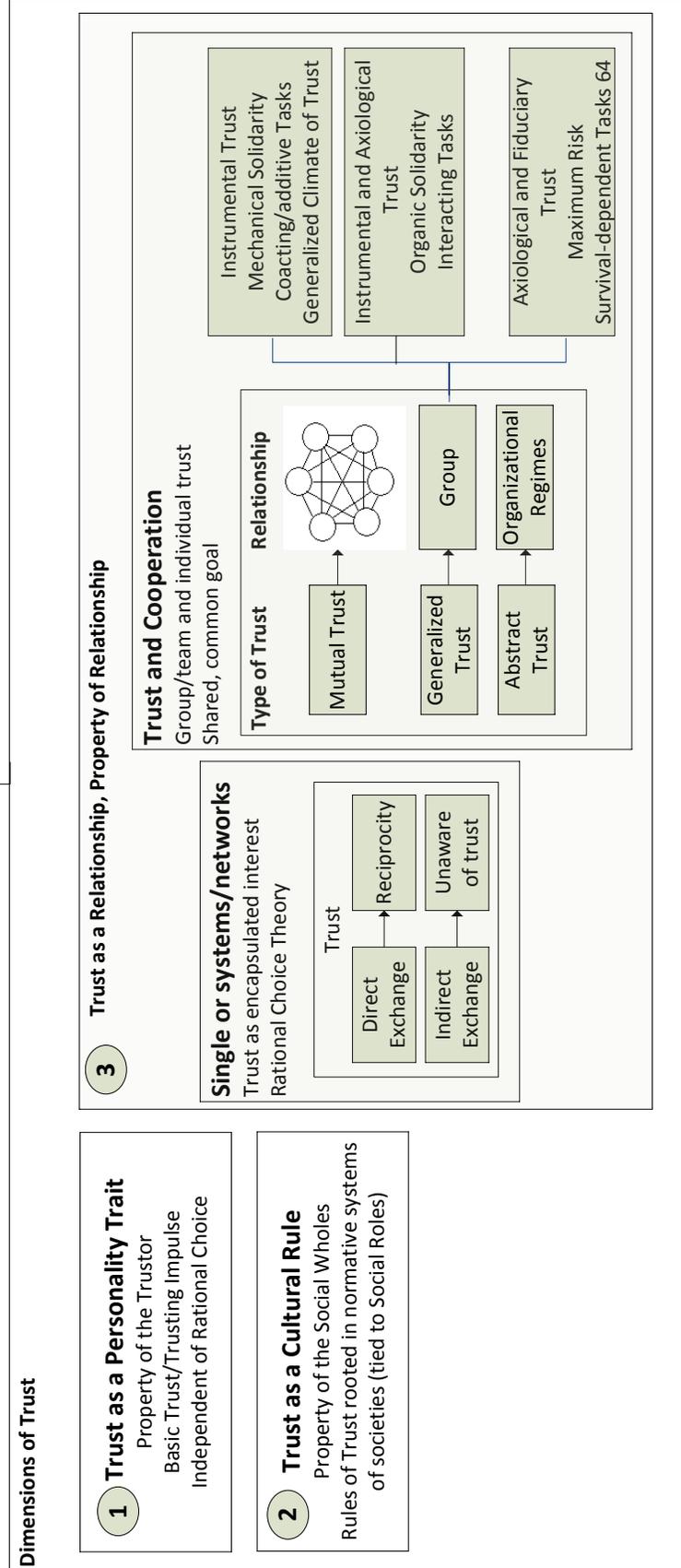
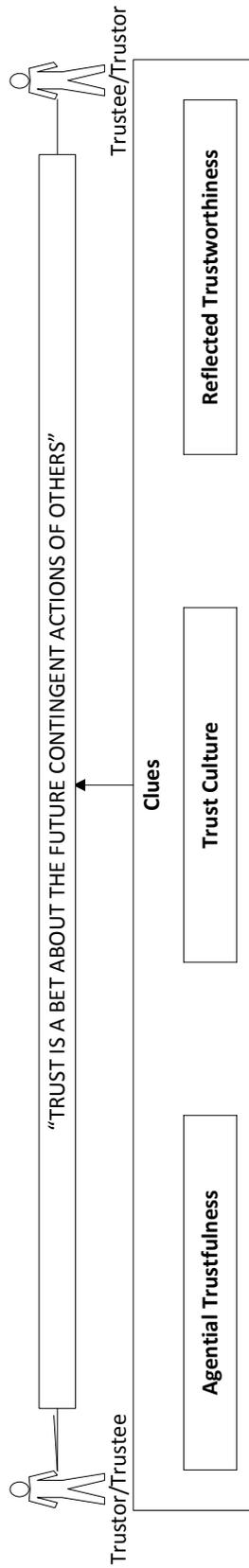


Figure 15. Overview of Sztopka's Theory of Trust

Trustors use their knowledge about the trustworthiness of the trustees to inform their trust decision. There are six cues associated with this knowledge: three concern primary trustworthiness and three derived trustworthiness. The three cues to primary trustworthiness consist of direct and indirect knowledge concerning the past trust reputation of the trustee; the present trust performance; and the appearance and demeanor of the trustee (i.e., looks, possessions, identity such as gender, age, race). The three contextual cues concern accountability (e.g., non-anonymity of the trustee), pre-commitment (e.g., decisions and actions of the trustee), and trust-inducing situations (i.e., visibility, closeness, intimacy) (Sztompka, 1999).

Based on Sztompka's (1999) theory of trust, we have deduced the following propositions regarding how the trustee's trustworthiness shapes the trustee's decision to trust:

Proposition 1: Trust is multidimensional. It has psychological, relational, and cultural dimensions.

Proposition 2: Agential trustfulness mediates the decision to trust (psychological dimension of trust).

Proposition 2a. Agential trustfulness is shaped by life experiences with trust.

Proposition 2b. Agential sociability mediates trustfulness and conversely.

Proposition 3: Relational trust is manifested individually or collectively. The trustor's epistemological knowledge about the trustee's or collective's trustworthiness shapes the trustor's decision to trust the trustee/collective (relational dimension of trust).

Proposition 3a. Primary trustworthiness: The trustor's knowledge about the trustee's past reputation concerning trust, current performance of trust, and appearance/demeanor shape the trustor's perception of the trustee's trustworthiness.

Proposition 3a1. The consistency of the trustee's past reputation of trust helps to shape the trustor's perception of the trustee's trustworthiness.

Proposition 3a2. The role of the trustee determines norm-based, role-specific congruent expectations and their corresponding trustworthiness

Proposition 3a3. The trustor's and trustee's social capital shapes the trustee's trustworthiness. Social capital determines the visibility of the trustee (personal familiarity and direct access). The visibility of the trustees' performance of their roles shapes the trustor's perception of the trustee's primary trustworthiness.

Proposition 3a4. The similarities between the trustor's and trustee's identities, as evident from their appearance and demeanor, shape the trustor's perception of the trustee's trustworthiness.

Proposition 3b. Derived trustworthiness. The context—accountability of the trustee, precommitment, and trust-inducing situational factors—mediate the trustee's trustworthiness.

Proposition 4: Cooperative relations require mutual trust, generalized trust, and abstract trust.

Proposition 4a. Cooperative groups form a network of mutual trust where each member trusts the other members.

Proposition 4b. Cooperative members of groups have a generalized trust in the cooperative group as a whole.

Proposition 4c. Cooperative members have an abstract trust in the organizational processes that ensure successful cooperation.

Proposition 5: The type of relations that shape cooperation among group members determines the type of trust required of its members.

Proposition 5a. Cooperative relations based on little interdependence, role identities, and low risk (i.e., mechanical solidarity) require instrumental (rational) trust (i.e., expectations of regularity, reasonableness, and efficiency).

Proposition 5b. Cooperative relations based on medium interdependence, social identities, and medium risk (i.e., organic solidarity) require both instrumental and axiological (moral) trust (i.e., additional expectations of moral responsibility, kindness, truthfulness, fairness).

Proposition 5c. Cooperative relations based on high interdependence, social identities, and high risk require instrumental, axiological, and fiduciary (caring) trust (i.e., additional expectations of disinterestedness toward self-interests, representative actions, and benevolence and generosity).

Proposition 5d. Cooperative relations that have the character of "public goods," whereby all benefit equally regardless of individual contribution, are at risk of freeriding.

Proposition 6: The trustees' memberships in various normative social structures and their roles within these structures determine norm-based role-specific expectations and their corresponding trustworthiness.

Though illuminating, Sztompka (1999) subsumes his theory of trust with rational choice thinking rather than a social theory of trust (Möllering, 2001a) and, therefore, can inform, but cannot define, our theoretical framework. Specifically, it lacks the dynamic, emergent, interactional perspective needed for our study of trust which we find in Weber's and Carter's (2003) study on the social construction of trust in the context of face-to-face love and friendship relationships. They note that their research represents the only study with an interactionally, emergent social constructivist focus of trust.

Weber's and Carter's Social Construction of Trust in Love and Friendship Relationships

Weber and Carter (2003) develop an interactional theory of trust, using the trust research of Niklas Luhmann, Georg Simmel, and Adam Seligman and define trust as an orientation between the self and the trustee. Trust as an orientation implies: "(1) it does not exist prior to its enactment, (2) it is a state of the relationship that is emergent, and (3) it structures the relationship" (Weber & Carter, 2003, p. 3). This understanding of trust complements our social constructivist approach to online social learning.

They identify three different dimensions of trust: (1) cognitive, (2) moral, and (3) social. The cognitive dimension is concerned with role-taking; that is, with understanding and taking the other's perspective. Simmel and Hughes (1949) identify role-taking as a necessary precursor in sociability. Role-taking allows people to take the other's perspective and to place others' interests above their own (i.e., empathy, altruism) and, thereby, make them trustworthy. Preece (2004) refers to role-taking as a necessary factor in developing empathy that she identifies as an antecedent to trust. The moral dimension of trust ensures that one has the appropriate values/norms, such as reciprocity and not harming others, to support the social construction and maintenance of a relationship.

Finally, the social dimension of trust “appears upon recognition that trust emerges only in relationship to real or imagined others” (Weber & Carter, 2003, p. 3).

Having established this definition and theoretical framework of trust, Weber and Carter (2003) examine the construction, deconstruction, and reconstruction of trust in the context of voluntary relationships “routinely characterized by trust;” specifically, friendship and love (p. 19). Beyond academic knowledge, Weber and Carter are also interested in the everyday understandings of trust held by people in friendship and love relationships. As such, they adopt Hardin’s (1992) call for a street-level epistemology of trust: “[f]or this we require a theory that focuses on the individual and on the ways the individual comes to know or believe relevant things, such as how trustworthy another person is” (pp. 14-15).

Insofar as our study is interested in the social construction of trust from the learners’ perspective, we are especially interested in Weber’s and Carter’s (2003) theoretical framework, methodological approach, and findings on the construction of trust in friendship and love. Weber and Carter use snowball sampling to select 50 participants for one-hour long, in-depth interviews. These interviews focus on theoretical insights gleaned from their previous exploratory research study on trust involving ten participants in in-depth interviews. In their exploratory study, Weber and Carter found that “the primary dynamics at work in the social construction of trust” are time, self-disclosure, and perspective-taking (p. 13).

Very simply, the social construction of trust requires time for people to get to know each other in friendship and love relationships. As time progresses and they disclose personal and vulnerable information about themselves, they note whether others

in the relationships manage this information in a trustworthy manner. As time and self-disclosure progress towards a trusting relationship, participants in these relationships find that they take each other's perspective into consideration before making decisions. In doing so, they can protect and support others' vulnerabilities rather than exploit them for personal advantage. Weber and Carter (2003) refined these three theoretical constructs in their subsequent interviews of 50 participants and used them to develop a 3-stage model of trust based on their initial theoretical findings: (a) Stage 1: Initial Encounters, (b) Stage 2: Self-Disclosure, and (c) Stage 3: Perspective-Taking (see Figure 16).

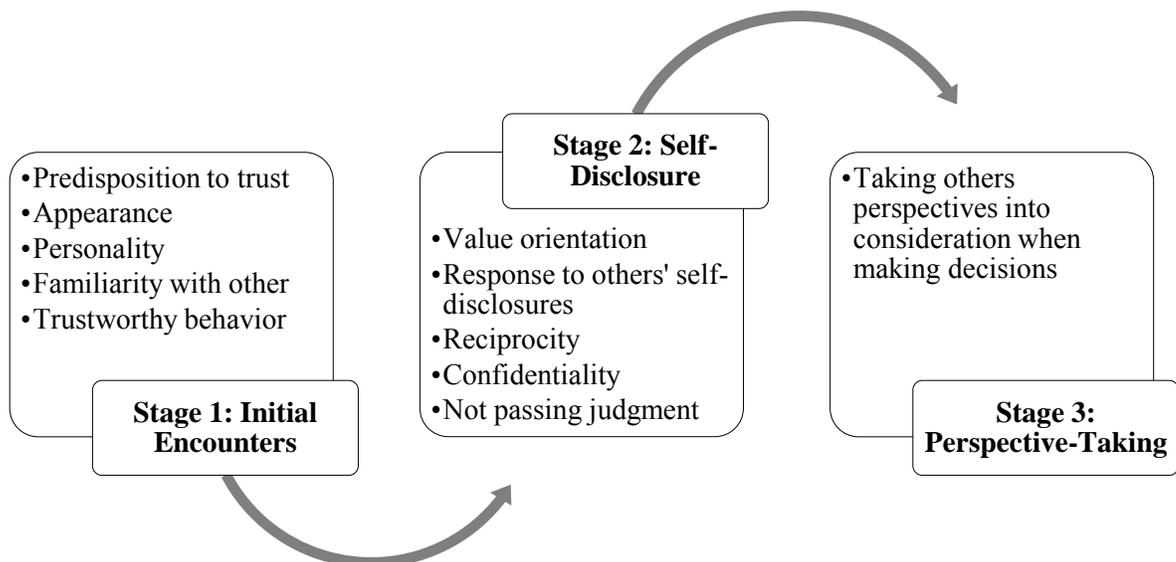


Figure 16. 3-stage model of the social construction of trust in interpersonal relationships (Weber & Carter, 2003).

They found that during initial encounters, predisposition to trust, appearance, personality (e.g., experiences with trust), familiarity with the other (e.g., reputation, membership in social networks), and trustworthy behavior help individuals to determine if they “have a common way of viewing the world” which “is important in the construction of trust” and facilitates moving the relationship from knowing each other

“on the surface” to getting to know each other more intimately (Weber & Carter, 2003, p. 30). The second stage, self-disclosure, affords individuals the opportunity to get to know each other more intimately by learning more about their value orientations (i.e., value systems such as respect for others) and how others will respond to self-disclosures. Weber and Carter (2003) found that reciprocity, confidentiality, and not passing judgment are three critical criteria in the social construction of trust. These criteria shape whether one can take the perspective of the other, which represents the third and final stage in the process of the social construction of trust. When individuals in a relationship are assured that the other will take their perspective into consideration when making decisions, then they have achieved the orientation to trust. To summarize, Weber and Carter (2003) found that the social construction of trust in friendship and love relationships is comprised of three stages: initial encounters, self-disclosure, and perspective-taking and that certain conditions must be met in each stage to transition to the next and, ultimately, a trusting relationship.

Weber and Carter (2003) make a point of distinguishing these types of relationships from face-to-face stranger relationships. In the context of this study, learners are not strangers. They may not know each other initially, but they are not complete strangers either. By virtue of participating in a particular online course, they indicate that they belong to an academic community (Ess & Thorseth, 2011). Academic communities promote trusting cultures through explicit norms of appropriate student conduct. In addition, the Web 2.0 world has diffused the idea of the stranger. By reconceptualizing social structures as a networked world consisting of network identities, network learning, and network work environments (Castells, 2010; Wellman & Gulia,

1999), life in the Web 2.0 world is lived on the net and, hence, there are no longer strangers in the traditional sense. We, therefore, find Weber's and Carter's study quite useful as a theoretical and methodological research approach to our study.

Summary of Chapter Two

Trust has been researched from the psychological, social psychological, and sociological perspectives. The psychological and social psychological perspectives approach the study of trust from the individual perspective which views trust as a predisposition, shaped by social structures and experiences of trust, or a rational cost-benefit analysis toward generalized others. These perspectives fail to recognize the social constructivist nature of trust and the interactional methodologies needed for our study of social trust. Sociological research on trust, however, helps us to form a basis for a social, interactional, emergent view of trust needed for this study. It considers the social construction of trust in a particular context. Sztompka's (1999) model of trust identifies indicators that shape the process of trust. Weber's and Carter's (2003) research on the emergence of trust provides a relevant theoretical and methodological study for our study of trust. This broad and extensive literature on trust serves as a guide from which to assess empirical data about learners' performances of trust in the context of online social learning, including psychological and social psychological understandings.

CHAPTER THREE: METHODOLOGY

The design of our methodology was informed by Weber's and Carter's (2003) qualitative descriptive and grounded theory approach. We adapted their approach to studying the social construction of face-to-face trust to our objective of understanding learners' social construction (i.e., performances) of trust in the context of online social learning. Our study of online learning addresses learning contexts that include text-based computer-mediated communication (CMC) as one medium for communication. This required that we reconceptualize Weber's and Carter's face-to-face interviewing approach for online interviewing. We drew upon Rubin and Rubin's (2012) responsive interview model to adapt the face-to-face interview method to online synchronous text-based interviews (Mann & Stewart, 2009).

Rubin and Rubin's (2012) model provides guidelines on how to address the challenges of the disembodied world of text-based computer-mediated communication by structuring the interview around three types of questions: main, probes, and follow-ups that solicit content as well as promote relationship building in non-verbal environments. These questions ensure that researchers "build a solid, deep understanding of whatever ...[they] are studying based on the perspectives and experience of ... [their] interviewees" (Blumer, 1969; Francis & Hester, 2004; Rubin & Rubin, 2012, p. 38). Furthermore, the fluidity and flexibility of the responsive interview model complements the fluidity and flexibility of our conceptualization of learners' social interactions, their

network sociality, and, thereby, facilitated the ongoing adaptation of interview questions to the demands of the context at hand. We used Rubin's and Rubin's (2012) specific guidelines for interview questions to develop our initial interview questions and to guide the conversations during the actual interviews.

Similar to Weber and Carter (2003), we focused on the micro-sociological level—social interaction—as our unit of analysis and used open-ended interviews with learners to gain an “inside” perspective of their interactive, emergent, social performances of trust. Because we were interested in learners’ performances of trust in a text-based computer-mediated online social learning environment, we chose to use an analogous interview method; that is, text-based computer-mediated interviewing (Walther, *Theories of computer-mediated communication and interpersonal relations*, 2011). In particular, we selected synchronous online interviewing as it most closely captures the interactive spirit of face-to-face interviewing. Computer-mediated communication’s hybrid quality as an oral and written language makes it “an excellent medium through which to ‘exchange opinions, beliefs, understandings and judgments in social interaction’ (Herring, 1996a: 104)” (Mann & Stewart, 2009, p. 189).

The responsive interview model encourages building rapport with participants as collaborators who, as vested members of the research team, exert greater effort to ensure the quality of the research (Rubin & Rubin, 2012). Although we interviewed individual learners, they, nonetheless, provided a sociological perspective of the social construction of trust because they are representative of learners, in general.

Insofar as trust is a sensitive topic, we followed Weber's and Carter's (2003) lead in adopting snowball sampling to identify prospective participants. The strength of

snowball sampling lies in participants' interpersonal relationships which evoke a rapport and, thereby, encourage others' participation in the study. Our data analysis followed the seven-step analytical and theory building process identified by Rubin and Rubin (2012) which mirrors the constant comparative method as explicated by Glaser and Strauss (1967) and advocated within descriptive analysis (Corbin & Strauss, 2008) and grounded theory (Creswell, 1998). Our analysis was guided by the findings from the research on trust which acted as 'directions along which to look' (Blumer, 1969, p. 148).

The following sections begin with a summary review of the statement of the problem, the purpose of the study, and the research questions that guide this study. These sections are followed with the process for identifying participants and their characteristics. We then extend and contextualize the literature on challenges facing computer-mediated communication from Chapter 2 to the context of online synchronous text-based interviewing. We do so to clearly show that the challenges facing learners' social construction of trust also shape the relationship between the researcher and participant in online interviewing and, therefore, had to be considered in designing our methodological approach. We introduce the responsive interview model and how it addresses these challenges. In addition, we show how the responsive interview model guided the selection of our research strategies and methods of data collection and analysis. We also describe the evaluation criteria for our study and the limitations that constrain the generalizability and applicability of our findings. We conclude with the research ethics that guided our conduct in this study. Where appropriate, these sections contain a subsection beginning with "In Practice." These subsections review how the

proposed methodologies and strategies were implemented during the study and any necessary changes that needed to be made.

Statement of the Problem

Trust is fundamental to social interactions (Seligman, 1997) and has the potential to improve learning experiences and outcomes. Social relationships characterized by trust appear to create more positive and effective learning experiences. However, we also understand that trust is “one of the most elusive and challenging concepts one could study” (Lyon, Möllering, & Saunders, 2012, p. 1). Lyon, Möllering, and Saunders (2012) note that the research base on trust is so diverse that it necessitates “considerable detective work by those interested” (p. 3). In her studies of adult English as a Second Language learners, Chevalier (1994) found that trust, in education, is “too often, [used] ... indiscriminately and uncritically” (p. ix).

The research on trust online, in general, and online social learning, in particular, is similarly elusive, diverse, and challenging. There is a need to better understand how trust is constructed in social interaction and, for our proposed study, by learners in the context of online social learning in the Web 2.0 landscape. Our study contributes to what Chevalier (1994) called “a much-needed, contextually grounded dialogue about the role of trust in educational environments” (p. 4).

Purpose of the Study

Acknowledging these cautions and recognizing that the study of trust is daunting, we formulated a simple, exploratory purpose for our study: to gain insights into learners’ *understandings* of trust, their *social construction* of trust, and the *influence* of trusting relationships upon learning in the context of online social learning. We focused on the

micro-sociological level—social interaction—as our unit of study and adopted a qualitative interview approach which helped us to develop thick descriptions of learners’ understandings of trust, how trust is socially constructed in their online social interactions, and how trust shapes their learning (Corbin & Strauss, 2008; Denzin & Lincoln, 2005). We used the research findings from previous studies of trust to provide general guidelines, as sensitizing concepts, heuristic ideas, to point us in the ‘directions along which to look’ as we interviewed online social learners (Atkinson & Housley, 2003, p. 9).

Research Questions

The following research questions guided our exploration of the emerging, interactive, social construction of trust from the learners’ point of view:

1. How do learners perform trust in social interactions in the context of online social learning?
2. How does trust shape the social relationships that learners form in this particular context?
3. How does computer- mediated textual communication shape learners’ performances of trust in an online context?
4. How does trust shape the social construction of knowledge? That is, how does trust mediate learners’ social construction of knowledge in online social learning?

Process for Identifying and Characteristics of the Sample

Because trust is a sensitive subject of a very personal nature and requires self-disclosure, we used snowball sampling (Cohen, Manion, & Morrison, 2007; Weber & Carter, 2003) to gain access to qualified participants. We proposed to initiate two

snowballs with two learners familiar to the researcher who had recently (less than two years) participated in at least one online course where communication included text-based computer-mediated communication (Weber & Carter, 2003). One learner was a graduate student who had graduated in the previous year from a large, public south-Eastern university with a significant online learning program. The other learner was an undergraduate learner from a large, private mid-Atlantic institution that was in the process of implementing a college-wide online learning program.

After interviewing these two core learners, using text-based communication in Skype, we used them as “informant[s]” to refer other learners they knew who qualified for this study (Cohen, Manion, & Morrison, 2007, p. 116). That is, learners who had recently (2 academic years) taken an online course that included text-based computer-mediated communication and social learning. Limiting participants who had engaged in online learning during the past two years ensured that their experiences were current and that they would have sufficient contacts in their respective institutions to grow the snowballs. As Cohen, Manion, and Morrison explain: “The use of snowball sampling builds in ‘security’...as the contacts are those who are known and trusted by the members of the ‘snowball’ (p. 122). If the occasion arose where a recommendation did not lead to a subsequent participant referral, then we planned to refer back to the most recent previous learners to ask for further recommendations and, thereby, ensure the continued growth of the snowball.

All learners were assured confidentiality with an IRB-approved confidentiality statement (see Appendix A). Weber and Carter (2003) found that the provision of a confidentiality statement made participants more comfortable in engaging in their

research study. We proposed to interview 30-50 learners, depending on when we would achieve convergence of learners' performance of trust and its influence on online social learning (Glaser & Strauss, 1967; Mann & Stewart, 2009).

Although the initial participants in the snowball represented learners who were known to the researcher, it was expected that subsequent participants would most likely only be known to the learners who referred them. This balance between familiarity to promote trust; yet, still maintaining some distance addressed a concern in snowball sampling that a homogeneous sample may result consisting of relationships characterized by 'reciprocity and transitivity' and non-generalizable results (Cohen, Manion, & Morrison, 2007, p. 122). We also proposed two snowballs in two differing contexts—one at a large, private mid-Atlantic institution and one at a large, public south-Eastern university—in order to ensure further variation in the sample and to elicit a variety of perspectives on trust. The first academic context has explicitly incorporated moral norms of reciprocity, altruism, and social service to the community into its curriculum whereas the latter promotes academic goals. Furthermore, demographic variation was ensured by selecting participants who met a variety of gender, age, and class standings (i.e., undergraduate, graduate).

In Practice: Participants in this Study

Although the initiators of the two snowballs were expected to garner sufficient referrals to grow the snowballs, it became evident from the outset that the snowballs were not going to grow sufficiently to supply the requisite number of participants for this study. The PhD graduate from a university with an established online learning program found that most of her/his referrals chose not participate. Many cited busy schedules as

the reason for their decision. This snowball only grew to 6 total participants which included the graduate learner who initiated the snowball. The undergraduate from the university which planned to expand the online learning program found out that the university's concerns with online learning, in general, prevented the college from going ahead with its plans to implement online learning courses. As such, the population from which s/he could select quickly disappeared. Nonetheless, this learner was able to enlist the participation of a total of 11 learners, including the learner who initiated the snowball.

As it became apparent that the snowballs were not going to grow, the researcher, in consultation with committee members, initiated new plans to add more snowballs. One of these plans included posting to an organization (i.e., listserv) that focuses on education and technology. This organization consists of over 1,600 international members. The researcher contacted the managers of the educational organization to ask for permission to post a request for participation. This request was granted and posted. Five learners responded to grow the third snowball. One more plan was implemented to solicit learner referrals from online instructors. Five learners responded who then referred three more participants for a total of eight learners in the fourth snowball.

The participants represented a highly diverse sample in terms of gender, age, class standing, culture, race, and age. Therefore, no adjustments were necessary to solicit other referrals. Information about the participants was maintained in a table noting their demographic information.

Challenges to Online Synchronous Text-based Computer-mediated Communication

Online interviewing challenges our fundamental assumptions about language use and interpersonal relationships (Mann & Stewart, 2009). The challenges to online

synchronous text-based interviewing emanate from the idea that CMC is typically a lean medium utilizing non-visual, text-based computer-mediated communication which precludes getting a sense of the other and, thereby, establishing the rapport necessary for interviews as well as clearly expressing oneself. More current research on CMC, as well as research on conducting interviews online, reveals advantages and strategies for managing more productive and successful research using CMC. The oral quality of CMC's hybrid language encourages dynamic, interactive exchanges while at the same time encouraging deeper reflection through its written form. Rubin's and Rubin's (2012) responsive interview model recommends the use of electronic paralanguage in the form of probe questions/comments to articulate non-verbal cues that may be filtered out by text-based computer-mediated communication and, thereby establish social and emotional connections. For example, a questioning look may be verbalized as 'Could you tell me a little more about that?' and interest may be expressed as 'Go on—this is great' (Rubin & Rubin, 2012, p. 139).

Relational development theorists challenge the negative assumptions about interpersonal relationships in CMC contexts and non-experimental studies of CMC show that warm relationships can and do develop online (Mann & Stewart, 2009; Walther, 2011). This is facilitated by the unique nature of CMC language as 'talking in writing' and the electronic paralinguistic features that compensate for the loss of visual cues (Mann & Stewart, 2009, p. 184). Because visual cues are absent, electronic paralanguage is increasingly used to "convey the mood of the communication and make social and emotional connections" (Mann & Stewart, 2009, p. 134). Electronic paralanguage includes repetitions, abbreviations and verbal descriptions of feelings and sounds such as

emoticons, ‘hehehe’ for laughter, or *big hugs* to indicate affection or approval (Mann & Stewart, 2009). Electronic paralanguage is used to express the social aspects of interaction as well as to manage conversations.

As a hybrid language, CMC language is characterized by features of both spoken and written language. As noted earlier, the hybrid quality of CMC language makes it “an excellent medium through which to ‘exchange opinions, beliefs, understandings and judgments in social interaction’ (Herring, 1996a: 104)” (Mann & Stewart, 2009, p. 189). Participants ‘use language as if they were having a conversation, yet their message must be written’” (Mann & Stewart, 2009, p. 184). The interactive aspect of CMC, especially synchronous CMC, has a “chatty, dynamic, ‘produced on the fly’ quality” which may give participants an immediate sense of the other” as in face-to-face interviews (Mann & Stewart, 2009, p. 128).

Just as learners have to learn how to conduct successful oral discussions, learners also have to learn how to conduct successful CMC discussions (Colomb & Simutis, 1996). CMC users have developed conversational strategies to address concerns about the non-linear flow of conversations and compromised turn-taking. For example, they may address someone by name as a new way of turn-taking and refocusing the conversation to a particular point (Mann & Stewart, 2009). In a study of communication conventions and protocols used by participants in an instructional setting, Murphy and Collins (1997) found that participants used the names of other learners, gave non-verbal textual cues, and asked questions/clarification to communicate more clearly.

The written aspect of CMC provides participants with a script of what has been said, assists in keeping conversations on track, and reduces demands on participants’

memory and attention. They can simply refer to the script to help them focus and remember what has been said. This allows them to reflect on past conversations and to engage in deeper, more meaningful conversations (Mann & Stewart, 2009). Furthermore, the script affords participants the opportunity to revisit these conversations and to ask for clarification/elaboration when needed. The script builds a communication history for the participants. This is a unique feature of CMC and an advantage in CMC-based interviewing, especially during the analysis phase.

Conventional qualitative research requires the interviewer to transcribe the interview into text and to record non-verbal cues and paralinguistic behavior in field notes. This process requires that interviewers consider and translate participants' moods and intentions into texts. These assessments and translations may be incorrect. Furthermore, non-verbal behavior is seldom reported. Instead, reports are based on interview transcripts which do not represent the interview interaction as a whole (Mann & Stewart, 2009). In contrast, CMC scripts contain both verbal and non-verbal communication as they are explicitly articulated in the electronic texts. Analysis, in CMC studies, therefore, can begin from "data which are not already coloured by the researcher's theoretical and methodological choices—choices which can construct 'a different version of events' (Flick, 1998: 176)" (Mann & Stewart, 2009, p. 193). The following section details Rubin's and Rubin's (2012) responsive interview model and how this model can guide synchronous text-based online interviewing in the context of our study.

In Practice: Addressing the Challenges to Online Synchronous Text-based Computer-mediated Communication during the Interview Process

The researcher leveraged all the techniques identified in the previous section to mitigate the challenges presented by interviewing in an online context using synchronous text-based computer-mediated communication. Electronic paralinguage was used to verbalize missing cues and, thereby, develop and manage the social dimension of the relationship. Probe questions/comments were used to clarify confusion and/or misunderstandings. These efforts helped to establish social and emotional connections between the researcher and participants. Figure 17 provides an excerpt that illustrates the chatty nature of online orality-literacy and use of electronic paralinguage to express non-verbal socio-affective cues.

Learner: Hi!
Learner: What's up? :)
Learner: I'll be driving soon
Researcher: Hi "Learner" ...
Researcher: We were going to meet at 1, and when I didn't see you respond, I thought that we might be on different time zones
Researcher: I thought that you would respond at 2EST
Researcher: did I confuse the dates/times?
Learner: Hmmm I didn't mark it down.
Learner: Let me get situated in the library
Learner: And I'll be good to go
Learner: Thanks!
Researcher: ok...
Researcher: no problem
Learner: Hehehe

Figure 17. Chat example illustrating use of electronic paralinguage to mediate lack of non-verbal cues

Responsive Interview Model

Rubin’s and Rubin’s (2012) responsive interview model provides a framework for designing qualitative research studies that incorporate interviews as their primary research method. These interviews are, however, structured as extended conversations among conversational partners rather than traditional question-response sequences. Rubin and Rubin recommend that interviewers create conversational guidelines to structure responsive interviews and, thereby, ensure consistency and quality of research.

The responsive interview model is structured around asking three types of questions: main, probes, and follow-up. Table 1 briefly summarizes the purpose of each type of question and its characteristics. These types of questions support a flexible design that continuously adapts to new information and insights revealed during interviews, facilitate building rapport between the researcher and interviewee, and ensure a depth of understanding. Probes, in particular, provide guidelines for addressing the perceived impersonality of a text-based CMC context.

Table 1

Responsive Interview Question Model (source: Rubin & Rubin, 2012, p. 119)

Question	Purpose	Characteristics
Main	Structure the interview to answer the research question	Always prepared in advance Worded to match the interviewee's experiences
Probes	Manage the conversation	Ask for elaboration, detail Keep the interview on target Ask for clarification, examples, evidence Help reveal slant or bias Worded simply, in a formulaic manner, independent of content of previous answers
Follow-up	Get depth, detail, richness, vividness, and nuance, helping to assure thoroughness and credibility	Explore relevant events, concepts, and themes Designed in response to the comments or ideas introduced by the conversational partner Worded to reflect prior answers May be asked during the interview or later

Responsive Interview Questions: Main, Probes, Follow-ups

Together, the main questions, probes, and follow-up questions build thoroughness and credibility in the research findings. The following sections review these three types of questions in greater detail and show how they guided the development of our initial interview questions.

Main Questions

The goal of main questions is to address the research problem. Main questions constitute the overarching research questions that explore the research problem. Rubin and Rubin (2012) explicitly describe how main questions should be worded, sources to use in designing main questions, how to determine the order of main questions, and the types of main questions to ask (see Figure 18).

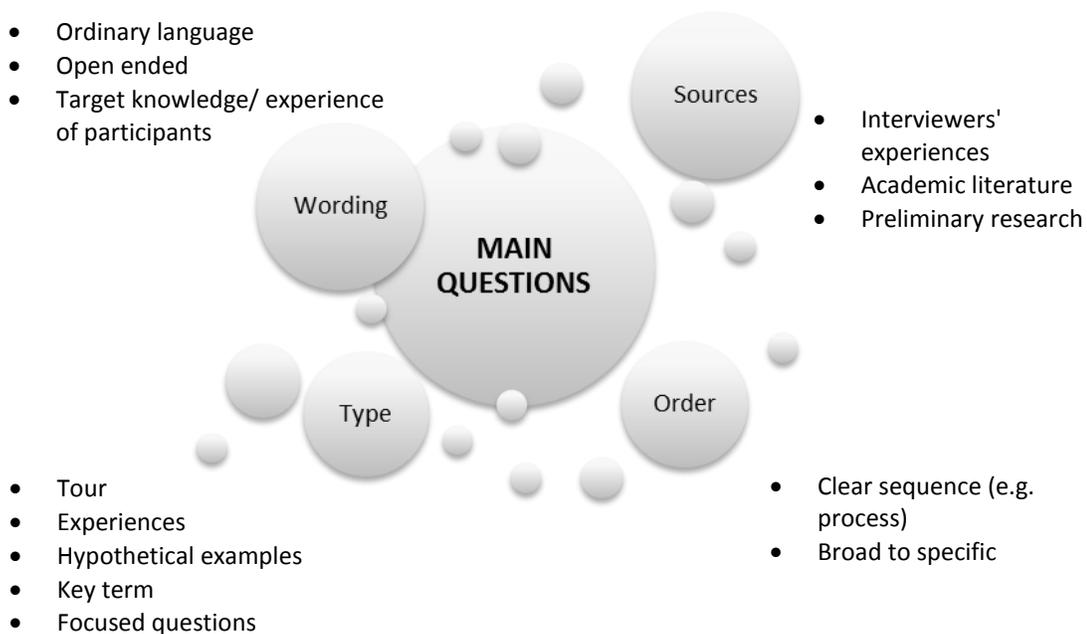


Figure 18. Guidelines for developing main questions (Rubin & Rubin, 2012)

Rubin and Rubin (2012) provide three guidelines for wording main questions: (1) use everyday language that participants understand, (2) articulate the questions in a

general manner to encourage participants to interpret the questions and answer them as they wish rather than guiding them in a particular direction, and (3) word the questions such that they consider the experiences and knowledge of the participants. Although main questions are to be worded using ordinary language, they must also be tempered with technical knowledge from the field of study such that interviewers “signal ... [their] level of expertise” and, thereby, elicit confidence in the researcher (Rubin & Rubin, 2012, p. 132). By creating a framework of participant-centered questions, the responsive interview model recognizes a critical finding in sociological studies; that is, that participants’ everyday understandings and researchers’ understandings differ. As Francis and Hester (2004) explain:

It is commonly argued that ordinary members of society do not possess the theoretical concepts of sociology. ... [U]nderstandings of the ordinary members are regarded as second rate; they are both incomplete and faulty. ... [T]he sociology task is a corrective one Despite these perceived failings, however, ... these activities continue to be accomplished. Social life...carries on regardless of the deficiencies ... members of society ... possess ... a practical, working knowledge of how to do the social activities that make up the organization of society Persons act on the basis of what they know and understand: relations between themselves and others, the circumstances of their situation, the relevant norms and rules to which they should attend in carrying out their activities, and many other things. They know these things not as theoretical objects or topics but as practical matters ... members’ knowledge is knowledge-in-use” (pp. 15-17).

Main questions can be derived from one or more of the following three sources:

(1) interviewers’ experiences or knowledge, (2) academic literature, and (3) preliminary research (Rubin & Rubin, 2012). Main questions should be ordered such that they expand rather than narrow the scope of questions that can be asked and answers that can be given. They can be articulated as (1) tour questions, (2) experiences, (3) hypothetical examples, (4) meaning of a key term, or (5) more focused questions (Rubin & Rubin, 2012). *Tour* questions invite participants to act as tour guides of their “turf while pointing

out what they think is important” or to provide a general understanding of their experiences. For example, in the context of our study, we may ask “Can you describe some examples of working on an online class project where you had to interact or depend upon another student?”

Experience-type main questions examine interviewees’ general experiences with the research topic. These are very broad questions that allow interviewees to choose which experiences they wish to talk about. For example, we may ask “Some researchers think that you can’t develop trust online while others think you can. How do you feel about this?” *Hypothetical* questions are a third type of broad, unstructured main question that attempts to begin a discussion about a topic by presenting an imagined scenario to participants and asking participants to respond to it. For example, we may ask “Suppose you had to work on a class project with someone you didn’t know. What’s that like? Can you walk me through this?” Questions exploring the meaning of a *key* term may, for example, in the context of our study, explore learners’ understandings of trust: “What do you consider when trying to decide whether or not to trust a classmate?” Finally, more *focused* questions combine two questions together to provide a broad scope and then to stage the response to another aspect of the topic. For example, in the context of our study, a focused question would be: “Do you think that trust has played a role in your online learning interactions? What was it like to experience a trusting relationship?”

These five types of main questions (i.e., tour, experiences, hypothetical examples, key term, and focused) create the framework for the responsive interview that is then detailed by verbal and non-verbal probes. In the context of our study, we designed the following research questions and their complementary main interview questions.

Depending on the nature of the research question, we selected appropriate tour questions, experiences questions, meaning of a key term, and more focused questions to gain insights into learners' general and particular understandings of trust, their performances of trust in online social learning, and how trust may mediate the quality of online social learning.

Research Question 1: How do learners perform trust in social interactions in the context of online social learning?

1. Tell me about your experiences with online learning where you had to work with other people and could only communicate using text such as chat, email, discussion boards. [*Tour question to gain insights into learners' general perspectives of the research context.*]
2. Can you describe some examples of working on an online class project where you had to interact or depend upon another student? Tell me how you felt about having to work with another person online. Tell me about how that went. [*Experiences question to gain insights into learners' specific experiences with a defining factor of trust, interdependence, and the nature of their social interactions online.*]
3. Can you share some examples of working on an online class project where you had to interact with someone you knew well? What was that like? Did it make a difference that you knew them? That you were working online? How? [*Focused question to gain insights into learners' particular experiences with known others in the online context and how these experiences shape on another key factor of trust, identity.*]

4. How about some examples of working with someone you didn't know well. What was that like? Did the fact that you didn't know them well or that you were working online make a difference? How? [*Focused question* to gain insights into learners' particular experiences with unknown others in the online context and how these experiences shape on another key factor of trust, identity.]

Research Question 2: How does trust shape the social relationships that learners form in this particular context?

1. You know, the focus of this study is trust in learners' interpersonal relationships. Do you think that trust has played a role in your online learning interactions? What was it like to experience a trusting relationship? What was it like to work on a project with someone you trusted? [Experiences question followed up with a tour question to gain insights into learners' general understanding of trust, its role in social interactions, and its impact on social learning.]
2. In my study of trust, I found that trust means different things to different people. How would you describe it? Can you give me an example of working online with another learner you trusted? [Meaning of a key term question to gain insights into learners' everyday understanding of trust.]

Research Question 3: How does computer-mediated textual communication shape learners' performances of trust in an online context?

1. Some people think that you can't trust anyone online while others think you can. How do you feel about this? Do you think that the online context changed the ways that you trusted your fellow online students compared to face-to-face students? How? [*Tour question* to gain insights into learners' perceptions of the

online environment and how the affordances/constraints of the environment shape performances of trust.]

3. Do you think about trust differently if you are interacting with someone online as compared to in person? [*Focused question* to determine if learners' distinguish between online and offline trust, and, if yes, how.]
4. What do you consider when trying to decide to trust someone? [*Meaning of a key term* to ascertain what factors learners consider in performing trust acts.]

Research Question 4: How does trust shape the social construction of knowledge? That is, how does trust mediate learners' social construction of knowledge in online social learning?

5. Can you tell me about a time that you enjoyed working with other students on an online class project and you had to use text, like chat, to communicate? [Tour question to gain a broad understanding of the processes involved in online social learning.]
6. Can you tell me about a time when you didn't enjoy it? [Tour question to gain a broad understanding of the processes involved in online social learning.]
7. Do you think that you learned better in one situation or another? What do you think was different? [Focused question to identify what factors learners feel differentiate a satisfying learning experience.]
8. What role did trust play in it? To what extent was trust part of what took place? [Focused question to understand how learners perceive the role of trust in online social learning.]

How learners responded to these questions prompted the type of probe that was selected to further the conversation. For example, if information was missing, then requests were made to fill in the missing information. Probe questions cannot be pre-determined because they emerge from the research context. However, what is common to these questions is that they typically probe for further information to provide richer details and build the credibility of the data. This is the reason that Rubin and Rubin (2012) call them probes; they probe for further information. The following section provides an overview of the different types of probes that can be designed and how they expand the conversation with the participant.

Probe Questions

Rubin and Rubin (2012) identify three types of probes to build relationships and manage, interpret, and clarify conversations (i.e., interviews): (1) attention, (2) conversational management, and (3) credibility. These may be expressed verbally or non-verbally. Interviewers can use *attention* probes to indicate that they care about what the participant is saying and that they are listening. Attention probes can consist of such utterances as “Uh-huh,” “Yes,” “That’s interesting,” and “Wow.” *Conversational management* probes “help regulate the level of depth and detail, help clarify ambiguous exchanges, and keep the conversation focused on the topic of research. ...[They] help eliminate confusion” (Rubin & Rubin, 2012, pp. 139-140). *Credibility* probes “reveal how much solid evidence underlies the answers, how good the interviewee’s memory is, and what kind of bias or slant he or she might have” (Rubin & Rubin, 2012, p. 14). The following sections detail the different types of conversational management and credibility

probes researchers can use in their interviews to keep the conversation on track and to elicit rich, vivid details about the research topic.

Conversational Probes. Rubin and Rubin (2012) have listed six types of conversational probes that an interviewer can use to maintain the focus on the topics at hand and, thereby, reduce any confusion that may result from digressions. These are (1) steering, (2) confirmation, (3) clarification, (4) sequence, (5) continuation, and (6) elaboration probes. Table 2 describes the purpose of each type of probe, when it is appropriate to use it, and how to word it.

Table 2

Types of probes, their use, and examples

Probe	Purpose	Example
Steering	When a conversation has digressed off topic, steering probes can help to bring a conversation back on track.	“Sorry, I distracted you with that question; you were talking about...” “Could you go back...?”
Confirmation	Confirmation probes repeat what has been said to ensure correct understanding. The interviewee can agree or correct the summary. Confirmation probes are very important to use when interviewees share something new or unexpected that has significant implications for shaping understanding of the research topic.	“You mean...?”
Clarification	Clarification probes are the opposite of confirmation probes. Whereas confirmation probes assume certain knowledge and confirm it, clarification probes are asked to clear up a misunderstanding or to fill in missing information.	“Can you explain that one more time? I’m not sure that I understood you.”
Sequence	Sequence probes clarify the timing and order of an event to ascertain causation.	“Did this happen before...?”
Continuation	When conversational partners are unsure whether to continue with a story, continuation probes are useful signals to convey that conversational partners should continue. Continuation probes are also helpful in focusing on a particular part of a story.	“So...?” “Then what?” “And...?”

Probe	Purpose	Example
Elaboration	Elaboration probes are the opposite of continuation probes. Whereas continuation probes encourage continuing a conversation even though the conversational partners may not realize where the conversation is going, elaboration probes specifically as “for more detail or explanation of a particular concept or theme” selected from what the conversational partner has said (Rubin & Rubin, p. 144).	“Such as...?” “Can you tell me more about that?” “Hmm, ... [s]ounds like there is a story there.” “Maybe something else was going on ...?”

Probes are especially important in online interviewing as researchers have reported that delays in online responses and lack of visual cues result in multiple threads of conversations occurring simultaneously and out of sequence. In the context of our study, elaboration probes were used with caution when discussing performances of trust with learners, as this is a sensitive matter and conversational partners, in rare instances, did not feel comfortable elaborating on a topic that made them uncomfortable.

Credibility Probes. Credibility probes help to establish the reliability of the information that has been shared during the interview and whether conversational partners have a particular perspective that may color their contributions. Credibility can be probed through either evidence probes or bias/slant probes. Evidence probes ask questions to “ascertain how the conversational partner learned what he or she is describing” (Rubin & Rubin, 2012, p. 146). They can be articulated as “How do you know this?” or “Can you give a specific example, or are you talking generally?” Bias or slant probes “determine the lenses through which people see and interpret their worlds” (Rubin & Rubin, 2012, p. 147). They inform how different perspectives can be interpreted. They can be articulated as opinion questions to avert any perception of a confrontation: “For example, asking a smoker what he or she thinks about antismoking

campaigns might help you ascertain slant without the implication that he or she is doing something wrong” (Rubin & Rubin, 2012, p. 147).

Summary of Probe Questions. Probe questions are important because they clarify interviewees’ responses to main questions. The different types of probe questions help to keep the conversation on track, elicit rich details needed for descriptive analysis, reveal themes for developing grounded theory, and provide a greater understanding of the research topic. In the context of our study, they also provided conversational cues that facilitated relationship development with interviewees in an online context. Although main questions created the framework for the interview and probes enriched participants’ stories, they only represented “a first pass toward understanding the research topic” (Rubin & Rubin, 2012, p. 147). Furthermore, although probe questions cannot be anticipated prior to the interviews, interviewers can keep in mind the different types of probes that exist to use as needed. Follow-up questions are needed to further clarify and provide a deeper and more nuanced understanding of some concepts that emerge from the interviews. The following section considers whether follow-ups are warranted, when to ask them, concepts that require following up, and how to ask follow-up questions.

Follow-up Questions

Follow-up questions are the distinguishing feature of the responsive interview model. They afford interviewers the opportunity to revisit material covered or missing from initial interviews. Follow-up questions “permit you to fill in the steps of a process, grasp a broader context, resolve apparent contradictions, and politely challenge the perspective of your interviewees” (Rubin & Rubin, 2012, p. 150). In doing so, follow-up questions strengthen the credibility of the research findings. Rubin and Rubin (2012)

recommend following three principles when designing follow-up questions: “ be informed, show empathy and be gentle” (p. 168). They also suggest that instead of asking *why* questions directly, interviewers should consider asking substitutes such as “*what influenced, what caused, what contributed to, and what shaped*” (p. 167).

Rubin and Rubin (2012) identify several guidelines to consider when deciding whether to ask follow-up questions. For example, follow-up questions should be asked only when they are “central” to the research questions, address sensitive topics that may not be appropriate during the initial interview, and do not challenge or are critical of interviewees. Follow-up questions may be asked immediately, in a later interview with the participant, or in an interview with a different participant who is more knowledgeable about the topic. Follow-up questions often emerge when interviewers review interviews and find that they missed an opportunity to explore something further. For this reason, the responsive interview model recommends that interviews be scheduled such that each one can be reviewed before the next one is conducted.

The following questions serve as guidelines to determine what content invites follow-up questions (Rubin & Rubin, 2012, pp. 151-153):

1. Does it seem relevant and important?
2. Is it incomplete, vague, or contradictory?
3. Is it too general, too narrow, or too extreme?
4. Do you need to explore and test a theme?

Relevant and important information may consist of missing information that the interviewer identified after reviewing the transcripts of the interviews, new themes identified by the interviewee, or perspectives that contradict the literature. Incomplete,

vague, or contradictory information may, for example, consist of “major threads that are left hanging, ideas only half presented, key terms undefined or unexplained, or behaviors that are becoming apparent but without any sense of the mechanisms that cause them” (Rubin & Rubin, 2012, p. 152). General, narrow, or extreme responses may, for example, consist of simple statements that may be appropriate for one context, but not another. Exploring and testing a theme may consist of articulating a new interpretation that emerges from the interviewees’ responses and verifying this new understanding with the interviewees.

There are eight specific “triggers” that guide the design of follow-up questions (Rubin & Rubin, 2012; see Table 3).

Table 3

Triggers for follow-up questions and sample questions (source: Rubin & Rubin, 2012, pp. 153-165)

Trigger	Context of Use
1. Missing pieces	<p>Missing pieces can appear in interviews that describe a process or provide a story. Steps may be missing in a process and characters or events may be missing from a story. Missing pieces can also emerge from lists that identify causes, consequences, or symptoms. “An extreme case of missing information occurs when the interviewee doesn’t answer the question you pose, either by ignoring it or providing a response that doesn’t match what was asked” (Rubin & Rubin, 2012, p. 154). This is potentially the case when sensitive questions are asked such as in this study of learners’ performances of trust.</p> <p>Sample follow up questions:</p> <ul style="list-style-type: none"> • “How” questions, Mini-tours • Hypothetical questions that “challenge interviewees when they ... make a claim without presenting evidence” (Rubin & Rubin, 2012, p. 163).

Trigger	Context of Use
2. Questions not answered or answered evasively	These triggers emerge when interviewees provide answers that may appear too vague, generalized, or “too official and rehearsed” (Rubin & Rubin, 2012, p. 154).
3. Overly broad generalizations or overly narrow answers	<p>Sample follow up questions:</p> <ul style="list-style-type: none"> • Echo wording: repeating the interviewees’ words as a question • Asking interviewees under what conditions generalizations may hold true • Hypothetical questions that “challenge interviewees when they overstate a conclusion ... without presenting evidence” (Rubin & Rubin, 2012, p. 163).
4. Apparent contradictions or ambivalence	<p>Contradictions and ambivalence are clues to potential research problems, “may reflect tensions, contradictory experiences, or conclusions that are true under some conditions but not others” (Rubin & Rubin, 2012, p. 154).</p> <p>Sample follow up questions:</p> <ul style="list-style-type: none"> • Posing a puzzle: articulate the contradiction/ambivalence and suggest a solution that reconciles them, or point out to interviewees that the information sounds contradictory and ask them to reconcile it • Hypothetical questions as in triggers 1-3.
5. Stories with implicit themes	<p>Interviewees sometimes respond with stories rather than providing direct answers, and they may embed themes within these stories that are not fully developed.</p> <p>Sample follow up questions: “How” questions to determine general orientation</p>
6. Unclear concepts	<p>Concepts are nouns, noun phrases, or gerunds that express ideas. Unclear concepts represent triggers that alert interviewers to ideas and meanings that may be clear to the interviewee but not everyone else. For example, abstract concepts such as faith may have one meaning for some interviewees and a different meaning for another. Key terms also fall into this category. Concepts are critical clues “to learning how your interviewees understand their world” (Rubin & Rubin, 2012, p. 156).</p> <p>Sample follow up questions:</p> <ul style="list-style-type: none"> • Direct questions such as “What does ... mean?” Or, what are the components of a concept? • When do interviewees use that term? • Ask an interviewee to compare two similar terms.

Trigger	Context of Use
7. Incomplete or unsupported themes	<p>“Themes describe and/or explain what the researcher thinks is occurring in the research setting. Themes are your or your interviewees’ brief summaries and conclusions about what is happening” (Rubin & Rubin, 2012, p. 157). Follow-up questions are needed to clarify, complete, and confirm the themes. Rubin and Rubin (2012) recommend a four-step process for developing follow-up questions that flesh out themes:</p> <ol style="list-style-type: none"> 1. “clarify and illustrate the meaning of the theme by asking for further examples” 2. “ask more follow-up questions to make sure you understand the terms within the theme ... to refine the theme” 3. “work out further follow-up questions to examine how broadly the theme can be generalized” (Rubin & Rubin, 2012, p. 158). <p>Sample follow up questions: “How” questions, ask for comparisons, ask for components, use hypotheticals</p>
8. New ideas related to the research questions	<p>New ideas related to the research questions capture unexpected information shared by interviewees. Follow-up questions help to clarify understanding of these new ideas and how they shed light on a different interpretation of the findings.</p> <p>Sample follow up questions: Ask questions about what it all means, ask for comparisons</p>

Structure of the Responsive Interview: Interviewing Patterns

Main questions, probes, and follow-up questions can be organized in a variety of patterns depending upon the purpose and context of the interview. These include: (1) opening the floodgates, (2) main branches of a tree, (3) river and channel, and (4) picking up the twigs. *Opening the floodgates* is an interview pattern designed for novice researchers who interview well-informed conversational partners. In this sense, researchers are opening the floodgates for interviewees to share their wealth of knowledge and experience. This interview pattern is structured around 1-2 broad research questions that afford interviewees the opportunity to respond in breadth and depth (Rubin & Rubin, 2012).

Main branches of a tree is an interview pattern that decomposes the research problem into equal parts, each associated with a main research question to ensure that the breadth of material is covered. Each part/research question represents a branch of the tree and is, therefore, related to each other. Questions include transitions from one “branch” to another. The *river and channel* interview pattern, on the other hand, focuses on achieving depth. Each channel has a complementary main question that the researcher follows to explore a concept or theme in depth. The researcher may or may not return to the other channels depending on what is discovered while pursuing understanding in the channel at hand (Rubin & Rubin, 2012).

Picking up the twigs is an interview pattern applicable to follow-up conversations. In essence, researchers have used the main branches of a tree or river and channel interview pattern to conduct an initial interview, but find that they still have some lingering questions. They, therefore, schedule follow-up interviews to ask follow-up questions, or to pick up the twigs they left behind in the first interview. These are brief interviews that may be conducted by phone or email (Rubin & Rubin, 2012).

We chose the *river and channel* interview pattern to structure the questions for our initial interviews and *picking up the twigs* for our follow-up conversations. The breadth of trust literature that informed our study motivated us to explore our research questions more deeply. To ensure that we followed a consistent approach in interviewing all learners and that their rights were respected, we designed and followed a conversational guide (Rubin & Rubin, 2012) which outlined the interview process and questions to be asked. The following section reviews the interview questions that guided

our conversations with learners. It is followed by the particular conversational guide for our study.

In Practice: Asking Main, Probe, and Follow-Up Questions in Interviews that are Structured in a River and Channel-Picking up the Twigs Interview Pattern

The initial interview question for Research Question 1, *How do learners perform trust in social interactions in the context of online social learning?*, was structured as a tour question to gain insights into learners' general perspectives of the research context. It asked: *Tell me about your experiences with online learning where you had to work with other people and could only communicate using text such as chat, email, discussion boards.* The structure of this request as a tour question set the context for a conversation that followed the *river and channel interview pattern* quite naturally. Beginning with such a general question presented learners with the opportunity to choose which learning experience that they wished to discuss. The choice of learning experience then set the foundation upon which all other questions were based. Depending on what learners shared, we explored "channels" of interest to gain a deeper understanding of them. These channels may have reflected what has been reported previously in the literature, contradicted it, or contributed something new.

Learners were aware of the purpose of the study and, therefore, were prepared and focused on the topic at hand. They typically addressed the different aspects of this study (e.g., trust, technology, online social learning) as represented by the different research questions without any prompting. When, however, the researcher needed to focus on a particular research question, then the researcher asked more focused questions.

Probe questions were appropriate during both the initial and follow-up conversations to clarify some confusion, answer additional questions, or to deepen understanding. As expected, follow-up questions were reserved for follow-up conversations after a preliminary analysis of the initial interviews yielded additional questions or confusion.

Data Collection: Conversational Guides

We proposed the following conversational guide:

1. Identify learners to begin snowballs.
2. Email learners with a description of the purpose of the study and invite them to participate in the study. Emphasize the voluntary nature of this study; that is, that they may choose to participate or decline to any point. If they agree to participate in the study, email the IRB-approved consent form as an attachment, and ask them to reply with a return email indicating consent.
3. Schedule an online interview time (email).
4. Connect to Skype and begin text chat with the learner.
5. Confirm IRB-approved consent and begin asking the interview questions. Adapt as needed.
6. Thank the learner and ask for some demographic information. Can you please share with me your: gender, race, education, occupation, age, and marital status?
7. Ask the learner for a referral: Whom do you know that you think would like to participate in this study? Just share a first name with me. Can you contact them to ask them and share my email information with them?
8. Follow up: Inform the learner that we will review the conversation and try to elicit some themes about the nature of learners' performances of trust in online social learning and how trust shapes online social learning. We will email the learner within 24 hours to share our findings and confirm our understanding of what the learner tried to share. We will also use this time for follow-up questions to clarify or fill in missing information.
9. Save the chat transcript for data analysis.

In Practice: Implementing the Conversational Guide

Implementing the conversational guide presented minor challenges, beginning with the first step which was concerned with identifying participants to initiate the snowballs. The challenges presented by this step as well as by step 7, referrals from the snowball, was previously discussed in the section on “Process for Identifying and Characteristics of the Sample.” Another challenge was concerned with step 8. Due to the participants’ and researchers’ schedules or the complexity of the conversations, follow-up was conducted beyond the 24 hour planned period.

We amended the conversational guide to maintain our relationship with the participants throughout the duration of this study. After all conversations were completed, we sent a note to all learners to thank them for their participation and to share with them that their participation had already yielded an important contribution in terms of contributing to three published papers (see Appendix B). Learners were given the option to have copies of these papers and to receive updates on the findings. We emailed copies of the papers to learners who asked for them.

Data Analysis

Our data analysis was modeled after Rubin and Rubin’s (2012) seven-step analytical and theory building process which reflects the approaches followed in descriptive and grounded theory research. Steps 1-5 represent the descriptive stage. In this stage, we performed inductive and deductive analyses, interpretation, and meaning making to identify the concepts, themes, events, examples, names, places, or dates that would help us to develop thick descriptions and themes of learners’ performances of trust and how trust shapes their learning (Corbin & Strauss, 2008; Denzin & Lincoln, 2005).

Data analysis began after the first interview rather than waiting until after all the data were collected. The rationale for this is that immediate analysis helps “a researcher to identify relevant concepts, follow through on subsequent questions, and listen and observe in more sensitive ways” (Corbin & Strauss, 2008, p. 57).

Analysis of the interviews were conducted in three phases: (1) as each interview progressed, we inductively and deductively analysed learners’ responses to explore additional relevant information revealed by the learner during the interview, (2) after each interview, we closely read the learners’ responses to judge what emerged of most “significance and interest” (Seidman, 2006, p. 117) and used this knowledge to update the interview questions, and (3) after all interviews were completed, we revisited learners’ thick descriptions to analyze them inductively and deductively for the purpose interpretation and meaning-making.

This understanding was grounded on previous research on trust. In particular, the analysis was conducted from the lenses of Sztompka’s (1999) sociological theory of trust as well as Weber’s and Carter’s (Weber & Carter, 2003) model of trust. The knowledge gained from these thick descriptions were then used for conceptual ordering—to identify common patterns in learning contexts—and to formulate theoretical categories (steps 6-7). We paired descriptive analysis with grounded theory to allow for trust in online social learning to emerge from learners’ practices of social interactions and learning (Denzin & Lincoln, 2005). During grounded theory development, the constant comparative method is used to analyze the themes and concepts extracted during descriptive analysis. We followed this approach. Themes were collapsed during axial coding. These “abstracted” themes were then used to formulate theoretical propositions about learners’ performances

of trust in online social learning and the implications of trust for the quality of their learning. Following Castells (2010), we attempted to communicate “theory by analyzing practice” (p. 3).

Although we recognized that learners’ interactions are embedded in larger social structures such as role categories (e.g., student-student, student-teacher) and course settings, our focus was on a micro-sociological lens; that is, the social interactions among specific learners. Role categories and course settings represent meso/macro-sociological categories which were outside the scope of this study. Having said this, however, we also acknowledged that should these meso/macro constructs appear in learners’ interviews, attempts would be made to shed light on these micro-meso/macro linkages.

In Practice: Performing Data Analysis

We complemented Rubin and Rubin’s (2012) seven-step analytical process with analytical strategies and tools recommended by Bloomberg & Volpe (2012) in their text *Completing Your Qualitative Dissertation: A Road Map from Beginning to End*. Doing so ensured that we had collected data consistently and completely and that we followed a consistent approach in analyzing all 60 transcripts (30 initial and 30 follow-up).

Coding the Interviews

The researcher initially carefully read the interview transcripts to identify the “‘big ideas’ ...[which could] provide an initial framework for the development of the study’s findings” (Bloomberg & Volpe, 2012, p. 139). Special attention was paid to repetition of words, ideas, or concepts throughout and across transcripts that could subsequently shape the study’s themes. They were compared to the categories and

descriptors emerging from the trust research to determine whether learners were reflecting the literature or shared new thoughts.

The researcher used Microsoft Word to inductively and deductively analyze the transcripts of these chats. In particular, heading style elements were used to denote four different levels of analysis. *Level 1* was used to represent the most abstract level of analysis where the findings directly answer each research question. *Level 2* was used to indicate more abstract categories that were based on the interconnections among Level 3 codes as well as informed by the conceptual framework of this study. *Level 3* captured the codes that emerged in the course of “open coding.” *Level 4* summarizes learners’ descriptions of their experiences (Corbin & Strauss, 2008; Denzin & Lincoln, 2005). Complementing the heading style elements with the Navigation Pane in Microsoft Word revealed potential patterns in the data (see Figure 19).

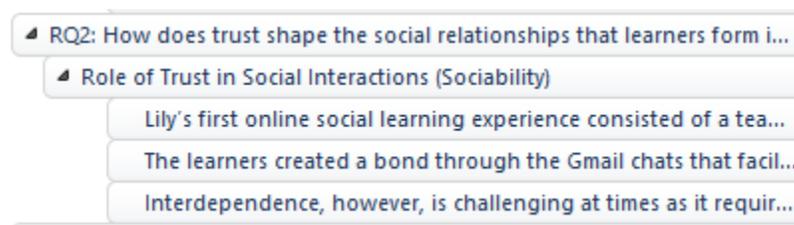


Figure 19. Navigation Pane excerpt from Lily's chat

These patterns were used to create analytical categories for each research question. Four analytical categories were determined for each research question. The categories were organized in Data Summary Tables which are described in the following section.

Data Summary Tables

Four Data Summary Tables were created, one for each research question. Each table identified four analytical categories that could potentially shape the findings for

each research question. The researcher reviewed the transcripts to ascertain what each learner had to contribute with respect to these analytical categories (see Figure 20).

Proxy Name	RQ 1: How do learners perform trust in social interactions in the context of online social learning?			
	Text-based CMC (Technology)	Online Social Interactions (Sociability)	(Un)Known Others (Identity)	Indicators of Trust (Trust)
Learner 1				
...				
Learner 30				

Figure 20. Data Summary Table for Research Question 1

An analysis of the Data Summary Tables helped to “winnow” (Creswell, 1998) the data and to group it into meaningful categories that shaped the findings of this study. In total, twelve major findings emerged—three per research question. These findings are reported in Chapter 4. The findings were then subjected to another level of analysis and synthesis in order to interpret their meaning in the context of the literature review in Chapter 2 or any other relevant literatures as well as new insights emerging from the study. The Consistency Chart facilitated the interpretation of the findings.

Consistency Chart of Findings, Interpretations, and Conclusions

The Consistency Chart is a traceability matrix that “tracks the findings through the interpretation to conclusions, making certain that these components are all aligned” (Bloomberg & Volpe, 2012, p. 205). The Chart was organized by research question and the three findings for each respective research question. The Chart, along with the transcripts, were then used to interpret the findings and to determine the conclusions that could be drawn from the findings and interpretations. Figure 21 provides an excerpt of Research Question 1, Finding 1 in the Consistency Chart for this study.

<p>Research Question 1: How do learners perform trust in social interactions in the context of online social learning?</p>
<p>Findings: “If I find this...”</p> <p>All learners described trust as a social practice which begins with learners’ trusting predispositions. Learners’ personal experiences with trust shape whether, and to what extent, they trust others when interacting with them for the first time. This predisposition initially colors how they interact with other learners. Trust is then socially constructed by consistent, reliable, competent, and ethical acts of social learning. Approximately half of the learners in both trusting (45%) and trust-compromised learning teams (55%) additionally identified moral acts of caring for others (e.g., help, compassion, attachment) as distinguishing characteristics of trust. Learners used the presence or absence of these indicators to characterize others as trustworthy or untrustworthy. The researcher used learners’ assessments to, collectively, characterize learning teams as trusting or trust-compromised.</p>
<p>Interpretations: “Then I think this means...”</p> <p>Learners described performances of trust in terms of psychological, relational, and cultural acts which are socially constructed in specific ongoing social interactions with specific others</p>
<p>Conclusions: “Therefore I conclude that...”</p> <p>Learners’ descriptions reflected prevalent perspectives of trust found in the research on rational, philosophical, and sociological approaches to trust. Learners universally spoke of trust in cognitive terms that some researchers feel are conflated with trust (e.g., reliability). What underlay this cognitive perspective seems to be an affective perspective of care. Learners may have the ability to be trustworthy, but they may not conduct themselves thusly. It appears that true acts of trust are performed in social interactions by conduct that reflects the will and ability to be a caring colleague.</p> <p>The will to be trustworthy seems to emanate from a bond among learners, beyond a “contractual” obligation to complete a joint task. Trust transcends the mechanics of collaboration to include the spirit of collaboration—the unity of many into one, or when the “me” becomes a “we.”</p> <p>Learners value relationships with others, but struggle to create trusting relationships.</p>

Figure 21. Excerpt from the Consistency Chart of Findings, Interpretations, and Conclusions of this Study

Trustworthiness and Limitations

Trustworthiness during descriptive analysis and grounded theory was supported by addressing issues of credibility, dependability, and transferability (Bloomberg & Volpe, 2012). All three were addressed by rigorously following the seven-step analytical

process articulated by Rubin and Rubin (2012), Bloomberg and Volpe's (2012) analytical strategies, and by conducting two practice interviews. Rubin and Rubin's process, as well as Bloomberg and Volpe's strategies, ensured that the analytical process was transparent and that the findings were traceable to the original transcripts to ensure the credibility of our findings. Efforts were made to identify negative instances or discrepant findings. These were reported as well. Furthermore, the researcher used the follow-up conversations as opportunities to review the researcher's understandings of learners' interpretations with the learners. In essence, the follow-up chats also served as an opportunity to conduct "member checks" (Bloomberg & Volpe, 2012).

Dependability was assured by providing detailed and thorough "audit trails," along with the instruments used to collect and analyze the data. Furthermore, an expert was consulted to review the analytical procedures as well as the actual analyses to identify any researcher bias. This expert was a university faculty member who taught courses in qualitative research analysis and sociology. Furthermore, the expert's professional research employed qualitative research methodologies, incorporating interviewing as a primary method to collect data and descriptive and grounded theory for data analysis. Transferability was also assured by providing rich, thick descriptions of the study to help readers determine how realistically feasible it is that "similar processes will be at work in their own settings" (Bloomberg & Volpe, 2012, p. 113).

Although we have conducted previous qualitative studies of trust incorporating open-ended interviewing, this was our first experience utilizing the responsive interview method. Therefore, we conducted two practice interviews to provide a real-world opportunity to gain practical experience in applying Rubin's and Rubin's (2012)

interview process. This knowledge was used to update the interview process as well as interview questions.

One limitation of this study was noted. Specifically, that the number of interviewees may not be sufficient to support the development of theoretical propositions. Insofar as this is an exploratory study, this limitation is unsurprising and expected.

Research Ethics

One of the ways that an ethical approach to this research study was ensured by seeking and gaining approval from the University of Missouri Institutional Review Board (IRB). Furthermore, the Association of Internet Researchers, in 2002, published a series of recommendations to guide ethical research on the Internet. These recommendations are framed in the form of questions rather than guidelines. “The questions are...based on the premise that the ethics of Internet research are very like the ethics of any other research approach. Internet researchers are expected to adopt a ‘bottom line’ position that foreseeable harm to research participants should be prevented and that deceit of research participants is rarely justifiable” (Hine, 2008, pp. 316-317). This research study was conducted with these goals in mind as well as the following ethical considerations: integrity, advocacy, collaboration, reflexivity, care, sensitivity, anonymity, and confidentiality.

Integrity was maintained by inviting participants to engage in the study, openly sharing the purpose of the study, the process of the study, and the findings of the study with the participants. In addition, participants were afforded the opportunity to advocate for themselves, to articulate their understandings, and to co-construct the findings of the

study. In co-constructing the findings, care was taken to identify the researcher's values, morals, emotions and how they may have mediated the findings.

Because trust is a concept that is associated with safety, care was taken not to make any harmful judgments about participants' understanding of trust in the context of computer-supported collaborative learning. In addition, sensitivity was shown to participants from cultures who may not have felt comfortable to talk about issues like trust, and to individuals for whom discussions about trust may have evoked unpleasant experiences.

In addition, the anonymity and confidentiality of the participants were ensured by separating the data from the identity of the participants. Specifically, participants were asked to select a pseudonym that would be used to refer to them. When they did not choose a pseudonym, the researcher chose one for them. This pseudonym was shared with learners, and they were asked if the pseudonym was agreeable to them.

Learners were assured that the following procedure would be followed to remove any identifying information from their chats:

1. Replace real name with proxy name
2. Replace project identifiers with proxy names
3. Replace school identifiers with proxy names
4. Replace references to other learners with proxy names

Learners were also informed that any printed copies of the transcripts would be shredded with a cross-cut shredder.

Summary of Chapter Three

The purpose of this study was to gain insights into learners' *understandings* of trust, their *social construction* of trust, and the *influence* of trusting relationships upon

learning in the context of online social learning. Thirty learners were interviewed to gain insights into their interpretations. The interviews were conducted as open-ended conversations, designed around Rubin and Rubin's (2012) responsive interview format. This format ensured that the researcher and participants developed socio-affective relations important to facilitating deep and critical conversations. The data were collected and analyzed based upon traditional approaches in descriptive and grounded theory research. In particular, Rubin and Rubin's analytical approach and Bloomberg and Volpe's (2012) analytical strategies and tools ensured the trustworthiness of the study.

CHAPTER FOUR: FINDINGS

The overall purpose of this qualitative study was to explore learners' performances and construction of trust in the context of online social learning. More specifically, this study focused on: (1) learners' understandings of the role of trust in socially constructing identities online; (2) how these identities create a framework for online social interactions (i.e., sociability); (3) how their understandings and identities shape online social learning experiences; and (4) how technology may mediate the social constructions of identities and social interactions online both of which, in turn, (5) influence performances and construction of trust as well as online social learning. A better understanding of learners' performances and social construction of trust online has the potential to inform online learning theories such that educators can understand the social and technological factors that result in the design of online learning that is both more satisfying and effective for learners. Absent are the voices of their peers and instructors who are co-creators of learners' academic worlds.

This chapter presents the key findings that emerged from 30 in-depth, one-hour conversations with learners and 30 half-hour, follow-up conversations with the same learners. The learners comprised 15 male and 15 female participants, ranging in ages from 19 to 61 (average 38 years). Twenty learners were married, and nine were unmarried. Seven learners reported that they were of an African/African-American/African-Native American racial background, 4 Asian/Asian-Caucasian, 16

Caucasian, and 3 Hispanic/Hispanic-Native American. Seven learners had either completed or were in the process of completing an undergraduate degree (Bachelor's), 16 learners had either completed or were in the process of completing their first graduate degree (Master's), and 7 learners had either completed or were in the process of completing their doctoral graduate degree. The learners represented participants from a spectrum of higher education contexts, from public universities to private and for-profit institutions. Their learning formats ranged from completely online to hybrid models. Learners' identities, universities, programs, courses, and projects were anonymized by using proxies that were either selected by the learners or the researcher.

Learners interpreted trust as a *social practice* exemplified by consistent, reliable, competent, ethical, and moral (e.g., care) acts of social learning. Learners who performed such acts were deemed trustworthy whereas those who did not were considered untrustworthy. Learners found that learning *communities* create personal, trusting relationships among members that are defined by a culture of trust that nurtures future performances and the social construction of trust among its members. Learners appreciated when their instructors provided them with explicit *guidelines* on how to build trustworthy behavior within learning teams.

They found that task *interdependence* on team projects necessitated trust among learners' social interactions. However, this trust could be *breached* as learners engaged in their learning activities. Whereas learners in teams that shared personal, trusting relationships were often able to reconcile breaches of trust, learners in teams that lacked such trust struggled to do so. All learners *leveraged sources* among various networks to support their social learning. Some learners turned to team members whom they deemed

trustworthy to help, while others turned to competent friends. Some learners even turned to trustworthy sources online, such as MIT open courseware or course content on YouTube, to help them learn what they needed to know to complete their assignments.

Learners reported that the *permanence and visibility* of computer-mediated communication provided them with a view into others' past and current acts of trustworthiness. And, although, their instructors designed *social learning opportunities* (e.g., online threaded discussion forums), learners, in general, did not feel that their instructors did so effectively as these opportunities focused more on the *number*, rather than the *quality, of posts*. That is, learners reported that grading was typically based on number of posts or completion of assignments rather than on how well learners learned socially. For this reason, learners felt that instructors cared about the number of posts rather than on how learners interacted socially. Trust, or lack thereof, also shaped learners' *appropriation* of computer-mediated textual communication. Whereas learners in trusting learning teams used computer-mediated textual communication to communicate affectively and academically, learners in trust-compromised learning teams found the medium's disembodiment, to various degrees, dehumanized others.

Trust in team members appears to be a decisive factor in *shaping deeper, critical social learning experiences*. Learners reported that trust facilitated social learning and an equitable share of the learning effort among team members. Unfortunately, all learners reported having encountered *social loafers* in their teams and expressed the harm, which at times was irreparable, that social loafing causes in terms of the learning burdens, outcomes, and successes.

Learners' stories provided opportunities for a large number of findings which made it very challenging to select among them. Researchers focused on the findings that provided the greatest *analytical insight* into understanding how learners' perform and construct trust in online social learning. These decisions were *guided by the literature* on trust and online learning as well as *unique insights* that learners shared to further knowledge in these areas of study. The findings below are a representative sample of what learners had to say with respect to each research question.

Overview of Findings

This section begins with an overview of the findings. It is followed by learners' detailed accounts of their online social learning experiences that support and illustrate specific findings. Based on the interviews, the researcher characterized learners as being in "trusting" and "trust-compromised" teams. This determination was made at the end of a team's lifespan as trust is an emergent, dynamic construct that was subject to continual change. Whereas some teams engaged in trusting behaviors throughout their lifespans, others began as trusting learning teams and, ultimately, developed into trust-compromised learning teams. Trust-compromised teams did not develop into trusting learning teams. Ten learners were characterized as members of trusting teams, and twenty in trust-compromised teams. Trusting teams were characterized by the researcher as having learners who communicated responsively and affectively, clearly articulated expectations, were successful in creating formal and informal team structures to guide their interactions, and carried a fair share of the learning burden. Trust-compromised teams were characterized by the researcher as having at least some members who did not communicate and participate in social learning from the outset or at some point during

the learning experience. Their lack of appropriate social participation in the learning activity caused an unfair burden and stress on remaining team members who had to find some way to compensate for the deficits created by the social loafers. Team members experiencing social loafing were forced to exert extraordinary effort to complete a much larger task than they could feasibly accomplish.

Findings 1-3: Performances of Trust and Distrust

Findings 1-3 support Research Question 1 which asked “How do learners perform trust in social interactions in the context of online social learning?”:

1. All learners described trust as a social practice that begins with learners’ trusting predispositions. Learners’ personal experiences with trust shape whether, and to what extent, they trust others when interacting with them for the first time. This predisposition initially colors how they interact with other learners. Trust is then socially constructed by consistent, reliable, competent, and ethical acts of social learning. Approximately half of the learners in both the trusting (45%) and trust-compromised learning teams (55%) additionally identified moral acts of caring for others (e.g., altruism, help, compassion, attachment) as distinguishing characteristics of trust. Learners used the presence or absence of these indicators to characterize others as trustworthy or untrustworthy. The researcher used learners’ assessments to characterize learning teams as trusting or trust-compromised.
2. An overwhelming majority of learners in trusting learning teams (90%) cited that camaraderie (i.e., memberships in a community—cohort, same academic department, same profession) created personal relationships among learners

which were framed by shared bonds and norms that set expectations of acceptable (i.e., trustworthy) behavior. Furthermore, membership in learning communities afforded learners the opportunity to interact repeatedly, revealing acts of compliance with- or breaches of- these shared bonds and norms. When aggregated, these acts formed members' personal "histories of trustworthy behavior." Members of learning communities, therefore, had unique insights into others' past trustworthiness that helped them to predict others' future trustworthy behavior. Learners used membership in learning communities and knowledge of others' histories of trustworthy behaviors to determine whom they could trust within their learning teams and to shape their expectations about each team members' future performances of trust within these teams. Learners' performances of trust were affirmed in the course of actual, repeated interactions among members of such learning teams, but, at times, were also challenged and breached.

3. Almost half of the learners in trusting learning teams (40%) indicated that educators provided them with guidelines to structure their social learning. These guidelines were, in fact, various ways that learners could perform trust in online social interactions by establishing normative expectations for communication, work effort, and accountability.

Findings 4-6: Trusting and Trust-Compromised Social Relationships

Findings 4-6 support Research Question 2 which asked "How does trust shape the social relationships that learners form in this particular context?":

4. An overwhelming majority (90%) of learners from trusting and trust-compromised learning teams indicated that the scope of online team assignments created task interdependence among team members such that learners were required to trust each other. They had to trust each other to complete their individual work as a prerequisite to completing the team's assignment, as a whole. Learners added that teamwork obligated them to trust others regardless of whether they knew that their team members were trustworthy or untrustworthy.
5. All learners reported that they had experienced breaches of trust at some point during their online social learning experiences. Learners in trusting learning teams were able to reconcile from such breaches of trust because they had constructed a more resilient, personal type of trust, strengthened by ongoing performances of trust. In addition, violators presented "acceptable explanations" for their breaches of trust, ceased their untrustworthy behaviors, and henceforth engaged in trustworthy behaviors. Together, the type of trust learners developed in trusting learning teams, along with violators' efforts to rectify their untrustworthy behavior, facilitated the reconstruction of trust among members of trusting learning teams. Conversely, learners in trust-compromised learning teams were unable to do so because their trust lacked a resilient and personal quality. Furthermore, violators in these teams persisted in their untrustworthy ways, preventing or adversely mediating online learning social interactions as well as compromising the success and learning outcomes of their teams.

6. All learners recognized that they needed help to complete their individual tasks and turned to trustworthy sources among their personal networks to provide this help. Of these, all members of trusting learning teams and 60% of the members of trust-compromised learning teams reached out to trustworthy members of their teams. The remaining learners in trust-compromised learning teams turned to members within their personal networks (20%) or consulted online resources (20%), whom they deemed trustworthy, in order to gain the necessary information or understandings to complete their tasks.

Findings 7-9: Computer Mediated Textual Communication

Findings 7-9 support Research Question 3 which asked “How does computer-mediated textual communication shape learners’ performances of trust in an online context?”:

7. All learners indicated that the affordances of computer-mediated textual communication (i.e., visible traces of identity, learning, and participation) provided them with a view into learners’ performances of trust. They used this information to assess whether others were trustworthy individuals and to predict their future trustworthiness. Insights into actual performances of trust, revealed by the permanence and visibility of computer-mediated textual communication, afforded learners the opportunity to determine whether learners could trust others to complete their fair share of team work in their current social learning endeavors.
8. Almost all learners (90%) in trust-compromised learning teams and a majority of learners (60%) in trusting learning teams felt that instructors did not

effectively use the “social” affordances of computer-mediated textual communication, such as online threaded discussion forums, to encourage online social learning. As such, learners believed that they missed opportunities to get to know one another. Learners considered this an important precursor to assessing others’ trustworthiness, building trust, and social learning.

9. All learners reported that computer-mediated textual communication affected whether and how they communicated which, consequently, also mediated their ability to get to know one another. All learners in trusting and trust-compromised learning teams acknowledged challenges presented by computer-mediated textual communication in attempting to communicate in a socio-affective manner. However, all learners in trusting learning teams felt that they could “overcome” these challenges. Specifically, the quality of their social relations shaped their social appropriation of computer-mediated textual communication which they then leveraged to facilitate communication, getting to know each other, and performing acts of trust online. They could use text effectively to express affect, as well as task-based language. All learners in trust-compromised learning teams reported that the disembodiment of computer-mediated textual communication prevented communication, delayed communication, resulted in miscommunication, and obscured their ability to get a sense of others and their trustworthiness.

Findings 10-12: Social Construction of Knowledge in Trusting and Untrusting Contexts

Findings 10-12 support Research Question 4 which asked “How does trust shape the social construction of knowledge? That is, how does trust mediate learners’ social construction of knowledge in online social learning?”:

10. All learners in trusting learning teams and half of the learners in trust-compromised learning teams indicated that trust among learners engenders a safe emotional and intellectual environment for online social interactions and learning. In this environment, trusting relationships mediate learners’ online social construction of knowledge by encouraging them to take risks such as expressing their vulnerabilities—personally and academically. One learner indicated that trust in online learning technologies is also necessary to create a safe intellectual environment.
11. All learners in trusting learning teams found that trust shaped their social construction of knowledge by encouraging them to turn to other learners within their teams to enrich their learning experiences and outcomes. Conversely, all learners in trust-compromised learning teams primarily trusted themselves to facilitate their learning and secondarily others. Trust, therefore, mediated learners’ social construction of knowledge in online social learning by influencing whom they relied upon to shape the quality of their learning experiences and outcomes. A small minority of learners, 10% in trusting and 5% in trust-compromised learning teams, identified two conditions of social learning (online threaded discussion forums and cooperative learning) in which they felt that trust may not be needed.

12. An overwhelming majority of learners in trusting (80%) and a majority of learners in trust-compromised (60%) learning teams reported that they had observed social loafing (e.g., free riding, joy riding, hitch hiking) in their current or previous learning groups. Moreover, they described how social loafing, by even only one member of a learning team, compromises team trust that, in turn, adversely mediates learners' online social construction of knowledge. Social loafing breaches team trust and forces trustworthy team members to carry an unfair burden of the learning effort. Of these learners who reported social loafing, 20% in trusting learning teams and 10% in trust-compromised learning teams expected social loafing in every social learning experience.

Detailed Description of Findings

RQ1: How do learners perform trust in social interactions in the context of online social learning?

Finding 1: All learners described trust as a social practice that begins with learners' trusting predispositions. Learners' personal experiences with trust shape whether, and to what extent, they trust others when interacting with them for the first time. This predisposition initially colors how they interact with other learners. Trust is then socially constructed by consistent, reliable, competent, and ethical acts of social learning. Approximately half of the learners in both the trusting (45%) and trust-compromised learning teams (55%) additionally identified moral acts of caring for others (e.g., altruism, help, compassion, attachment) as distinguishing characteristics of trust. Learners used the presence or absence of these indicators to characterize others as

trustworthy or untrustworthy. The researcher used learners' assessments to characterize learning teams as trusting or trust-compromised.

The key and overriding finding of this study is that learners perform and construct trust as an *ongoing social practice* in the context of learning. Learners characterized this practice from an ethical-rational perspective in terms of performances of *role-based expectations*. That is, learners interact in the context of social learning to, primarily, engage in a learning activity. They “meet” as learners. As such, they have a notion of what it means to be a learner and how this role is performed, regardless of whether they know each other personally. Participants couched their notions of this role and its associated trust-related expectations in terms of an *ethical and rational perspective of trust*. Learners are expected to do what is “right”—to engage in trustworthy behavior that is exemplified by ongoing performances of consistent, reliable, and competent social learning behaviors. Furthermore, approximately 50% of learners in trusting and trust-compromised learning teams additionally identified *moral trust*, or performances of care (e.g., creating attachments, helping each other), as further evidence of trust in online social learning. Learners' interpretations of the social construction of trust, therefore, was informed by ethical, rational, and affective factors. Individual learners confirmed or breached these expectations by performances of trust during their ongoing social interactions with others.

Learners who performed consistent, reliable, and competent behaviors were deemed to be trustworthy whereas those who breached these normative expectations of trust were deemed to be untrustworthy. Although learners in both trusting and trust-compromised learning teams experienced breaches of trust, trustworthy teams were able

to recover from these breaches whereas trust-compromised teams failed to do so. The reason for these different outcomes appears to lie in a team's ability to effect trustworthy behavior from all its members. Trusting teams were able to re-engage learners, who had breached trust, in trustworthy behaviors. Trust-compromised teams were unable to effect such changes. Those who breached trust in trust-compromised teams engaged in persistent acts of violations of trust throughout the social learning activity. One of the consequences of these individual breaches is that they hindered the development of team trust among the remaining members of trust-compromised teams. Rather than focusing on getting to know each other and building trust, members of trust-compromised learning teams were forced to exert extraordinary effort to complete learning tasks with compromised resources; that is, less contributing team members.

Participants described ethical-rational performances as follows: doing the work required of them, at the level of quality expected of them, in the time frame needed (i.e., competence and reliability), and that they do so consistently to complete assignments and earn a "good grade." Learners expressed that trust involves doing your best for your team; doing what is "right." They expressed these views of trust as a social practice:

Trust is a binding understanding in the roles between two parties ... The understanding is that both parties know their responsibilities to each other ... there is a syllabus which states the responsibilities of the student and the instructor (*Elijah, 20s, undergraduate learner, public college*)

Trust is relying on group members to do the required assignments. (*Mary, 40s, undergraduate learner, private university*)

My idea is if you as a team member are assigned something to work on. The expectation is that team member will do their work. I trust them to get their share of the work in. (*Nigel, 30s, undergraduate learner, for-profit university*)

Trust to me is knowing that the other person will do what they say they will do when they say they will do it. (*Neely, 40s, graduate learner, public university*)

[Trust is being] able to count on a person to do what is [morally]... right and to follow through on their words. ... [As] the weeks progressed, you would find out, who was dependable or not. (*Jamie, 40s, graduate learner, public university*)

Trust, to me, is believing that if someone says they're going to do something, they do it. Or, just trusting that they have good instincts and will do what's right in the first place. (*Lily, 20s, graduate learner, public university*)

Believing that what someone tells you is the truth. And believing that they'll follow through and do anything they say that they will do. (*Bay, 30s, graduate learner, public university*)

When assigned to a group and you're getting a grade on something it is important to recognize your responsibility ... a person that does not recognize that responsibility or does not care about it is not trustworthy... when it comes to group work ... you trust that everyone is going to do their work to the best of their ability. (*John, 30s, graduate learner, private university*)

Trust is that the other person shares my goals and values about the course (not personal values). Does that make sense? I trust that we are all in this thing to do our best. (*Kelly, 40s, graduate learner, public university*)

In addition to viewing performances of trust from an ethical-rational lens, a majority of learners in both trusting and trust-compromised learning teams also viewed trust through a moral lens; that is, they viewed performances of trust as *socio-emotional and altruistic expressions* towards others evidenced by expressions of care such as creating attachments, helping each other, showing compassion and concern, caring for other's well-being above their own, or rejoicing and mourning in each others' joys or sorrows. Such expressions of care sometimes necessitated letting go of control—to trust others more than yourself. Learners spoke poignantly about this affective bond:

I think trust is an understanding of a bond that you have with another person that they have your best interest at heart, respect you, and will aim to take into consideration your feelings and beliefs. (*Zoeyu, 20s, graduate learner, public university*)

Trust is the emotional metric that you place on a person, place, or thing. Trust is the amount of goodwill that you would expect from someone to do no harm to you or your loved ones. Trust is the feeling you place on someone or something to set a person up for success. (*Sandy, 30s, undergraduate learner, public university*)

The ability to rely on another...faith in my teammates... faith/trust they will do their job. (*Vecna, 60s, graduate learner, public university*)

I think there are many different levels of trust and explanations of what trust is...but I think on the surface, trust is believing in someone else... It's believing, based on experience, that the other person will do what's right, be kind, and support you instead of hinder you. (*Lily, 20s, graduate learner, public university*)

Trust to me: letting go of control and sharing with others without knowing the outcome. Much easier said than done for me (now that I think about it!). Faith is a part of it, especially when it comes to 'grades' or proving myself on a professional level. (*Saoirse*)

Finding 2: An overwhelming majority of learners in trusting learning teams (90%) cited that camaraderie (i.e., memberships in a community—cohort, same academic department, same profession) created personal relationships among learners which were framed by shared bonds and norms that set expectations of acceptable (i.e., trustworthy) behavior. Furthermore, membership in learning communities afforded learners the opportunity to interact repeatedly, revealing acts of compliance with- or breaches of- these shared bonds and norms. When aggregated, these acts formed members' personal "histories of trustworthy behavior." Members of learning communities, therefore, had unique insights into others' past trustworthiness that helped them to predict others' future trustworthy behavior. Learners used membership in learning communities and knowledge of others' histories of trustworthy behaviors to determine whom they could trust within their learning teams and to shape their expectations about each team members' future performances of trust within these teams. Learners' performances of trust were affirmed in the course of actual, repeated interactions among members of such learning teams, but, at times, were also challenged and breached.

Any connection, whether close or distant reflects shared bonds, norms, and identity where learners feel that they “know” others in their network and can, therefore,

more readily predict trustworthy behavior in them. Learners described being connected by belonging to a community such as a formal or informal cohort group, a shared profession, attending the same university, or studying in the same department. Although these bonds create immediate connections and initial trust among learners, they can be breached by conflicting real world experiences that mediate these connections, even to the point of severing them. For example, members of a cohort group may implicitly trust each other because they belong to the same cohort, but if a member behaves untrustworthily, the cohort bonds are breached.

Almost half (40%) of learners in trusting learning teams expressed the benefits of membership in cohort groups which included getting to know each other well and forming close and lasting relationships (or avoiding some individuals). These benefits included nurturing trusting relationships that, in turn, facilitated social learning. Maintaining relationships over several semesters, if not years, provided learners with the opportunity to note others' trustworthy and untrustworthy behaviors in a variety of contexts, with different others—learners or instructors. In essence, the longevity of cohorts afforded learners the opportunity to develop trust reputations that they leveraged as social capital to form social learning relationships. This social capital helped learners determine with whom they wanted to work; that is, who was trustworthy, for future learning events. *Diana*, a professional university staff employee in her 50s who is also studying for a doctoral degree at a public university, juxtaposed her cohort learning experiences with non-cohort learning experiences. She highlighted that trust is constructed within cohorts and encourages learners to participate in social learning.

Conversely, in the absence of a cohort and trust, *Diana* felt that learners did not even want to work together:

I also should tell you the online program is a cohort. We stay together, which is a big advantage, I think. Positive experience... being in a cohort we already knew who we would not want to work with. It was our third semester in the program... The cohort model made it easier to work with students I could trust. I moved out of the cohort model for the spring semester and worked with a group where half of them did not want to work together on the project. (*Diana*)

Grace, a professional in her 50s in the field of educational technology who is also studying for a doctoral degree at a public university, also highlighted her cohort learning experiences by contrasting them with non-cohort experiences. Whereas, cohort relationships are personal and focused on building long-term collaborations, non-cohort relationships appear to *Grace* as impersonal, task-oriented, focused on earning a grade, and moving on to the next course. *Grace* reiterated the benefits associated with the long lasting nature of cohort bonds and goes on to further characterize them as family relations where you get to know others well. This is significant because getting to know others well allows learners to discover each others' strengths that learners can effectively utilize when determining who will work on what. It affords learners with the opportunity to structure an effective learning group for optimal performance. *Grace* also captured the spirit of care in a cohort where a key norm is to help each other. Learners become a family. When an instructor introduced a competitive game into the learning context of a cohort group, the learners "hated" the game as it required them to compete against each other, to take points away from each other. This violated their fundamental norm of helping each other. Ultimately, the learners also ended up "hating" the course too:

One of the last courses they took the professor built it into a game...the game required them to do things that took points from other students...they hated the game and the course...because they did not want to take points from another student...they said we are all like family we help each other and will keep in

touch for years...when it is one class and you never see them again it is very different...most people keep it impersonal...do the task get the grade and move on to the next class...group work with the cohort group worked out just fine but they were like a family. ...when it is one semester then it is a little harder because it is more impersonal...we had a group of five of us who worked together very well. Each of us knew our strong points and weak points and when it came to group work we all knew which role we would take. that helped a lot...I am an organizer so they utilized my skill...Debra was good at gathering research and resources...I organized them...Samantha liked to write...so it comes down to utilizing each person's strengths...so when you have a cohort they get to know who has what strength. (*Grace*)

Saoirse recounted an equally meaningful learning experience with other learners who shared the same profession, an informal type of cohort group. *Saoirse* explained that she knew the other learners in her group as she had worked with them in previous courses. Furthermore, they shared a common bond: they were all teachers, with various levels of expertise and experience, who were confronted by the same problem in their professional lives. This problem focused on how to effectively teach blended classrooms (i.e., classrooms that included learners with varying abilities) without adequate knowledge or preparation. In fact, *Saoirse* felt that the stress that her team members felt from these trying circumstances created an even stronger bond among them. Although they lived in different parts of the US, with differing time zones, they managed to communicate and work together effectively. They trusted each other on a professional level to a degree typically found in face-to-face interactions:

For the successful collaboration, I had already worked with the other students in other classes, and had seen the caliber of work they created. We all had a common problem in education that needed to be resolved, and we all have varied levels of experience solving these problems. We were all living in different states across the U.S. and still managed to create a wonderful and extensive plan to help one another. We also received an A on our project, which was very rewarding. I must say, it was because we trusted each other on a professional level that few people get to experience without face to face interaction. :) ... If you have never experienced a special education class or a blended class with both general and special ed students, I can tell you it is a very difficult and stressful environment. I

attribute much of the trust that the three of us shared due to trying circumstances.
;) (*Saoirse*)

A minority (20%) of learners in trusting learning teams reported that they shared yet another informal bond with their team members—they were members of the same department. Their experiences within these affiliations differed: one experience involved knowing and trusting others, another experience consisted of not knowing others well and a lack of trust. *Charisse*, a professional in her 40s who recently graduated with a doctoral degree in instructional design from a public university, was a doctoral student in the same department as two of her team mates, knew them personally and professionally, and attended classes and departmental social events with her fellow learners. She got to know the third team member, who was also from the same department, but at the master's level.

A key message in *Charisse's* story seems to be that knowing leads to trust:

Two of them were doctoral students in the same department. one is a master's student, I know her because I talked to her since the beginning of that online class. ... for the 2 doctoral students I did know them personally, because we met each other in different department events and classes. I believe trust in learners' interpersonal relationships has a role in online learning. ... I know the background of those two doctoral students, I not only trust in their professional capability but also their personal characters to get the things done in a professional way with good quality. (*Charisse*)

Diana shared a differing perspective regarding departmental connections than *Charisse*. *Diana* trusts others until she discovers that they are untrustworthy. She described a context in which learners were in the same program, and that she neither felt a bond with them nor totally trusted them because *Diana* observed, over time, during her face-to-face learning experiences with them, that her fellow learners typically had not behaved in a trustworthy manner. This led her to conclude that she did not completely trust them. Although *Diana* wished to trust, actual performances of trust that were characterized by breaches of trust taught her not to trust specific others. This example is

significant because it reveals that face-to-face trusting experiences transfer to the social construction of trust in online contexts:

I think we should trust them [others] initially until they let us down. . . . We actually knew each other before taking that course, . . . since we were all in the same program . . . we were all doctoral students in the same department . . . I would not give 100% trust to my team members to finish the work that they are assigned to, based on my previous in-classroom experiences. So when it comes to online, there is less reason to trust that all your team members would finish the job that they are supposed to. (*Diana*)

Finding 3: Almost half of the learners in trusting learning teams (40%) indicated that educators provided them with guidelines to structure their social learning. These guidelines were, in fact, various ways that learners could perform trust in online social interactions by establishing normative expectations for communication, work effort, and accountability.

The goal of social learning is to place learners in contexts where they can socially interact to engage in learning opportunities. Although learning course content is an explicit part of the curriculum, learning socially may or may not be. All learners reported that their instructors designed opportunities for learning with others (e.g., online threaded discussion forums), but they did not feel that these opportunities were necessarily social. Learners felt that their instructors appeared to assess and grade their online social learning activities based on learners' demonstration that they had learned the requisite content rather than on both the content and how to learn socially. Insofar as learning contexts are social, grades, to some extent, also reflect how well learners work together. However, it does not appear that the learners' instructors explicitly focused on learning socially. Only one learner, *Faith*, an educator in her 50s who recently graduated with a PhD in education from a public university, noted that her team was assessed based on

both their learning outcomes and how well they worked together: “We all got A’s. ... We were graded on how well we worked together as a team.”

Bay, a teacher in her 30s studying for a master’s degree at a public university, represents learners’ prevalent view of the social nature of online social learning. *Bay* used the word “cold” to describe typical online social interactions because they focus on learning tasks instead of social bonding. She described cold interactions as those that have “no ice breaker, no opportunity to share your background (other than, perhaps, where you’re from.). No, ‘Hi, how is your weekend going?’ etc.... Just, ‘Hi, our first task is.....’ and off to work.”

Only 40% of learners in trusting learning teams described that the instructors in the courses they were describing explicitly employed strategies to create trusting connections among learners in an effort to nurture sociability and collaborative learning. They found these guidelines very helpful in creating positive, trusting, collaborative learning experiences that discouraged social loafing. Teaching the “social” seems to be as needed as teaching the “content.” This finding is, therefore, highly interesting because it seems that trust, as ongoing performances of consistent, reliable, and competent social learning behaviors, are part of learners’, but not instructors’, operational model of socially dependent learning.

Bay described a social learning experience that was shaped by explicit guidelines that promoted a trusting learning context. She assumed the facilitator role and, along with her team members, took several steps to ensure constructive collaboration. First, *Bay* used a sample behavioral contract, provided by her professor, to draft a team behavioral contract which identified (1) a shared workspace to store their work products, (2) the

frequency at which they were to check in on the shared workspace for updates, and (3) how they were to ensure team member accountability. Using this sample as a guide, the team created a rotating leadership position with flexibility to change the order as needed, selected and modeled the use of Google Docs, and used different colors in the team's text (work product) to indicate who contributed what part of the work product and, thereby, ensured accountability. *Bay* chose to use color coding as a means of ensuring accountability because she had previously been in another team learning experience where a team member seemed to have "hitchhiked." This same team member was also in the current team which prompted *Bay* to choose a tool to dissuade any potential "hitchhiking." If hitchhiking occurred despite these efforts, then the team leader was expected to send a direct email to the hitchhiker. If the behavior was not remedied, then a second email would be sent to the hitchhiker, and the instructor was copied on this email. Although most of the time the contract managed to ensure that everyone worked well together, there was a time when *Bay* had to "blind CC" the instructor regarding a "hitchhiker's" "excuse" for not doing certain work. This hitchhiker turned out to be the team member *Bay* had suspected of hitchhiking on a previous project.

The team also took additional steps to ensure constructive collaboration. They created a schedule concerning when work products were due, review dates, and team member responsibilities. Everyone actively engaged in the learning experience by asking questions and sharing ideas respectfully:

I drafted a contract, made some assignments of rotating the team leadership (by alphabetical order with the option to switch weeks if they saw a conflict) and modeled the use of Google Docs with different colored text for each of us to show our contribution on the 1st project. I learned the colored text trick after being involved in one negative experience when I'm pretty sure that one member didn't actually DO any work....and she was assigned to my group in this class as well. A

couple of members wanted to trade weeks to fit the schedule and did so. We'd set a deadline that each person's section needed to be drafted by Wednesday, then commented back and forth for the rest of the week, then the leader would clean up the document before submitting it on Sunday evening. Everyone contributed their thoughts...often in the form of probing questions or ideas.....very respectfully.....and it went well. The contract was... based upon a sample that the professor provided. Just identified our workspace (a shared Drive folder), the frequency we expected each other to look in on the work (at least every 2 days), and how we'd proceed if a member was not living up to expectations (direct email and if not remedied, CC the instructor.) It was up to us to use it or create our own. It suited us so we did! I did a blind CC once on an initial contact (to that same member who I suspected of hitchhiking in my other class) just to keep the prof in the loop, and the member did better from there on out. I forwarded her excuse to the prof as well. Not sure if it was legit, but I took it at face value. (*Bay*)

Lily, a professional in her 20s in the field of education who is also studying for a master's degree at a public university, praised the usefulness of roles in structuring their team's social learning. *Lily's* team began their collaboration with clearly defined roles which they personalized to support the group's functioning. *Lily's* professor provided a template for sample roles—leader and team members—along with their associated responsibilities. Learners then self-selected roles and tasks equitably. *Lily* felt that the success of a group depends on having someone who facilitates the organization and functioning of the group. Once learners understood their roles and what was expected of them, they were committed to doing their share and doing it well:

The professor provided us with a template for picking roles. There was a spot for a project leader, and then the rest of the spots were all the same. It was up to us to figure out what each person did. Our project leader asked who wanted to be leader, and we all agreed she would do a wonderful job..She did! :) Then, we took the different parts of the project (i.e Section A.1, A.2, A.3, etc) and divided them up equally between each person. So each person had an equal amount of content work to do. Then, in our gmail chat, I just happened to get our first conversation going, so I fell into the role of “chat/group work facilitator.” I would help each member figure out what they needed to do through the week. I also kept the online chat sessions productive and moving along so we could get done as much as possible. Then, the other two ended up being supporters and reviewers. They picked up the loose ends quite often and made sure everything was done and done well. And like I said, we all ended up sharing some of the roles in some little way, but there were definitely clear roles for each person. (*Lily*)

Grace, as a learner and subsequently as a professor, also stressed the idea of structuring learners' social interactions around group roles and their associated expectations:

I have found as a professor and a technology trainer to suggest to faculty how to do groups the correct way is important. To make it successful you have to make clear expectations of the groups...setting up a little bit of information for the group to follow helps. Like someone will take the lead. Giving them all the roles that will need to be played in the assignment and letting people in the group choose what role they want to play helps a lot. ...: I always do an exercise the first night of class that is called Expectations. I ask the students to go in breakout rooms and discuss their expectations for working with other students in the class and their expectations of me. They come back together with a list and share it with the other students and I put that list on the course homepage so students can see it. I then remind them when working in groups to go take a look at the list. I also explain the form so they know that other students will be reporting what they did when it comes to the group work. Making them accountable to their peers is important. (*Grace*)

Charisse's team used yet another mechanism to maintain clear communication and encourage trusting relations. Specifically, learners recorded their meetings and shared meeting minutes with the team. The team then reviewed the minutes and decided on workable solutions rather than optimal solutions:

when we had a meeting, someone took notes about the discussion and decisions that were made. The team's decisions were then emailed to everyone to show that this is what we decided to do. It might not be the best decision, but this is a doable and mutually agreed decision to move things forwards. (*Charisse*)

RQ2: How does trust shape the social relationships that learners form in this particular context?

Finding 4: An overwhelming majority (90%) of learners from trusting and trust-compromised learning teams indicated that the scope of online team assignments created task interdependence among team members such that learners were required to trust each other. They had to trust each other to complete their individual work as a prerequisite to completing the team's assignment, as a whole. Learners added that

teamwork obligated them to trust others regardless of whether they knew that their team members were trustworthy or untrustworthy.

When instructors include social learning as a component of an online course, learners are expected to “meet” other learners online, often for the first time, and work with them successfully on a group project, within a specified timespan. From the outset, learners are given a goal: to complete the group assignment for a class grade, within the allotted timeframe. A common goal interdependently links learners. Because learners are meeting online, they often do not have the opportunity for casual encounters such as meeting each other outside class, have a cup of coffee, or to talk about personal concerns which comprise common ways of sociation in the face-to-face context. Learners shared that they missed these implicit, informal opportunities to build trust that have implications for their “in class” social interactions and learning.

Online, learners must often forego such sociability to immediately work together in order to achieve their goal. Out of necessity or sanctions, they are required to trust that team members will perform their share of the work and do so in a trustworthy manner; that is, in a consistent, reliable, competent, and caring manner. Their goal interdependence requires initial trust, even when learners feel that some team members may be untrustworthy. For example, learners might have noticed that a team member may have performed untrustworthy behaviors on the class online threaded discussion forum; however, they have to bracket this knowledge because they are committed to a common team goal that requires that they work together to accomplish it.

John, a professional in his 30s working in the nonprofit sector who is also studying for an undergraduate degree at a private university, noted that his team members

had not behaved trustworthily during the class posts on the online threaded discussion forum. Some of *John's* team members' performances online indicated untrustworthy behavior at the beginning of the course, prior to the team assignment. According to *John*, these team members did not appear to participate fully in class assignments whether it was in an untimely manner or contributions that lacked deep, critical thought. Nonetheless, *John* extended trust to them when they began to work together. However, when this negative foreknowledge was further fueled by additional acts of untrustworthy behavior within the team (e.g., not responding to emails in a timely manner or making any effort to participate in team activities), then their trust was irretrievably broken:

Because the only thing that I knew about them was what I had read in other discussion posts and their writing was not that impressive and they didn't respond to emails. If I had known them I would have probably given them the benefit of the doubt, but when all you know of someone is negative [trust is breached].
(*John*)

Recounting *Neely's* description of performances of trust, we see how important it is for learners to trust each other from the outset in order to be able to complete their assignment:

Currently I have to trust my classmates in my ... class. The projects where I had to work within a group or a partner there... had to be trust. Trust that your group or partner would pick up where you left off or do their part. I have been lucky to have great partners and group members that I trusted to take care of things and carry their load of the work. Without that trust, we would not have been able to complete the assigned projects. (*Neely*)

Neely, a professional in her 40s in the field of instructional design who is also studying for a master's degree at a public university, felt that she had to trust her team members in order to facilitate their social interactions and, hence, social learning. *Zoeyu*, a graduate learner in her 20s studying for a doctoral degree at a public university, also felt that she had to trust her team members, but for a different reason: she had to trust them because

she was “forced” to do so by the instructor. That is, the instructor created expectations of trustworthy behavior, sanctions for anyone who violated them, and monitored learners’ social interactions to ensure compliance. *Zoeyu* added that she thought that without the instructor’s expectations, learners would most likely have behaved aggressively:

yes, [we trusted each other] but probably because it was forced because you knew the teacher was monitoring the posts. Had it been unmonitored, I’m sure people would have responded more aggressively at times. ... I am sure technology makes people feel more invincible and free to respond without the threat of how someone in person might respond. (*Zoeyu*)

Bay illustrates how moments of sociability are important in meeting the trusting requirements of online learning environments. Specifically, moments of sociability are needed to create personal social interactions that have implications for social learning. *Bay* is a “type A” task-focused learner, but appreciated that other learners may need a personal touch, a sense of community. *Bay*, therefore, as a leader, “contrived” opportunities to add a personal dimension to online learning and, thereby, create an online community. *Bay* indicated that it is important to add a personal dimension to online learning because this dimension encourages learners to take risks such as expressing their vulnerabilities. Moreover, it is important to expose vulnerability because, in doing so, learners expose where they are wrong and, thereby, afford others and themselves an opportunity to learn:

I’m a pretty typical Type A kind of personality. I tend to be very goal/task oriented and work very well with folks who are the same way....however, I’ve learned to appreciate that other personality types “need” this type of activity [social interaction]. I always am sure to contrive some when I’m a leader and participate fully when I’m a participant. I think that many people are afraid of taking risks or being “wrong” so building a sense of community allows them to be vulnerable more so than if it was a “cold” interaction as the online sort often are. (*Bay*)

Finding 5: All learners reported that they had experienced breaches of trust at some point during their online social learning experiences. Learners in trusting learning teams were able to reconcile from such breaches of trust because they had constructed a more resilient, personal type of trust, strengthened by ongoing performances of trust. In addition, violators presented “acceptable explanations” for their breaches of trust, ceased their untrustworthy behaviors, and henceforth engaged in trustworthy behaviors. Together, the type of trust learners developed in trusting learning teams, along with violators’ efforts to rectify their untrustworthy behavior, facilitated the reconstruction of trust among members of trusting learning teams. Conversely, learners in trust-compromised learning teams were unable to do so because their trust lacked a resilient and personal quality. Furthermore, violators in these teams persisted in their untrustworthy ways, preventing or adversely mediating online learning social interactions as well as compromising the success and learning outcomes of their teams.

Learners, in trust-compromised social learning groups, recounted that the most common breach of trust emerged from failures to communicate effectively, if team members communicated at all. Surprisingly, some learners ignored team members’ efforts to communicate about their shared task, even up to the time that team projects were due. These breaches of trust compromised their social interactions such that learners were either never able to establish communication and social interactions or had to redirect their social interactions among learners who were engaged in order to complete their tasks. Some learners, in trusting social learning groups, also experienced similar breaches of trust as learners in trust-compromised social learning groups; however, in trusting groups, trust mitigated breaches by providing a lens through which learners

viewed these breaches. Specifically, trust allowed learners to view breaches of trust from a perspective that gave other learners the “benefit of the doubt.” In doing so, learners who appeared to breach trust had the opportunity to explain their behavior and to re-engage in social learning.

John recounted a learning experience where his instructor used the Blackboard Learning Management System to assign him to a team with 4-5 learners. Learners were then responsible for completing a group project. Although his instructor assigned 4-5 learners to a group, ultimately only 2 remained. *John* and his teammates faced communication challenges from the beginning—some learners took a long time to email back. One active team member sent “multiple emails trying to round everyone up.” *John* was not sure why three team members did not respond, but felt “it came down to some excuse” such as that they did not check email, were too busy, or did not understand the requirements. One team member did not communicate until the day before the project was due. *John* and his remaining team member informed their instructor about the team’s communication issues. The instructor reduced the scope of the project so that two learners could complete the work. *John* and his partner then notified the non-participating learners that they were no longer members of the group. They did so publically by posting a notification on the group’s discussion board area. Because of their conduct, *John* and his partner felt that they did not “owe” the other three team members in terms of sharing their work and grade. Their obligations were negated by untrustworthy behavior—“they left us out to dry”:

We sent each other emails and volunteered to do certain sections. ...Some kids took very long to email back. I'm not sure as to why but it probably came down to some excuse. They would say that they hadn't checked their email or that they had been too busy and didn't understand the requirement. If I remember correctly the

girl and I ended up doing the project. She emailed the professor and he said it was ok if we did something together and made it a little shorter. One of them [the original team members] didn't contact us until the day before the due date. The other's we told through the discussion board. I remember not going out of our way to let them know; they had not responded to us or participated in the preparation. I hate to think about it that way, but we didn't owe them anything...they left us out to dry. (*John*)

Faith recounted a story where a team member, *Alex*, who played a critical role as liaison to the client and as an information resource to the team, suddenly stopped participating in team meetings, meeting with the client, and doing his work. *Faith* and her team attempted repeatedly to re-engage *Alex* in team meetings. Although he promised to participate in the team meetings, *Alex* failed to attend them. The team's social interactions suffered considerably because of *Alex*'s repeated breaches of trust:

He was attending the online course sessions and would promise that he would attend the team meetings but then wouldn't show up. It was terrible. ... We were relying on him to keep us in contact with the client...he was our intermediary. He was our connection to the client so he was a key player for the project. So his absence was sorely felt. We needed feedback from the client so that we could generate a product that met their needs. Now that was missing...It would have looked bad if we sent someone else or stopped talking to the client all of a sudden. At first, his missing one or two meetings was okay, we just kept on working on ongoing products. But once we came to a junction where we needed client input...it became a problem...The client had been so faithful in actively participating in the project...it wouldn't have been right for us to suddenly disappear. It was frustrating...He also had some contributions he was supposed to submit for the project. We had to pick up the slack on that too...the work load grew exponentially. UGH!!! He had a section that he was supposed to have completed before he disappeared. We had also divided up the projects into sections...he had a section... Let me remind you that he was the one who insisted on our doing the project. (*Faith*)

In contrast, *Saoirse* and *Toni*, a graduate learner in her 20s studying for a master's degree at a public university, expressed appreciation for how their groups managed breaches of trust. Because they were members of trusting teams, they had formed a more resilient and flexible trust that made it was easier for them to “overlook” and understand breaches of trust. *Toni* explained: ‘Because we knew each other I think it was the

opposite [We were more relaxed about breaches of trust]. We knew that we were all very busy, so we allowed room for more of a lax behavior.” *Saoirse* added that competing personal demands sometimes distracted learners and prevented them from engaging in ongoing communication; however, this was not a problem as they “always felt a great sense of balance and understanding” for each other:

I also found it interesting that there would be days here and there when I could not find the time to participate in our collaboration, or one of the other students couldn't touch in for a day or two, but we always felt a great sense of balance and understanding for one another's "other lives" outside of our online project. :) It was one of the most authentic learning experiences I've had with this program. It was challenging, time consuming, and very rewarding. (*Saoirse*)

Finding 6: All learners recognized that they needed help to complete their individual tasks and turned to trustworthy sources among their personal networks to provide this help. Of these, all members of trusting learning teams and 60% of the members of trust-compromised learning teams reached out to trustworthy members of their teams. The remaining learners in trust-compromised learning teams turned to members within their personal networks (20%) or consulted online resources (20%), whom they deemed trustworthy, in order to gain the necessary information or understandings to complete their tasks.

Learners, in general, reached out to trusted members of their teams to learn what they needed to know in order to complete their team assignments, regardless of whether they felt their team members were competent or not and whether they were in trusting teams or trust-compromised teams. *Neely* explained how she felt lost in a specific class and how her classmates and the instructor helped her to learn the material and complete her assignments. *Neely's* team members' performances of trust through consistent, competent learning acts confirmed *Neely's* confidence and trust in her team members'

abilities. However, *Neely* also trusted less able peers. *Neely* pointed out that some of her peer learning opportunities did not necessarily involve more able peers, but rather simply peers who may have a different perspective on the learning material and can communicate about the learning material using “layman” language. *Neely* pointed out that the discrepancy in the level of knowledge and understanding between instructors and first time learners may be so great that they struggle to communicate and understand each other. For this reason, peers, even less able peers, may be more helpful in trying to understand course material:

It has been my experience in teaching and in school that usually if one person has a question on a topic, others have the same, or similar, question. Learning from someone on your own level makes you feel more confident. I'm not really sure how to explain it properly. Sometimes instructors use big words or just repeat things out of the textbook. That doesn't help. When you learn from another classmate, it not only puts things in laymen terms but it helps both people understand the concept. ... I just think they were able to look at it from a different point-of-view. Instructors sometimes forget that the information might be "second hat" for them, but new to the students. ... I'm not sure "confident" is the right word. I feel the most "confident" when it comes straight from the instructor. I can't seem to find the right word. Maybe its just that I feel comfortable learning from my peers at times. ... If it wasn't for my classmates in this current class, and my instructor, I don't know where I would be. ... I am so lost in the “course” world! ;) ... Currently I have to trust my classmates in my ... class. I have to trust their instincts and try what they say to try because most of them know... more than me. But I have worked with one lady that I really trusted to get things done. She was always on time and she delivered quality material... [I trust them] a lot [because] what they say works. (*Neely*)

Saoirse relayed a story regarding reaching out to competent, trusting peers. Her story highlights the importance of trust in selecting whom you turn to for help in social learning because when you reach out to others you need to be able to collaborate with learners who are reliable and can do their work in a competent manner. Reaching out to trustworthy team members is important to ensure that you receive the necessary help:

I knew I could rely on both of them to carry their weight and contribute positively to our big research project. ... I took a chance by doing that project with the other

two students. We had an option to do it alone. I was so grateful to have help from two wonderfully competent and very informative classmates. At the end of our term, we provided reflections on our experiences. I was amazed how many people in our class wished they had collaborated with other students, how frustrated and lonely and isolated they felt trying to navigate such a big research project alone. This really solidified my trust (and joy) in regards to having such a great collaborative experience. (*Saoirse*)

Kim, a graduate learner in her 20s studying for a master's degree at a private university, and her team mate chose a project that leveraged their individual expertise and, thereby, created a circle of trust and help between them. *Kim* and her teammate had completely different backgrounds, studying two different majors, in two different colleges. This difference initially made it difficult for them to communicate with each other—to find shared interests. However, they reflected on this difference and chose a project where each could contribute. In this sense, they turned to each other to learn what they needed to know:

My team mate was doing [architecture] and I was doing [biology], it was difficult trying to explain to him some things. ... We were able to get a research topic which cut across all of our professions, this really helped in terms of material and expert knowledge. (*Kim*)

Sam, a technology professional in his 30s who is also studying for a master's degree at a for-profit university, recounted how he and his fellow learners turned to their individual networks to support them in their learning. However, whereas *Sam* turned to friends with subject matter expertise outside class to help him, some of his classmates turned to a network they had created within the same course for support on both the assignments and tests. Specifically, *Sam* disclosed that learners, who already knew each other from previous encounters, continued to network together on assignments and tests, either in person or over the phone. *Sam* became aware of this collaboration from learners' posts and private emails that were also sent to him:

I am sure some of those students knew each other outside that class so they shared notes. Personally I was very detached in the course. I wanted credit and unless I had to communicate I did not. ... I wanted it simple; I had a job. ... Some [learners] did tests together over the phone. [How did you know this?] Well we did email each other after exams at times asking how each other did or after each one took the exam. One would say what the exam was like and they did well because another classmate completed it and shared the information or they did it together on campus. (*Sam*)

In addition to turning to his friends for help, *Sam* also chose to utilize online resources to supplement his learning. He found MIT open courseware and academic videos on YouTube especially helpful because they offered *Sam* the opportunity to observe how different teachers taught the same content and, therefore, to find which teacher taught him the material most effectively. He found that although different teachers used the same technology (e.g., video), they taught differently—they taught in a manner that helped him to understand the material. MIT open courseware and YouTube videos became more trustworthy resources for *Sam* than his course, instructor, or class mates:

I referenced other sources for my solutions... MIT open courseware and YouTube were the best options... You can find the topic you need and get the best explanations, if you don't understand one teacher there are others that can explain it differently... I had “subject matter” friends if it got bad and we would meet. But mostly MIT courseware and YouTube. ... So, for better or worse we find a way to learn what we have too. (*Sam*)

Sandy, a professional in his 30s in the field of technology who recently completed an undergraduate degree at a public university, also used online resources, but he did so to confirm what other learners said and, thereby, build trust in them:

I'm under the impression that you can learn a little something from everyone. Do I place total trust in what students have told me..no. I would much rather look up and confirm what people say, do my due diligence before putting total trust in a student. (*Sandy*)

RQ3: How does computer-mediated textual communication shape learners' performances of trust in an online context?

Finding 7: All learners indicated that the affordances of computer-mediated textual communication (i.e., visible traces of identity, learning, and participation) provided them with a view into learners' performances of trust. They used this information to assess whether others were trustworthy individuals and to predict their future trustworthiness. Insights into actual performances of trust, revealed by the permanence and visibility of computer-mediated textual communication, afforded learners the opportunity to determine whether learners could trust others to complete their fair share of team work in their current social learning endeavors.

Computer-mediated textual communication technology records many details concerning participants' communication. It records who says what, where it is said, when it was said, and why it was said. For example, if learners participate in online threaded discussion forums, technology records the discussion in which they participated, when they posted their comments, what they said, and in what context (e.g., response to a general question, a response to another learner, an initial post, or question). All learners, to some degree, leveraged computer-mediated textual communication to learn about each others' identities, what they knew, and how they participated in the course in order to develop a perspective of each other regarding trust. Such monitoring provided insights into others' trustworthiness that learners used to foreshadow others' trustworthiness in future social learning opportunities. In addition, monitoring also ensured ongoing performances of trust that further strengthened trust among team members.

Kim was initially excited to take an online class because she was very busy and felt that an online course would afford her the opportunity to skip the sociality of learning and instead focus on the course content. Although this appealed to her initially, she soon realized that she missed the social dimension of learning, especially when she became aware of, what she interpreted as, learners' inauthentic portraits of themselves online. When *Kim* had the opportunity to meet the same learners face-to-face, she was unable to identify them from their pictures as their pictures did not resemble the learners she met:

At first it was a good idea [to take an online course] because this meant we would skip the pleasantries and just dive into the coursework. But as time passed I realized I may not even be able to pick them [other learners] out in a real classroom since I don't know them personally. Most of my classmates put their best photos as the profile picture so it would be hard to know them when we meet face to face. The first class we were meant to write a small biography about ourselves so that's where I noticed the picture thing and I was like can I even tell them apart in a real classroom so I just found out I couldn't. They were very polished and so unnatural not like from a studio really but like in a company dinner looking smart and sharp. You could see their faces but most of them in real life they are either thinner or plump so you wouldn't really know it was them. Yes [the pictures were] very formal, I think guys were picking their best photos. I remember one guy had his photo taken in a skiing mountain. I think in some ways it affected the one on one relationship that guys have in a physical classroom, it made people for lack of a better word anti-social. So it was kind of hard to even respond or comment to someone's post in the discussion board. ... We were assigned groups but most of us just fell out of the groups and preferred to work alone. (*Kim*)

The lack of authenticity made *Kim* feel that she could not get to know her fellow learners. When asked whether getting to know others is important in trusting others, *Kim* responded: "Yes precisely." As such, she was unable to develop a trusting relationship with them. She felt a tremendous breach of trust which constrained her participation in the course.

Jamie, a technology professional in her 40s who is also studying for a master's degree at a public university, acknowledged that she is not a very trusting person. She

performed a risk analysis whereby she systematically gathered data on other learners' performances of trust to gain insights into their trustworthiness. As other learners shared, *Jamie* also reviewed other's posts to determine when learners posted, the quality of their posts, and their responsiveness. However, *Jamie* did so more formally. She kept tallies the first week of the term to determine other's trustworthiness in her class as a whole. She continued with a more informal assessment during her team learning experience. In particular, *Jamie* continued to monitor the consistency between what her team members said as compared to what they did to assess their reliability which she considered as an indicator of trust. She found that whereas team members typically reported that they were "fine," meaning that they were completing their tasks as needed and on time, she found that by the end of the week when everything was due, 85% of the team members, in fact, were not fine and had not completed their work. The inconsistency between what learners said and what they did was a clear indicator to *Jamie* that they could not be trusted. The consequences of these repeated breaches of trust required the whole team and *Jamie*, especially, to exert more effort to complete their learning assignments:

I never fully trust any team member. I always had a contingency plan for writing the entire group project myself, just in case. And as the weeks progressed, you would find out, who was dependable or not. So, I guess... No I am not a trusting person. ...[I would note] how late they would post their first info doc on themselves, and their discussion questions every week. How long it would take for their replies to come in. Would they just post the minimum or would they actually read everyone's, and post to those they had comments on. I would take tallies on them the first week, that was my risk analysis of the people. ... Interestingly enough, I would say 85% of the time [during our teamwork], the response was that they were fine. But by the end of the week, the finished product was not produced. So Sunday rolls around and the whole team is scrounging, waiting, reviewing and often I am the one up late doing the final draft. (*Jamie*)

Instead of performing a systematic study of learners as *Jamie* did, *Harper*, a technology professional in his 50s who is also studying for a master's degree at a private

university, observed learners' behavior in online threaded discussion forums to glean insight into their personalities and, hence, trustworthiness. *Harper* associated specific learner behavior with personality types that, in turn, he correlated with trustworthiness. He assessed trustworthiness by observing the effort learners exerted in participating in these forums and the care and effort they displayed with their communication skills. He interpreted greater learning effort and care in communicating as two indicators of trustworthy behavior. *Harper* noted whether learners selected less challenging discussion questions and simply responded with one or two lines (i.e., less learning effort, less trustworthy behavior) or chose more challenging questions and responded more reflectively (i.e., greater learning effort, more trustworthy behavior). Furthermore, he noted whether learners cared to make the effort to communicate clearly so that they could avert disagreements and misunderstandings as well as to communicate about appropriate topics (i.e., not griping) as further indicators of trustworthiness:

After just a few weeks into a class, you could start to pick up on various students' personalities, just through their postings. Some students would pick the most obvious of the discussion questions and just write a line or two and then other students would really go for the more complex ones. Then, there would always be disagreements and I suppose even misunderstanding because of the way students wrote or responded to postings. There was also some griping to the professor about the assignments. (*Harper*)

Saoirse built her trust in her team members by observing their work ethic and online behaviors. *Saoirse* could see if they turned in their assignments on time, the quality of the work, and how they interacted with others. *Saoirse* found that her team members submitted their work on time or earlier than expected and were respectful to class members when engaging with them online (discussion board). *Saoirse* also leveraged knowledge concerning learners' identities and performances of trust from previous courses to inform her current assessments. Because learners' trust reputations

were visible through their online performances of trust in individual assignments, *Saoirse* felt that she “recognized” her team members. She knew what to expect from them; that is, she could predict how they would perform in a team learning context based on their earlier individual performances. She knew that she could rely on them to do their fair share of the project and to contribute positively to the learning effort:

My trust came from observing the other students' work ethic and online behaviors. I could tell if they turned in assignments on time (or ahead of time), if they participated in group discussion boards, if they responded to others in a respectful way. I also felt confident in their abilities because I knew a little about their backgrounds and goals for their own career paths. The fact that we 'recognized' one another from previous classes laid the foundation for our trust to work with one another. I had seen their work in classes that were much more independently based. I knew I could rely on both of them to carry their weight and contribute positively to our big research project. (*Saoirse*)

Finding 8: Almost all learners (90%) in trust-compromised learning teams and a majority of learners (60%) in trusting learning teams felt that instructors did not effectively use the “social” affordances of computer-mediated textual communication, such as online threaded discussion forums, to encourage online social learning. As such, learners believed that they missed opportunities to get to know one another. Learners considered this an important precursor to assessing others’ trustworthiness, building trust, and social learning.

Learners communicated that instructors, in general, used online threaded discussion forums and team projects to promote online social learning. However, learners felt that their instructors did not use technologies effectively to promote meaningful social interaction. Instead, learners felt that their instructors used technologies to convey task-based information or to promote task-based “conversations.” Learners described how their instructors commonly posted questions or topics on online threaded discussion forums and instructed learners on how many posts and/or replies they were to post in

order to “participate” in discussions. Learners reported that instructors typically graded on the number of posts and not the quality of posts or how learners interacted socially with each other. Learners found such uses of communication technologies as less social, immediate, and natural. One learner added that these technologies, however, can be leveraged as social tools to promote online communities. Concerning team projects, learners felt that their instructors provided, but did not require nor model the use of social tools. Instead, learners were left on their own to choose to use or not to use the tools provided to them or to select different tools. Learners added that by not using the “social” affordances of computer-mediated textual communication effectively, instructors hindered learners’ opportunities to interact socially, get to know each other, and develop trusting learning relationships.

Diana clearly did not find value in online threaded discussion forum activities and found them to be poor substitutes for class discussion. Her concern centered around the way discussions were designed online: they were “forced” and “measured” by responses that required references: “We have had a few classes where we also use discussion boards to communicate. I do not like those; forced discussions measured by responses (with references) are not a good substitute for classroom discussion.” *Diana* felt that text chat is better than discussion groups as they contain immediate, spontaneous responses instead of “canned” responses: “I think it's [chat is] better than discussion groups personally. At least it is immediate and not a canned response. ... More natural, I think, if that makes sense.”

Sandy commented that his professor appeared to set up online threaded discussion forums as social tools; that is, tools where learners could help each other. However,

Sandy felt that the professor did nothing to promote their social use. Only six out of thirty learners in the course participated in them. *Sandy* felt that even the professor used online threaded discussion forums in a functional way, responding to questions with the page number where learners could find help for their questions:

He would post the assignments online, set a due date, show our grade the following week and on to the next assignment. Either you understood the material or not.. if you asked a question and no student participated in your thread. You would get a generic response from the professor, stating a page number to find your answer. (*Sandy*)

Maggie, an instructional technology professional in her 30s who recently completed a doctoral degree at a public university, shared a similar sentiment regarding the use of online threaded discussion forums to promote social learning. Although her professor said the quality of posts would be part of the learners' final grades; in fact, they were not. It became apparent to *Maggie* that learners' participation deteriorated when they found out that their effort did not count toward their final grade. *Maggie* realized that when the professor did not attend to the discussion board participation and did not urge non-participants to post that the professor did not care about this social learning experience:

We were required to post onto online discussion threads and the professor said it would be counted into the final grades. But soon we found it wasn't really seriously counted [because] the professor had never mentioned and/or urged people to post. If s/he really cared about it, then s/he would find out that people are not serious about that requirement and s/he would comment on that. (*Maggie*)

David, an online university instructor in his 30s who is also studying for a master's degree at a public university, also reported on the structured nature of online threaded discussion forums. Although it is possible to create more social, 'community' type online interactions, *David* found that forums in Blackboard or Sakai appear to have a functional language that complements functional posts. The posts have an educational

purpose; learners feel that they “have to” post because posts are used to determine their grades, instead of to create social bonds. Learners feel obligated to meet “post quotas.”

David also elaborated on non-textual computer-mediated communication tools that more readily encourage social learning. The synchronous and “face-to-face” nature of tools such as Skype video chat or Google Hangout require that learners always “listen,” pay attention, and recognize the communicative partner as a “person.” It affords them the opportunity to “elaborate” about their thoughts:

In my experience, forums have been to the point. You are asked an answer, you give the answer. You're asked to respond to someone's post, so you respond to their post. It's very task based. ... I think that the discussions, though they sometimes ask for information in a related way, rarely give way for personal experiences. We're there to post what needs to be posted, and if we can't cater our personal experiences to what is needed, then yes, we "can" them into inauthentic responses to satisfy the grade. As for robotically responding to them, I think that happens regardless, as we're required to do so, and at a certain point, we as students (at least for me), just stop trying to be authentic, and just try to get what's needed onto the forum for our points. ... Forums have what I'd call a "functional" language, at least in this setting. It's very different than online forums that I've been a part of that are more "community" based. I've been a part of, or run my own online forum for the last 10 years or so, often with “subject matter” being the focus. It's very easy to get a sense of who someone is there, through their writing... but also because people are more apt to share stories about their lives, or pictures of their kids or something. With the forums on either Blackboard or on Sakai, I've noticed that the posts are always very functional, meaning that they serve a purpose (respond to this, post about that, start a thread about this and elaborate about that.) It always serves an educational purpose. Put simply, people are posting on those forums for class because they have to, because it's associated with a grade, and not because they are there to make friends or start a conversation with someone. For me, the forum based communication platform is quite inefficient. Though it offers students an opportunity to post their thoughts, I've found that over my time in this degree program, it's quite easy to do the bare minimum using forum posting as a means for communication. Very rarely have I ever felt that forum posting was an efficient means of communication. Skype, and other platforms that we've used (Google Hangout), offer an opportunity to work directly with your assigned classmates, not only able to more effectively hold conversations with one another about the subject matter (without having to wait on a response being posted to the boards), but often it's the case that you have the time to elaborate about your thoughts, and as a participant, you're always listening. Forums, I've found, it can be very easy to just not read what someone

said, or glance over it very quickly, often having to re-read what they've written earlier just because it's far easier to not pay attention. I also feel strongly that having face to face communication gives more credit to the person that you are speaking to, with respect to the subject matter for the course, and them as a person. It's very difficult to understand a person via online posts, as there is no tone in their language, or often it's the case that that tone can be lost. Face to face technology such as Skype eliminates that confusion. (*David*)

Having said all this, *David*, however, also illustrated how text-based online threaded discussion forums can be used to promote online social learning; specifically, by using them to create online communities. He explained that forums can be designed and managed as communities where leaders shape conversations to create long-term communities. *David* felt that his professors did not shape forums as communities—the professors were as “transient” as he was or perhaps even more so. Sometimes *David* did not see his professors post for “over a week” which he felt was not “an example for participation, or even for community.” For *David*, professors, not the design of course, promote community. Technology is the context in which community can develop. Professors’ conduct mediates whether a community develops. Professors should model social participation; rather than create a space and expect learners to participate socially. Off topic discussions are necessary to create a community; otherwise, you only have functional forums:

I think there is a responsibility to the leader of the forum. When I ran web forums, it was my responsibility to maintain communication with everyone, both on topic..., and in off topic areas. It was my job to get people to talk about their home lives, their work, or things that bothered them. We had areas where people could post online word games (for example, I write a single word to a sentence, then you do, then I do, then you do, and soon, we have the first sentence to a story). We would post about gasoline prices, or whatever. The idea being that you not only gave the participants an option to participate, but as a facilitator, you WERE a part of these conversations and promoted them to build community. I'm going to say it: I've never felt that way on forums for my classes. My professors are just as transient as I was. ... I don't think that the design of the course promotes or discourages social relationships; I think the professors that lead them either promote or do nothing to promote community. If a professor enters the

forum only to check that a student has done the work, then the student will understand that, and only participate to satisfy the requirement. The technology is there to spur conversation and to allow for community development. I know this because I've done it in my own forums, and all the forums that I've been a part of over the years. And yes, 5 months in a class is PLENTY of time to become friends with someone or for a community to develop. But because of either the apathy of the instructor, or the apathy of the learner based on the instructor's behavior, community doesn't develop because it's not functionally required. I think that professors should develop a specific thread for off topic communication, and then do their best to participate themselves. You cannot just make a place for people to chat, and expect them to do so. Community development requires that there be a leader that promotes said community, and participates as well. In short, a professor should always be engaged in off topic communication if he or she wants community development. (*David*)

Saoirse also felt that online threaded discussion forums can be useful tools for social learning under certain conditions: when you have ongoing dialog characterized by (almost) daily interactions that build on each other:

I think it is vital not only to communicate, but to do so often. I find with my best and most positive online trust relationships, it's usually with the people in an online class that check their email every day, read and respond to discussion boards everyday (or almost that often) and keep current with dialog, ideas and projects that build from participation from many people. ...These aspects are what are lacking in my "specific" classes. We have long spans of time between assignments and very little communication on discussion boards/emails. This can be frustrating because the projects are difficult and complex. We should be able to help each other more by talking to one another. I will say that the professors for these courses have always been VERY helpful, communicative and responsive on a daily basis. (*Saoirse*)

Neely reported on how the discussion board was used meaningfully by learners and the instructor to help each other in her class. Ultimately, however, she reminded the researcher that a learner's grade depended on the number of posts. *Neely* used the online threaded discussion forum to post questions she had about the assignments, to help other students who had questions, and to share "something interesting" with the class. Instructors used online threaded discussion forums to "engage" learners in weekly discussion questions. Learners had to answer a question and respond to two other learners

each week. Although *Neely* found online threaded discussion forums as effective collaborative tools where learners could learn from each other, she was frustrated by the asynchronous nature of the responses. *Neely* typically posted early whereas the rest of the learners appeared to post much later to maintain a meaningful, ongoing conversation. *Neely* reminded the researcher that posting questions and answers on online threaded discussion forums is part of the learners' grades. *Neely* felt that online threaded discussion forums activities are sometimes inauthentic and that some learners simply post to receive a participation grade. She noticed that this approach to online threaded discussion forum participation was more prevalent in her undergraduate rather than graduate studies. She felt learners' participation is a reflection on whether they take responsibility for their learning. *Neely* noticed that when learners delayed posting until the "last minute" that they typically posted "I agree" type of posts instead of reflective ones:

If I have a question about the course material I place it on the discussion board and other students can help me find the answers. Or my instructor will help. I also use them to help other students or if I find something interesting that I can share with the class. ... We had a weekly discussion question. We had to answer the question and then reply to at least two classmates. ... I think it is a great way to learn from each other. However, it seemed like I spent a lot of time waiting for others to post. I'm usually one of the first to post because I do not like to procrastinate. ... You also have to remember that a lot of classes require you to post questions and answers on DD. It is part of your grade. ... There have been a few times that I feel like people post just to receive their participation grade. I have noticed less of that in my MA program than in my BA. I think a lot of that has to do with realizing that you are responsible for your learning. ... I think that sometimes people wait until the last minute to post something. Then they just read other's posts and make them post similar to the ones they read. Like if your instructor asks you to look over something and give your opinion if it's good and why. A student may read everyone else post without actually going to the source and checking it out on their own. (*Neely*)

Finding 9: All learners reported that computer-mediated textual communication affected whether and how they communicated which, consequently, also mediated their ability to

get to know one another. All learners in trusting and trust-compromised learning teams acknowledged challenges presented by computer-mediated textual communication in attempting to communicate in a socio-affective manner. However, all learners in trusting learning teams felt that they could “overcome” these challenges. Specifically, the quality of their social relations shaped their social appropriation of computer-mediated textual communication which they then leveraged to facilitate communication, getting to know each other, and performing acts of trust online. They could use text effectively to express affect, as well as task-based language. All learners in trust-compromised learning teams reported that the disembodiment of computer-mediated textual communication prevented communication, delayed communication, resulted in miscommunication, and obscured their ability to get a sense of others and their trustworthiness.

Learners’ interpretations of computer-mediated textual communication differed depending on whether they were members of a trusting or a trust-compromised learning team. Learners in trusting teams used computer-mediated textual communication to facilitate communicating affectively as well as academically; socially constructing consistent and trusting identities; and consistently, reliably, and competently performing acts of trust. Learners in teams where trust was compromised struggled to communicate affectively as well as academically with untrustworthy team members; noted that untrustworthy team members presented different identities, depending on the context; and observed that untrustworthy team members failed to perform consistent, reliable, and competent acts of trust.

The messaging design of computer-mediated textual communication seems to be the critical factor that can effect such disparate experiences because messages can be sent

without any assurances that they have been received or that the recipient will respond in a timely manner, if at all. As *Toni* explained: “Technology (Texting and emailing) guarantees the delivery of the message, but not a response. The response is sent back out at the discretion of the sender. Talking in person allows for immediate responses and compromise.” In defining trust, *Diana* explained: “You build trust I think by listening to each other, responding.” Insofar as listening and responding reflect performances of trust, lack of communication is a potential indicator of performances that lack trust. In general, learners in trust-based teams reported that their team members communicated in a timely and clear manner. This did not necessarily mean responding immediately as *Lily* illustrated. *Lily* appreciated the slight time delay in computer-mediated textual communication as it gave her an opportunity to reflect more thoroughly and critically about what she was learning and the contributions she wished to make:

I am the type of person that needs a moment to formulate thoughts. While I can have a face-to-face conversation, it’s difficult for me when I’m expected to immediately respond. For example, when I had small classes in my Undergrad, it was difficult to take everything we had learned in a lecture and just talk about it. I did better when I could take even 1-2 minutes to piece it all together. Then, what came out (through written or oral language) was much more formulated. It contained all of the things I wanted to say instead of “Oh...I forgot this...Oh and this too!” (*Lily*)

Conversely, learners in trust-compromised teams reported that their untrustworthy team members did not communicate in a timely or clear manner. Failure to communicate seemed to be the greatest source of frustration for trust compromised teams. It was most distressingly expressed by *Faith*. We repeat her passage here because it so vividly captures the frustrations and implications when team members fail to communicate:

He was attending the online course sessions and would promise that he would attend the team meetings but then wouldn't show up. It was terrible. ... We were relying on him to keep us in contact with the client. ...he was our intermediary. He was our connection to the client so he was a key player for the project. So his

absence was sorely felt. We needed feedback from the client so that we could generate a product that met their needs. Now that was missing...It would have looked bad if we sent someone else or stopped talking to the client all of a sudden. At first, his missing one or two meetings was okay, we just kept on working on ongoing products. But once we came to a junction where we needed client input...it became a problem...The client had been so faithful in actively participating in the project...it wouldn't have been right for us to suddenly disappear. It was frustrating...He also had some contributions he was supposed to submit for the project. We had to pick up the slack on that too...the work load grew exponentially. UGH!!! He had a section that he was supposed to have completed before he disappeared. We had also divided up the projects into sections...he had a section... Let me remind you that he was the one who insisted on our doing the project. (*Faith*)

Regardless of whether learners were members of trusting or trust-compromised learning teams, they reported that computer-mediated textual communication lends itself to miscommunication. *Farrah*, a learner in her 40s studying for a doctoral degree at a public university, shared the stress she felt when her instructor began the group project within the first 1-2 weeks of the course and based her course grade on this group project alone. *Farrah* and her team mates had to begin working together without having had the opportunity to get to know each other and, thereby, build trust which is critical in mediating misunderstandings that result from text-based communication:

We had to get grouped quickly as literally the work of the entire semester depended upon this group... I think that it was difficult because we had to start with the group work so early in the class, there was no chance to get to know each other first or to establish any trust beforehand. We immediately were scrambling to find a way to figure it all out and to get our work completed on time. Between that and the fact that we had to make so many decisions before we could even begin the real work (which group will we be in? what will be the target of our project? how will we communicate? who will do what?, etc.), we were doomed for conflict. ... when miscommunication happens in text-based exchanges (and it is inevitable), a certain amount of trust is required in the communicators...that their intentions are the best, that they are as committed as I am, that they are being honest with me. (*Farrah*)

Harper felt that computer-mediated textual communication, sometimes, lacked tone and visual cues which resulted in misinterpretations:

Then, there would always be disagreements and I suppose even misunderstanding because of the way students wrote or responded to postings. I think [there were misunderstandings] because - as is sometimes experienced when reading someone's email including the lack of facial expressions and vocal inflections, the intention of the posting would be misinterpreted. (*Harper*)

Bay also acknowledged the possibility of misunderstandings but found that when text-based communication is synchronous, it affords learners immediate feedback/clarification to address these misunderstandings. *Bay* added that a disadvantage of synchronous communication appeared to be potential digressions to personal conversations and distractions from key aspects of the work. Having said all this, *Bay* was still amazed at the quality of her team's collaboration and resulting work effort because the team members never met, never heard each other's voices, and never saw each other except for their photos. The team members were also very happy because they could use the lessons learned in this experience to improve their practices as teachers:

There were significant pros and cons to the chat session...on one hand, it allowed for a more efficient sharing of ideas as all four of us could immediately get feedback, make revisions, and repeat. If a comment was unclear or seemed to have been misinterpreted, we could clarify immediately rather than wait for reply emails.... however, it was easy during the chat for a few members to dominate the conversation. Additionally, efficiency was sometimes lost as we got off topic on in a personal conversation or got sidetracked by formatting and other issues in the project. ... Very rewarding. I am AMAZED that I completed a 52 page project with three gals whose voice I never heard and face I never saw (well...except their avatar photo.) The final product was much better than I could've done independently, I learned more about the use of online collaborative tools, and broadened my horizons as far as how technology is being used across the country in schools. (WE were all teachers.) (*Bay*)

Interestingly, *Diana* pointed out that voice communication, which is considered a richer medium than text-based computer-mediated communication, was more constraining, at least as it was designed in Adobe Connect. Specifically, when using voice communication in Adobe Connect, *Diana* found that it was not very helpful because only one person could talk at a time; Adobe Connect seems to force turn-taking

that was not a natural way of communicating for *Diana* and her colleagues. So, *Diana* and her classmates complemented voice chat with text chat in Adobe Connect to communicate more effectively:

We usually have synchronous sessions on Adobe Connect. Voice on [there] ... is not that easy because only one person can talk at a time. Students usually type in the chat window. ... We also have back channel conversations in the chat window while the instructor is speaking. The instructor can see our comments of course. ... I can recall one time where I thought the instructor said a certain word and I typed that in the chat to clarify. The word I thought she said made the comment funny. I got clarification on what she really said. ...: I think it was something about having cookies spread out on her bed, but she really said copies. (*Diana*)

In addition to shaping learners' communication, computer-mediated textual communication also mediates the presentation of the self online. Trustworthy learners presented authentic, consistent selves; untrustworthy learners presented multiple, conflicting identities, depending on whether they were performing acts of trust or distrust in a public or private context. For example, some learners presented themselves as trustworthy others in a class context where their behavior was visible to all class members and the instructor. Privately, they engaged in untrustworthy acts as only their team members could see them and, typically, did not reveal them to the class or the instructor.

Learners in trusting teams repeatedly expressed that they "knew" their team members and trusted them. They based their interpretations on their team members' consistent and reliable performances of trustworthy selves. *Diana* aptly captured this notion: "I did not know them before the program. I know them now. Three of us roomed together at "conference name". We are friends now. We worked together quite well and have continued working together since then, to design "project", write "medium", and present at some conferences." Learners in trust-compromised teams reported that their

untrustworthy team members typically presented trustworthy selves in public forums such as online threaded discussion forums which were visible to everyone in the course, including the instructor, but then presented untrustworthy selves in private, team contexts.

Faith recounted how the online environment allowed her team member, *Alex*, to performed a trustworthy identity in public online threaded discussion forums which the instructor and the class, in general, could observe, but then performed an untrustworthy one, in private, during group work. It seemed that technology facilitated social loafing because it provides a veil behind which learners can hide. Accountability seems to be mediated online; if learners do not see each other as in face-to-face encounters, then they do not appear to be as accountable. As shared previously, *Alex* suddenly disappeared from their team's meetings and team work. He repeatedly promised to re-engage, but failed to live up to his promises. *Faith* concluded: "Alex was smart...he made himself look good on the class discussions but slacked off on the project."

Angus, a professional in his 60s in the field of technology education who recently completed a master's degree at a public university, also communicated the idea that text-based computer-mediated communication allows learners to create whatever identity they want to show because learners cannot "see" each other: "the other side can filter what they present... consider right now... you know I'm here... and responding... but am I talking to my wife at the same time? you don't know." *Zoeyu* seems to have aptly summed up the lack of accountability and potential dangers of text-based computer-mediated communication in mediating untrustworthy online identities. Online, some learners feel free to conduct themselves in an untrustworthy manner as they are not

subject to social constraints typically found in face-to-face interactions: “I am sure technology makes people feel more invincible and free to respond without the threat of how someone in person might respond.”

Some learners alluded to the constraints of communicating using text-based computer-mediated communication as the reasons that they were unable to get to know one another or that some learners were able to present different, conflicting selves. Getting to know one another is a critical precursor to assessing the trustworthiness of others and bestowing trust. Learners’ felt that text-based computer-mediated communication lacked affective expression and disembodied communicators. They found emoticons (e.g., smiley faces to express emotion) and paralinguistic features (e.g., lol) insufficient to compensate for the affective absence. Because of this constraint, many learners found it difficult to get to know each other as complex human beings.

John explained that the limitations of text in expressing oneself as well as the disembodiment of learners in computer-mediated textual communication destroy vital visual and auditory cues that can inform and clarify communication:

Text itself does not express or indicate emotion. Words in general can be traps for our thoughts and ideas. A medium that is all text and some emoticon carries with it skepticism... social interactions are about communication... 80 percent of that is body language... I have been told and I do believe that more than what we say, our language and intent, is communicated through body language... it is not what you said but how you said it... tone and demeanor and body language add a lot to our words. (*John*)

Interestingly, *John* added that computer-mediated textual communication may be more “truthful” as it is not mediated by the listener’s response to what is being said; that is, communication is presented by the speaker as intended and is not altered based on the listener’s response. In face-to-face conversation, speakers adapt what they are saying

based on the feedback (e.g., visual cues) that they interpret from listeners. This adaptation may not represent what speakers originally intended:

... If I am having a conversation with someone online who is to say that if I were standing in front of you reading your expressions as I speak that I would say the same things or even believe the same things? In that way text can be more revealing of the truth. (*John*)

Furthermore, *John* felt that disembodiment also robs online learners of their social presence by dehumanizing them to the point that learners feel that they are working with an “email address” instead of a person. This dehumanization inclines the “lazy student” to engage in more self-centered, untrustworthy behaviors and, thereby, to care only about “himself and the teacher”:

because once you have a face or understanding that there is a human being there and not just an email address it becomes more about working together with that person. [If] not then the only real person the lazy student cares about is himself and the teacher. (*John*)

John felt that text-based communication limits, alters, and misleads communication because it lacks affect and is disembodied. Effective communication requires richer cues—tone, demeanor, and body language.

Charlie, a training professional in his 40s who is also studying for a master’s degree at a public university, also posited that because text-based computer-mediated communication lacks a visual component such that learners cannot see each other, it acts as a barrier to getting to know others and, therefore, to developing a relationship with them. For *Charlie*, social learning is reduced to task learning; relationship building does not have a place in online learning:

The hardest part I think is developing a relationship with anyone else. Not seeing a face, or just a small avatar, make it hard to gauge a personality. But all in all, with other students, we accept each other, like them or not, to get the task at hand completed. And we really aren’t there to build a relationship. Which is disappointing. The lack of a face-to-face interaction does have a lot to do with it.

All my undergrad work was in classrooms, 5 hours a night for 8 week semesters, I worked, and studied with the same group of people for 6 years. You build those relationships. (*Charlie*)

Because text-based computer-mediated communication mediates both communication and the social construction of identities, it logically also mediates online performances of trust. By communicating clearly and presenting an authentic self, learners performed trustworthy acts. Conversely, learners who did not communicate in a timely manner, or at all, and presented different selves, depending on the context, performed untrustworthy acts.

RQ4: How does trust shape the social construction of knowledge? That is, how does trust mediate learners' social construction of knowledge in online social learning?

Finding 10: All learners in trusting learning teams and half of the learners in trust-compromised learning teams indicated that trust among learners engenders a safe emotional and intellectual environment for online social interactions and learning. In this environment, trusting relationships mediate learners' online social construction of knowledge by encouraging them to take risks such as expressing their vulnerabilities—personally and academically. One learner indicated that trust in online learning technologies is also necessary to create a safe intellectual environment.

Learners identified a number of risks associated with online social learning centering around the notion of disclosures: disclosure of the self, disclosures of what they do not know, and disclosures of what they do know. Learners expressed concern that online social learning maintains a record of all interactions that can readily be shared by anyone with anyone, including the entire Internet. For this reason, learners felt that they needed a safe emotional space, built on trust, in which they could share personal

information. Furthermore, learners expressed a need for a safe emotional space where they could expose their vulnerabilities in terms of what they did not know, to ask questions, and to ask for help. Finally, one learner posed an interesting, and quite real and practical, need for a safe intellectual space for doctoral students to share their ideas. Whereas the concerns about personal privacy and competence focus on vulnerabilities emanating from others' judgments, the concern for an intellectual space emerges from the concern that original doctoral research may be misappropriated, thereby, jeopardizing learners' academic futures. The common theme among all these concerns centers on whether learners can trust each other. Only one learner expressed concerns about potential violations of trust resulting from the use of specific technologies (i.e., Google Docs).

David and *Faith* capture learners' concerns regarding personal privacy. Whereas *David* felt that, in time, learners get to know each other online and develop trust such that they can share personal information without fear of judgment, *Faith* preferred to keep her private life offline. For *David*, learners' relationships are, eventually, characterized by friendship such that it becomes natural to make personal disclosures without any fear that someone will betray that confidence. Personal vulnerability and risk are mediated by trust. *Faith*, however, did not share that sentiment. She felt that meeting online rather than face-to-face made a difference in establishing a personal connection. She shared that in face-to-face encounters, the learners would have connected on a personal level because they would have talked about personal things. Online, however, communicating "takes a lot of effort," and does not appear to be a safe place to share personal information. Text-based computer-mediated communication requires typing that "can be a pain" as well as

creates a record that can be shared without your permission. It appears that, online, others cannot be trusted to keep personal things private:

trust is something that you can share with someone in an online sense, where you feel open enough to share your thoughts on both the degree program, but also outside information. ... Well, I think that inside the online environment, people are often afraid of "facts" about their lives getting out there into the online environment. I think in that sense, there's a vulnerability. But when I consider online friendships, I think that there's an initial curve where you're meeting people are aren't sure if they'll understand your tone, your humor, your thoughts about the degree, or class. But after you've established at least some trust and comfort, you feel less vulnerable to judgment (*David*)

[In person] I think we would have made time to talk about more personal things. Online takes a lot of effort...and I don't like to share personal things online. First of all typing can be a pain...and the text become a "record." Just a private person I guess. A record can be shared without your permission. Don't like that. (*Faith*)

Maggie shared *Faith's* sentiment that online responses are “records” that can be shared without permission. *Maggie* is careful about sharing her opinions, especially adverse ones, online because others can manipulate and share her words at will:

Online team work means you don't see each other, and most of opinions that you share, can be recorded in texts, or audio. In that sense, I would be even more careful, in terms of sharing my opinion with my team members, especially negative opinions toward the course itself or the professor. ... When opinions are typed down as texts, it feels more formal and permanent. (*Maggie*)

Lily clearly articulated the connection between personal and academic disclosures.

By creating a personal bond, personal trust, learners were able to create a safe environment where they could share both the personal and academic challenges they faced and which impacted their social learning. Learners in *Lily's* team openly communicated when they needed help and when demands in their personal lives “interfered” with their academic commitments to the team. Because of these academic and personal disclosures, the rest of the team members were prepared to “pick up the pieces where need be”:

With the people I trusted, I depended on them more. I asked them for their opinion, and I considered their opinion. I was able to engage in intellectual conversations with them and open myself up to another point of view and experience. With those I didn't trust as much, I didn't value their opinion. I suppose you could say I was less interested in what they had to say. Their effort level and experiences in class showed me that they didn't have similar goals and that they didn't take education as seriously. I don't mean to say I was rude to them, but I didn't engage with them outside of the specificity of the project. Those I trusted, I was able to joke with, laugh with, and be more vulnerable in my admission of not understanding something or needing help. ...Our emails started very formal... Then they started becoming more relaxed. We all still addressed each other respectfully and maintained a safe environment... But, though I've never seen these people, I feel like I "know" them. ...In the "name of course" project, we had a great balance of personalities. While people's personalities don't shine through online right away, they certainly do eventually present themselves in a unique way. Throughout the first few weeks, we were mainly trying to figure out each person's role. Through that process, people started taking on different roles — the role of leader, supporter, editor, facilitator, etc. We tried to keep with those roles throughout the following weeks, but there were definitely times when we would need each other to help us out. We formed a great bond through the gmail chats especially that allowed us to be comfortable asking each other for help. For example, some of the participants had children or had to be to bed by a certain time, or they had prior arrangements throughout the week. They would just let the team know, and we would pick up the pieces where need be.
(Lily)

Maggie voiced learners' concerns about exposing their academic vulnerability to team members and some team members, in turn, broadcasting that vulnerability to others:

In the environment of online learning, trust is to believe that your peer learners can do works that they are assigned to, and you can share your opinions with them without being worried about they being judgmental, or re-sharing with others.
(Maggie)

Maggie also highlighted doctoral learners' needs for a special kind of trust. Doctoral learners have unique academic requirements and goals. They are required to conduct original research which they develop over the course of several years, in the context of various courses. In the process of developing expertise in their area, they may share their thoughts in class assignments or team projects. Untrustworthy team members may

misappropriate others' intellectual work as their own in future publications, thereby, compromising the original learners' creations:

In terms of doctoral study, there is another level of trust: the results you post onto the shared document, can be used/copied by another team member, as part of her/his publication in the future. (*Maggie*)

Although all these learners expressed concern about how others could misappropriate private or academic information, one learner expressed concern about how certain technologies could violate learners' trust. Specifically, *Diana* was a member of a four-learner team that used Moodle, email, Skype, and Google Drive to communicate and collaborate on their team work. At one point during the course, her professor made her team aware of security and ownership issues involved in using Google Drive.

We designed a course in Moodle and mostly communicated using e-mail with a weekly Skype meeting. We also communicated in the comments section of Google Drive (documents) until a professor told us there were security/ownership issue with Google. ... We were told about an author who had issues getting his journal article published because it was posted on Google Docs. So we went and read the fine print on that website and they can do whatever they want with your content once it is posted. We moved our stuff off. Now we are using Microsoft OneDrive and just started using HackPad too. (*Diana*)

Finding 11: All learners in trusting learning teams found that trust shaped their social construction of knowledge by encouraging them to turn to other learners within their teams to enrich their learning experiences and outcomes. Conversely, all learners in trust-compromised learning teams primarily trusted themselves to facilitate their learning and secondarily others. Trust, therefore, mediated learners' social construction of knowledge in online social learning by influencing whom they relied upon to shape the quality of their learning experiences and outcomes. A small minority of learners, 10% in trusting and 5% in trust-compromised learning teams, identified two conditions of social

learning (online threaded discussion forums and cooperative learning) in which they felt that trust may not be needed.

The majority of learning teams, both trusting and trust-compromised, were challenged to achieve optimal cohesion whereby they could leverage their synergy to achieve optimal learning performances. They were plagued by some team members who engaged in social loafing to the point that team performances were lowered or prevented from attaining their original goals. A minority of learners were able to achieve positive synergy such that they excelled in achieving their goals, even maintaining a relationship and collaborating on other projects after their course work was completed. Regardless of whether learners experienced collaborative learning colored by social loafing or not, they all agreed that social learning is a more effective learning approach. The majority of learners also supported the idea that trust shapes more satisfying and effective social learning experiences. As *Angel* explained: “I think that trust is important for the group to function. If we had to make sure the other members were doing their part constantly we would not be able to get anything done.”

Learners felt that social interaction, a defining factor in social learning, is critical in shaping the quality of learning. Social interaction facilitates sharing of ideas and provides a model of how others think. Social interaction is a motivator because it is inspiring. *John*, who began as a member of a five-person learning team and ended up in a two-person learning team because three learners engaged in social loafing, described the compromised view of collaborative learning that still maintains the importance of collaborative learning:

I appreciate the group dynamic ... she [the remaining trustworthy team member] and I grew closer because of the drama and we also discussed the subject matter

in detail... Like being in a classroom. Seeing how people think and draw conclusions from things can be inspiring. (*John*)

Because *John* was able to trust only one out of five team members, his opportunity to share ideas was limited to one learner. Furthermore, his opportunity to observe models of how others think was also limited to the same learner. Trust, therefore, shaped whom *John* could rely upon. The trusting relationship between *John* and one team member mediated their social construction of learning by constraining it to their knowledge, their thinking, their models.

Because *Faith* observed her team members' performances of trust on the online threaded discussion forum, she felt that they were trustworthy—trustworthy enough to join them and to choose a more challenging learning project. When a key team member, *Alex*, disappeared from *Faith's* team, the remaining team members had to renegotiate their relationships and work effort. The loss of trust that the team experienced by *Alex's* untrustworthy behavior prompted the rest of the team members to rely on themselves and each other even more so. Their interdependence shifted away from the social loafer:

Because I trusted them, I decided to join them in the big project...we could have easily taken a smaller project and gotten a good grade but I trusted them to do the work.... Trust definitely influenced which project we decided to take on.... Not only to Robert but trusting myself...since I wasn't an expert on "subject area" training. I had to rely on myself a lot more...since we had to take up the slack. (*Faith*)

Conversely, *Saoirse*, a member of a trusting team, showcased *John's* notion of the benefits of working with others. Trust widens the circle of learners upon whom you can rely and, thereby, broadens learners' exposure to different ideas and knowledge. Because *Saoirse* and her team members trusted each other, they became more creative and prolific problem solvers. They had many ideas for solutions that they shared with each other, and they built upon these ideas to collaboratively create a solution:

Oh, my goodness. We had so many ideas. Tim really wanted to try flipped classroom lessons (students watch a video he created at home then work together on the topic presented in the classroom the next day/week). Ellen had access to iPads so we were collaborating on different strategies for devices. (*Saoirse*)

Charisse characterized trust as a hallmark of social learning because social learning, as compared to competitive learning, requires deeper interaction. The implication of this is that learners rely on those they can trust, those that share their direction, to engage in social learning activities:

If, for example, you're learning, like group project, everyone is on the same direction, you don't compete with each other, but you need a much deep level interaction with other learners in order to finish the project, then trust play a role in this situation. (*Charisse*)

Lily spoke in general terms about how trust influenced whom she relied upon and how these reliances mediated her learning. Her observations are significant because they point out that learners not only rely upon other learners, but evaluators as well in their social learning. *Lily* expressed the vulnerability inherent in trusting others and the rewards from trusting learning experiences. Although trusting others exposes learners' understandings and perspectives, it also affords them an opportunity to be happy and to further their understanding. Ultimately, *Lily* trusts in others who will be professional and mature as social learning partners:

While group projects are fun and we can all learn so much from each other, it's all about furthering ourselves as people and professionals. When we put trust into another person online, we have to know that they are going to support that and share that goal. If they don't, it's difficult to trust that they will be good teammate or a good person to learn from. ...In online learning, we are putting ourselves out there, making ourselves vulnerable, and opening ourselves up to being wrong and to struggle with concepts and unfamiliar ideas. So trust plays a huge part in being able to do that so we can be happy, further our understanding, etc. And often not to just a few people...but people who are evaluating you, considering how deep your understanding is, agreeing, disagreeing...and in some cases, there are conversations we have online that put us at risk of offending people. That goes back to the basic trust of online environments...that we have to trust that people will at least be professional and mature. (*Lily*)

Lily revealed another salient aspect of trust which relates to the idea of trust involving letting go of control, of deferring to others' judgments, ideas. *Lily* described that trusting other learners can be challenging at times as it requires one to respect the decisions that others make and which may affect one (e.g., one's grade); it requires respecting other's ideas even though they conflict with one's ideas; it requires a non-judgmental attitude toward differing opinions and a give and take attitude. It requires accepting failure. *Lily* found herself in the position that she disagreed with a team member regarding one aspect of their project. Although *Lily* conducted research to confirm her understanding of what was required, she was unsuccessful in "convincing" the other team member that they needed to make any changes to that aspect of the project. *Lily* trusted the other team member and accepted her assessment that the project was "fine" just the way it was. Ultimately, *Lily's* understanding of the assignment and the requisite changes proved to be correct as the instructor marked that portion incorrect and deducted points from the team's grade:

On the other hand, my trust in a person in another project was broken...She was our team leader and did a phenomenal job with leading our team through a very difficult project. And 95% percent of the way through, she had done a great job with her work in the project as well. But, as all people do something, she dropped the ball on the last 5%. I have a great deal of respect for her, but I feel like she thought she had put in enough work. She didn't seem willing to keep going to the very end and truly make our work the best it could be. Looking back, I could have pushed harder, but I didn't want to offend the work she had already completed. It was the last section of our project that she was responsible for working on..And she attempted to group two parts of the assessment into one (less work...). The rubric and the project details listed clearly (in red) that these two parts were not to be grouped. So, I tried to respectfully tell her about this. So, she basically took half of the text from one part and half from the other and put them into the two different sections. It worked okay (we got a 1/4 for each of those parts), but when I attempted to demonstrate how we could change the project, she rejected the changes. She said something like "I really think it's fine the way it is." And, I had to respect that. I could have gone through and changed that section and submitted without her knowing...But, I had enough trust in her to say, okay, maybe it really

is fine the way it is. When we received our results, it wasn't fine. Not a HORRIBLE deal, but it did jeopardize a portion of a project we spent 8-10 weeks on. And when you're working as a team, everyone's names are on it....So, that was a difficult situation. [I was] frustrated [that she said the project was fine]. Because as a group, we weren't shooting for "fine." We were shooting for "this is our best work." (*Lily*)

Although most learners spoke enthusiastically about the salient role of trust or lack of trust in shaping their online social learning experiences, a small minority (2 of 30 [7%]) of learners, envisioned two social learning contexts in which trust does not play a role: online threaded discussion forums and cooperative learning activities. *Kelly* described two scenarios—one in which three learners worked together as a team and another in which the whole class could be viewed as a team. In the first social learning context, the small team, *Kelly* felt that trust was necessary to promote successful learning outcomes. In the second context, however, *Kelly* felt that trust most likely does not play a role as one does not form personal relationships with other learners at the class level. The differentiating factor seems to lie in the type of interdependence among learners. In the team activity, *Kelly* and his team member were interdependently linked by a goal (a common grade). In the online threaded discussion forum activity, *Kelly* is only loosely interdependently linked to the other learners. Although they read each other's posts and respond to them, their individual grades do not depend on one another's contributions:

Well, the previous example I mentioned meant that two of the three of us did more of the work load, in my opinion. In that case, I just led the work in the direction that I thought it should go. Fortunately, the other strong member of the group was equally dedicated to the success of the project and we worked well together. So, that was a possibility of trust at work. In other classes, I am not sure that "trust" is a factor that develops. I have a class now where people may give feedback to my posting regarding an assignment. It is not of any real importance to me who they are and whether or not I "trust" them. In fact, I'll never get more than a sense of who they are. (*Kelly*)

Diana differentiated collaborative social learning from cooperative social learning in order to explain when and where trust is needed. In a cooperative condition, trust is not needed because learners complete their individual sections without input from any other learner. In a collaborative condition, learners may work independently, but they also work interdependently. They read each others' "stuff" and may change it which requires trust. Such interactions also have the reciprocal effect of building trust:

When you say working online, I usually think about collaborating on a document. You could go about it two ways. You could divide it up and let the other work on their section alone as you work on yours. That is called cooperating. A better way is to work on the sections and help each other with their section, which is collaborating. Collaboration takes trust, and it probably builds trust. If you do not trust someone, you do not want them reading your stuff and changing it. (*Diana*)

Finding 12: An overwhelming majority of learners in trusting (80%) and a majority of learners in trust-compromised (60%) learning teams reported that they had observed social loafing (e.g., free riding, joy riding, hitch hiking) in their current or previous learning groups. Moreover, they described how social loafing, by even only one member of a learning team, compromises team trust that, in turn, adversely mediates learners' online social construction of knowledge. Social loafing breaches team trust and forces trustworthy team members to carry an unfair burden of the learning effort. Of these learners who reported social loafing, 20% in trusting learning teams and 10% in trust-compromised learning teams expected social loafing in every social learning experience.

Social loafing is a pervasive and common problem that compromises interdependence and, hence, trust among learners in the context of social learning. Instead of sharing the learning effort, social loafers force engaged learners to undertake a greater learning effort by carrying the burdens left by social loafers. They also place learning outcomes and successes at risk. Although the challenges presented by social

loafers force engaged learners to extend their learning beyond what they initially envisioned, they also constrain them. Specifically, social loafers deprive learners of their knowledge and experiences that may shape their learning experiences differently. Social loafing makes learners feel that they are losing control over their learning outcomes and successes as their grade depends on untrustworthy and, hence, unpredictable, others. As *Peter*, a learner in his 40s, studying for an undergraduate degree at a public university, explains:

The professor assigned us to teams of 6. Kathy volunteered to be the organizer so she emailed everyone to start the team project. Only 3 of us responded. I offered to be the editor. 3 just ignored Kathy. We knew we couldn't trust them and had to do all the work by ourselves. Kathy emailed the professor about them and he ignored us too. It wasn't fair, but what could we do? We decided to split up the work. It was a lot to do. We had to analyze a case study and write a paper about it. A few weeks later, the other 3 showed up. They had all sorts of excuses. One even said he didn't have his book, but he was participating in online discussions. He needed his book for them. So, we split up the work differently again. It was pretty chaotic and I was very stressed. Kathy didn't pay attention to the word count, so she didn't tell everybody to watch how long their parts were. I ended up having to edit a document that was twice as big. It was exhausting to edit it because I basically had to do the research for all parts and rewrite everything. Everyone had good ideas, but the chaos in the beginning with the 3 guys not helping set us up for a really bad situation. I learned from this project, but mostly I was just stressed and tried to get it done. Because we were going to talk about trust, I thought about what happened to trust with us. It was clear from the beginning that the 3 guys knew that they could just slide because we were going to do the work and they could come in at the last minute and still get a passing grade. They showed from the beginning that they could not be trusted. They didn't care what we had to go through to make up their work or how it was going to affect our grade. They just looked out for themselves. (*Peter*)

Angel's experience with social loafing was especially distressing. It is significant in that it presents a view of the social learning experiences of learners with disabilities that reveal the importance of trust not only among learners but between a learner with disabilities and the instructor who is supposed to support him. *Angel*, a learner in his 20s studying for an undergraduate degree at a public university, was a first-year, honors

college student with disabilities. He has processing challenges which require that he be given double time accommodations for writing assignments. His instructor was aware of *Angel's* disability and accommodation requirements. She agreed to the accommodations. However, she did not provide the time extension for the group writing project. In doing so, she breached the trust that *Angel* had placed in her by sharing his disabilities and asking for accommodations. *Angel* shared that he was a member of a 3-learner team who were tasked to write a research paper. Each learner wrote one section of the paper; however, only *Angel* and one other team member synthesized and edited the final document. The third learner and social loafer, *Frank*, disappeared. This placed a tremendous burden on *Angel* as writing is his most challenging academic activity. *Angel* attempted to email *Frank*, but *Frank* ignored the emails. *Frank* breached the team's trust because, for *Angel*, trust means believing that others will do their part, without monitoring: "I think that trust is important for the group to function. If we had to make sure the other members were doing their part constantly we would not be able to get anything done."

When *Angel* tried to obtain additional contact information for *Frank* from the instructor, the instructor emailed him that she did not have any additional information. Furthermore, she did not intervene to ensure that *Frank* also participated or to provide any time extension. *Angel* felt that she showed no regard for his special needs. He added that the instructor also assigned impromptu writing assignments due within 1-2 days, completely ignoring his accommodations, and further stressing *Angel*:

We chose sections in class and did a write up. We then made changes to the document asynchronously. Another member did a lot of writing and editing as well, but I did most of the work connecting everything together. There were three of us in the group. The third member did not contribute much to the essay outside

of writing his section. There were unexpected assignments which kept me on edge throughout. There were a lot of writing assignments given. Most of them were on the syllabus but she would assign 300 word essays through Canvas [while I still had to complete the scheduled assignments]. ... The work load was often intensive. [She notified us of these impromptu writing assignments during] school days and evenings. [We were given] sometimes as little as one or two days [to complete them]. I struggled but I was able to keep up with the assignments. It takes me time to write and I often had to rush the writing assignments to keep up. I need more time than other students but I did not get the additional time. ...[The instructor] knows I need the extra time but he did not provide the extra time for the assignments. ...Most of the issues I faced [in my group work] was in meeting up with them. When I asked my instructor for the contact information of my group members she could only provide their names. (*Angel*)

Mary, an accounting professional in her 40s who recently completed an undergraduate degree at a public university, recounted her experience with social loafers. She referred to them as “joy riders” because they were learners who enjoyed the benefits of a ride without paying for it; essentially, they were given a grade without earning it. *Mary* shared that she had to carry the burden for the social loafer in her team. She did not think about it very much as she focused on completing the work. *Mary* also expressed sympathy for the social loafer. She did not report his conduct to the instructor because she did not want the social loafer to fail:

To be very honest, I was always the group representative and I ended up doing most of the work. ... We called them joy riders. "People enjoying a ride that they have not paid for".... We did not let him [the instructor] know [that one of the team members was not doing any work]. [I felt] sympathy [for the social loafer]. I would not want any person to fail and I end up carrying the blame. (*Mary*)

Saoirse contrasted two social learning experiences: one with a social loafer and one without to highlight the joy of a trusting learning experience and the pain of one lacking in trust. The former experience, as often reported by learners, required that the active team members compensate for the work not completed by the social loafer. In the latter experience, learners did their fair share even though the project goal was more extensive:

In one class (do you want specific class titles?) we had to collaborate on a small paper between four students. There was one participant who did not follow up or provide necessary information before the deadline and three other students covered the deficit. I had the opposite experience with another course where three of us collaborated on a very extensive project that spanned many weeks, and we had an amazing experience. (*Saoirse*)

Faith described how *Alex's* sudden social loafing placed the team at risk of failure because he provided critical subject matter expertise and leadership. *Faith* and her remaining team members were challenged to fill the knowledge and leadership gaps left by *Alex*, the social loafer. If you will recall, *Alex* also stopped acting as an intermediary to the client. Without client feedback, the team members were unsure whether they were developing an appropriate solution. Their work product, therefore, suffered because of *Alex's* ongoing violations of trust. Their workload increased significantly as the rest of the team had to pick up the "slack." This forced them to exert greater learning effort and, thereby, achieve greater individual learning outcomes. Taking on greater learning effort was rewarding, but also stressful, as a heavy course load already burdened each team member. Personally, they also suffered because they had invested themselves in this work effort and felt that they were doing something useful, something real. When *Alex* breached the team's trust, *Faith* redirected the trust she had in *Alex* to herself and another team member, *Robert*, who assumed the leadership role. Together, they completed most of the project. *Alex's* behavior jeopardized this learning experience:

Our design was suffering because we weren't sure if we were designing the product to meet the clients' needs. We needed client feedback ...it was frustrating. We had worked so hard and we had really "bought in" to the idea that we weren't just doing an exercise we were actually doing something that benefited the client ...real world "type of work" not just a mock up. ... I learned a lot more about "area of study" because we took on the project [and *Alex's* social loafing]. Learned about needs assessment, the importance of the client and stakeholders, and subject matter experts. Trust definitely influenced which project we decided to take on...and what we learned as a result. Not only to *Robert* but trusting myself...since I wasn't an expert on "subject area" training. I had to rely on

myself a lot more...since we had to take up the slack. It should have been an "easy" course...but the workload grew exponentially. Easy if everyone had done their job that is. ...Well he [Alex] didn't show up for about 4 meetings...and decided to show up right before we were to make the presentation of our design to the class. ... He didn't even help with designing the presentation...but we gave him a slide on interaction with our client. We all got A's ...including Alex.
(*Faith*)

Learners, who reported social loafers in their teams, also added that they expected to encounter social loafers in every online social learning experience. One learner even added that she expected social loafers in face-to-face social learning experiences as well:

I have found this to be a problem with most of the classes that I have taken that require team work. Someone always needs to take one more than others and then others get to coast. I am sure that this type of "dropping out" during the hard work and showing up for the "praises" happens quite often. (*Faith*)

I have a friend who is working on her third degree and she hates group work. She wants to have her classes where they are self-paced and she can just do the work and not have to have the interaction with other students. Always a free rider in the bunch. (*Grace*)

I had the experiences of working with teams in classroom, turned out that there would be always at least one person in your team that won't do the work that they were assigned (*Maggie*)

Yes [it is common to have a social loafer in your group]. We had one person who frequently gave excuses. (*Mary*)

Summary

This chapter presented the twelve findings emerging from this study. The findings were organized according to the four research questions that guided this study. Data from 30 one-hour initial interviews and 30 half-hour follow-up interviews with the same learners revealed learners' interpretations of performances of trust among learners in the context of online social learning. In the tradition of qualitative research, extensive samples of learners' quotations are included in this chapter. By referring to learners'

words, the researchers hopes to communicate the interpretation of realities experienced by the learners in the learning contexts studied.

The three findings for Research Question 1: How do learners perform trust in social interactions in the context of online social learning? were: All learners viewed trust as, primarily, ongoing performances of consistent, reliable, and competent social learning behaviors. Approximately half of the learners in both trusting (45%) and trust-compromised (55%) learning teams also viewed trust expressions of care. An overwhelming majority of learners in trusting learning teams (90%) learners felt that knowing one another facilitated social interactions, performances of trust, reconciliations from breaches of trust, and successful collaborations. Almost half of the learners in trusting learning teams (40%) appreciated that their instructors provided them with guidelines for successful social learning that they leveraged to structure their social learning activities.

The three findings for Research Question 2: How does trust shape the social relationships that learners form in this particular context? were: An overwhelming majority (90%) of learners felt that online social learning required them to trust their team members because they were interdependently linked to complete a task. Trust, or lack thereof, mediated learners online social relationships. All learners experienced breaches of trust. Learners in trusting learning teams had socially constructed a resilient and flexible trust that allowed them to recover from these breaches. Learners in trust-compromised learning teams were unable to build such trust and, hence, were unable to reconcile breaches of trust. All learners turned to someone—members of their teams, individual networks, or online resources—to supplement their learning.

The three findings for Research Question 3: How does computer-mediated textual communication shape learners' performances of trust in an online context? were: All learners leveraged the affordances of technology to learn more about each other and to assess each others' trustworthiness. Almost all learners (90%) in trust-compromised learning teams and a majority of learners (60%) in trusting learning teams felt that their instructors did not leverage the social affordances of technology to promote meaningful social learning. One learner provided an example of how instructors could utilize these affordances to create communities of learners. Trust mediated the effectiveness of computer-mediated textual communication. All learners in trusting teams felt that it was an effective tool to communicate affectively and academically. All learners in trust-compromised teams found of computer-mediated textual communication problematic in communicating affectively and clearly.

The final three findings for Research Question 4: How does trust shape the social construction of knowledge? That is, how does trust mediate learners' social construction of knowledge in online social learning? were: All learners in trusting learning teams and half of the learners in trust-compromised learning teams shared that trust created a safe emotional and intellectual environment where they could share their vulnerabilities, such as personal concerns or academic gaps, without concern for judgment. Trust mediated learners' social construction of knowledge in online social learning by influencing whom they relied upon to enrich their learning experiences and outcomes. Whereas all learners in trusting learning teams could rely on anyone in their team, all learners in trust-compromised learning teams were inclined to rely upon themselves primarily and the remaining trustworthy learners in their teams. An overwhelming majority of learners in

trusting (80%) and a majority of learners in trust-compromised (60%) learning teams experienced social loafing in their social learning that adversely impacted what and how they learned. Of these learners who reported social loafing, 20% in trusting learning teams and 10% in trust-compromised learning teams reported that they expected social loafing in every social learning experience, regardless of whether it was face-to-face or online.

CHAPTER FIVE: ANALYSIS, INTERPRETATION, AND SYNTHESIS OF THE FINDINGS

This study explored learners' interpretations of how trust shaped their online social learning experiences, including their social interactions, their interactions with technology, and learning outcomes. The researcher hoped that a better understanding of learners' interpretations of trust could help educators support online social learners to develop trusting social learning practices. These practices were assumed to be more successful and satisfying learning experiences. By focusing on learners' perspectives in the context of online learning, this study addressed a gap in the research on online learning.

The findings reported in Chapter 4 reveal that one-third of the participants were able to develop trusting social learning practices while two-thirds of the learners struggled to do so. As anticipated at the outset of this study, the primary source of learners' struggles emerged from socialization challenges; that is, in developing trusting social relations. Online learning requires that learners be able to develop trusting social relations and social interactions with fellow learners and their instructor(s) to support collective online learning (Johnson & Johnson, 1994). Confirming research on socializing in online learning, learners found that online technologies may support socializing, but it is (a) *socialization* in the context of learning, (b) *course design* that explicitly manages

the content and social dimension of online learning, and (c) *instructor intervention* that “causes the socializing to occur” (Thompson & MacDonald, 2005, p. 245).

This chapter analyzes learners’ reflections of their online social learning experiences to shed light on the factors and conditions that may facilitate and promote trusting online social learning. Whereas the purpose of Chapter 4 was to “split apart” and separate “out pieces and chunks of data to tell the ‘story of the research’,” the purpose of Chapter 5 is “an attempt to reconstruct a more holistic understanding...to depict a more integrated picture, and what emerges is a layered synthesis” (Bloomberg & Volpe, 2012, pp. 187-188). Therefore, the findings from Chapter 4 were subjected to two additional levels of analysis. First, the findings were interpreted based on the *relevant theories and research on trust* to discover the themes that emerged from learners’ stories. Second, the findings were also subjected to a more broader level of analysis in the contexts of *higher education and American society* both of which have the potential to facilitate and constrain the construction of trust in online social learning. As Steinkuehler (2005) notes:

One of our challenges in the analysis of human activity ... is to ground our interpretations not only in the micro-details of what people do *and* say, but also, and just as crucially, in broader claims about the ‘forms of life’ that render those activities meaningful – the values, identities, worldviews, and philosophies that function in ways that enable us to recognize when one is being a particular sort of someone, doing a particular sort of something, and not something or someone else (pp. 23-24).

A concern in reporting research is that it can be fundamentally “messy, intensely frustrating, and fundamentally nonlinear” (Marshall, 2010, p. 55), but presented in a “pristine and logical” manner reflective of ‘the reconstructed logic of science’ (Kaplan, 1964, p. 67 cited in Marshall, 2010, p. 55). A potential consequence is that ‘through such highly standardized reporting practices, scientists inadvertently hide from view the real inner drama of their work, with its intuitive base, its halting time-line, and its extensive

recycling of concepts and perspectives' (Bargar and Duncan, 1982, p. 2 cited in Marshall, 2010, p. 55). To effectively present the complexities of this research; yet, follow a systematic approach consistent with interpreting the findings from Chapter 4, this chapter is firstly organized at a higher level according to each research question:

Research Question 1: "How do learners perform trust in social interactions in the context of online social learning?"

Research Question 2: "How does trust shape the social relationships that learners form in this particular context?"

Research Question 3: "How does computer-mediated textual communication shape learners' performances of trust in an online context?"

Research Question 4: "How does trust shape the social construction of knowledge? That is, how does trust mediate learners' social construction of knowledge in online social learning?"

Secondly, concepts and perspectives are recycled among research questions where interrelated facets of the role of trust in the social dimension of online learning occurred. For example, learners' explication of their social theory of trust (Research Question 1) also addresses the role of social relationships (Research Question 2), technology (Research Question 3), and learning (Research Question 4). Concepts and perspectives from Research Question 1, are, therefore, recycled and expanded upon when discussing the remaining research questions, and conversely.

The most profound insights in this secondary level of analysis centered on three realizations. *First*, learners in this study emphasized the "spirit" of trust, or moral trust, rather than rational trust based on skill acquisition. This notion differs from prevalent studies on social learning that promote a *rational perspective* of trust and maintain that developing trusting behaviors depend on acquiring the necessary *skills* rather than developing a moral character. The spirit of trust incorporates a *virtue of caring* that is

learned through *moral socialization* in an academic setting. Through academic moral socialization, learners learn how to become *humane participants* in the context of social learning.

Second, unlike traditional research on trust which assumes a prevalent theoretical orientation such as rational trust, philosophical trust, sociological trust, among others, the research findings in this study support learners' references to a multi-framework understanding of trust. No doubt this is reflective of Wuthnow's (1995) observation that "Real life is more complicated than any of our theories" (p. 182). As indicated by the learners, a single learning experience is very complicated. It involves many different contexts that demand different types of trust. Learners described various circumstances warranting trust during their social learning experiences. Depending on the context, they identified the appropriate, relevant framework of trust (Sztompka, 1999). For example, when discussing learning tasks, learners adopted a rational approach to trust. When discussing learners' roles, duties, and obligations to each other, they adopted a philosophical/moral approach to trust. Therefore, depending on the context, learners explained their understanding of trust in relevant and different terms. Learners' contextual analysis and understanding of trust support Blomqvist's (1997) contention that trust is context-specific and, therefore, requires a context-specific understanding and explication.

Third, a variety of sociological factors external to group learning exert their influence upon learners' experiences of social learning. Learning occurs in academic institutions that are part of society. As such, learning is influenced by socio-economic-political factors that shape social life. Society identifies what it deems is appropriate

norms of conduct in learning institutions. Economic factors exert a significant influence on what learners should learn in academic settings. Moreover, political factors influence how learning is assessed. These socio-economic-political factors affect what and how educators teach as well as what and how learners learn.

The following sections, organized by research question, begin with an interpretive overview and then proceed with a detailed analysis of each interpretation. The overview attempts to introduce key themes that emerged from this secondary analysis of the data. The detailed analysis attempts to understand these themes in the context of the prevalent perspectives of trust found in the research on rational, philosophical, and sociological approaches to trust, in general, and Sztompka's (1999) and Weber and Carter's (2003) sociological theories of trust, in particular.

Research Question 1: “How do learners perform trust in social interactions in the context of online social learning?”

An interpretation of the three key findings for this research question reveals that *Finding 1* articulates learners' social theory of trust, *Finding 2* focuses on the relational aspect of their social theory of trust by presenting learners' desire for camaraderie, or community, as an important social structure in shaping trusting learning relationships, and *Finding 3* reveals learners' needs to be socialized as social learners.

Learners in this study were apprised of its goal; namely, the study of trust in the context of online social learning, and thus attempted to address the topic of trust. However, they primarily talked about trust in terms of its characteristics, varieties, functions, and commitments rather than talking about it directly. This is expected because trust is a very complex concept that permeates the social fabric of society. As Johnson

and Johnson (1994) reflect: “there is nothing simple about trust; it is a complex concept and difficult to explain” (p. 119).

Learners conceptualized their social theory of trust as dynamic and complex acts that are performed in social interactions with others. Their practice of trust began with a psychological dimension of trust, a predisposition, which was tested in the course of ongoing social interactions. Learners then described performances of trust in terms of relational and cultural acts which reflected prevalent perspectives of trust found in the research on rational, philosophical, and sociological research on trust (cf. Baier, 1986; Coleman, 1990; Fukuyama, 1995; Hosmer, 1995; Mayer, Davis, & Schoorman, 1995; Preece, 2004; Putnam, 2000; Sztompka, 1999; Weber & Carter, 2003). As such, learners’ social theory of trust confirms Proposition 1 of Sztompka’s (1999) sociological theory of trust:

Proposition 1: *Trust is multidimensional. It has psychological, relational, and cultural dimensions.*

Furthermore, learners’ understandings of the relational dimension of trust reflect Weber and Carter’s (2003) analysis of relational trust in friendships and love. Some learners described performances of trust in terms of Weber and Carter’s (2003) social construction of trust in interpersonal relationships. Specifically, learners described the social construction of trust as a practice of getting to *know* each other beyond their role identities, in a close and interpersonal manner. This process of getting to know each other followed Weber and Carter’s three-stage process of the social construction of trust through increasing self-disclosure and the co-construction of shared identities. As such, learners first tried to get to know each other generally (i.e., roles as learners) by noting trustworthy clues which helped them to interpret a sense of each other’s online presence

(Gayol, 2010); then deepened the process of getting to know each other as specific others (i.e., the person behind the role) through self-disclosures; and, finally, by identifying with others to the degree that they considered each other's perspectives into account when making decisions. In their studies of learners' perspectives on online learning, Stodel, Thompson, and MacDonald (2006) found that friendship was very important to online learners. It made them feel closer to each other and part of a community. This sentiment is also supported by the literature on social presence. Garrison and Cleveland-Innes (2005) identified emotional expressions such as self-disclosures as indicators of social presence. It seems, therefore, that emotional expressions or self-disclosures helped learners in trusting learning teams to develop a sense of each other's social presence which in turn facilitated trust- and friendship-building.

To summarize, learners' social theory of trust incorporates a sociological lens of trust where relationships among learners are viewed in a similar vein as friendships. Whereas learners in trusting learning teams experienced close, intimate bonds characteristic of friendships, learners in trust-compromised teams yearned for them but, instead, experienced more practical, task-focused interactions. Developing moral, friendly relations seemed to be a critical factor in ensuring satisfying and effective social learning relations.

The following sections explore the three dimensions (i.e., psychological, relational, and cultural) of learners' social theory of trust in the context of the research on trust and trusting relations.

Psychological Dimension of Trust

Learners described their initial performances of trust in terms of an *impulse to trust* (Giddens, 1991) which Sztompka (1999) explains as “products of successful socialization in the intimate, caring climate of healthy families” and ongoing experiences with trust (p. 65). Participants’ impulses were shaped by normative expectations of what characterize trustworthy dispositions and behaviors for people, in general, and for those who profess to be learners, in particular. They had learned these normative expectations as part of their primary socializations at home and secondary socializations in academic environments. Based upon these normative expectations and their previous trust experiences, learners developed predispositions to trust, or a basic trust as referred to by Giddens (1991). Learners’ impulses to trust constituted, what Weber and Carter (2003) explain as an *orientation* towards others (Sztompka, 1999). These predispositions to trust appear to have been mediated by additional factors such as the implicit nature of trust, learners’ interdependence, and the context of learners’ social interactions.

These predispositions also revealed that whereas some learners were high trustors, others were low trustors (Johnson & Johnson, 1994). High trustors believed in bestowing trust upon others until they behaved untrustworthily. Low trustors believed that others needed to earn trust. High trustors and low trustors were members of both trusting and trust-compromised teams. This distinction mediated, but did not appear to determine, learners’ decisions to extend initial trust. This study found that learners extended initial trust regardless of their impulses to trust. This is not surprising as a predisposition reflects an intent to behave in a particular way, but is not necessarily a predictor of such behavior (Ajzen, 1991). A potential explanation for this incongruity may be that the impulse to

trust is also “emotionally flavored...independent of rational considerations, [which] sometimes may support rational estimates, but sometimes may run against rational cues” (Sztompka, 1999, pp. 65-66). Given this argument, learners may, at times, have made emotional decisions to trust that belied their rational trusting predispositions.

Barbalet’s (1996) development of confidence, trust, and loyalty as “social emotions necessary respectively for the social processes of agency, cooperation and organization” further shed light on this incongruity (p. 75). He explains that *confidence*, the affective basis of human agency, is an emotion associated with the willingness to act—to “go one’s own way” (p. 77). Barbalet then extends the notion of confidence to *trust* such that trust is a particular form of confidence in the sense that trust allows one to be confident that others will behave as expected. Trust, therefore, “includes the feeling that one can somehow rely upon others” which makes it possible to confidently cooperate with others who “are free to act on their own behalf” (p. 77). In this sense, trust functions as the emotional basis of cooperation; it allows “social agents to act with regard to an unknown and unknowable future...*only* an emotional apprehension of circumstances can do this: thought and reason cannot” (Barbalet, 1996, p. 82).

Baier (1986, 1991), Blomqvist (1997), Herzberg (1988), and Lagerspetz (1992) also draw attention to this *implicit nature trust* which “is not given on grounds and is not a rational option” (Blomqvist, 1997, p. 273). They refer to it as a *trusting attitude*, or *social trust*, which is part of a basic conduct of life. It appears that social trust may also have mediated learners’ predisposition to act as high or low trustors. Participants appear to have extended a *generalized (social) trust* toward others at the onset of their interactions based on an “optimistic assessment of trustworthiness and willingness

...[which encouraged them] to take small risks on dealing with others whom one does not yet know” (Hardin, 2004, p. 62; Putnam, 2000; Sztompka, 1999). Or, know well. Social trust appears to have mediated learners’ predispositions to trust such that learners extended trust to others regardless of whether they felt that trust was warranted.

Learners *interdependence* may have been another factor motivating generalized trust. Macionis (2012) explains, “As members of modern societies, we depend more and more on people we trust less and less. Why do we look to people we hardly know and whose beliefs may well differ from our own? Durkheim’s answer was ‘because we can’t live without them’” (p. 94). According to Luhmann (1979), it is this increased risk and interdependence created by modern social complexity that demands that trust be extended. It is understandable then that both members of trusting and trust-compromised learning teams initiated their social interactions in a trusting manner, regardless of their predispositions to be high or low trustors. Furthermore, learners were interdependently linked from the outset and, therefore, were expected to trust each other (Johnson & Johnson, 1994).

The *location of social interaction* is an important clue to *social identity* that may encourage or discourage performances of generalized trust (Macionis, 1989). The location of social interaction in the context of this study was academic environments and the social identity of the participants was learners. Associations constitute social systems that are embedded with different types and degrees of trust, as well as sanctions for breaches of trust. As noted previously, the location of social interaction is important. Academic institutions enjoy a “sacred trust” in the Durkheimian sense of the sacred. There is a “sacred quality of the setting in which relationships take place” (Sztompka,

1999, p. 95) in the sense that academic institutions are considered in high regard where members are expected to conduct themselves ethically, morally, and in a trustworthy manner. As such, academic associations engender trust, thereby, influencing individual predispositions to trust.

Learners, as a group in society, are deemed to be trustworthy individuals. Their identity, to some extent, is known (Sztompka, 1999). As Conrad (2002) attests, “Unlike Internet users surfing the net or engaging in other types of fantastical, recreational activities..., there is no anonymity in online learning” (All Communities are not Equal section, ¶1). Therefore, it is reasonable that learners set aside their trusting predispositions to extend social trust to others in the trusted role of learners. Learners in both trusting and trust-compromised teams conducted themselves in this way.

Learners’ performances of the psychological dimension of trust confirmed Proposition 2 and its corollaries 2a and 2b which define the psychological dimension of Sztompka’s sociological theory of trust:

Proposition 2: *Agential trustfulness mediates the decision to trust (psychological dimension of trust).*

Proposition 2a. *Agential trustfulness is shaped by life experiences with trust.*

Proposition 2b. *Agential sociability mediates trustfulness and conversely.*

Learners informed their psychological predispositions to trust with relational information they garnered about their learning partners’ trustworthiness and their understandings of trustworthy cooperative relations.

Relational Trust: Learners’ Social Theory of Trust

Learners’ social theory of trust presents an understanding of trust which blends a *rational-moral perspective*. The moral overtones of trust are interesting because they

appear to counter the rational view of humanity promoted by modernity and postmodernity. Specifically, these eras view individuals as *rational* actors who are motivated by *self-interest to maximize their benefits rationally*. Traditional views of humanity consider individuals as moral actors who are guided by their moral cultures (Sztompka, 1999). Learners viewed each other as *rational* actors, but, more significantly, as *moral* actors whose rationality was facilitated and constrained by their morality. They envisioned the most satisfying and effective social learning opportunity embedded in a community of moral trust because such a community was more likely to ensure that others would behave in a trustworthy manner (e.g., reliable, consistent, competent, caring). Their moral views regarding the moral obligations learners have toward each other influenced the nature of their relationships and the varieties of trust demanded in their interactions.

A common theme in the literature on relational trust is that “*knowing others*,” or ascertaining other’s true personal identities, is critical to assessing other’s trustworthiness and, thereby, creating trusting relations (Sztompka, 1999; Weber & Carter, 2003). There seems to be an emphasis on *getting to know* others by gathering “trust data” on them and then assessing their trustworthiness to ensure one’s interests are protected. This view represents relational trust from the rational-choice theory perspective which considers relationships as an exchange where rational actors, guided by self-interest, attempt to “maximize their utilities (the goals realized, benefits achieved...) by rational calculations taking into account the available information” (Sztompka, 1999, p. 60). Despite acknowledging the importance and role of morality in shaping cooperative (i.e., social) relations, the literature on cooperative learning views cooperative relationships from a

rational perspective, requiring the acquisition of *cooperative skills*—even *moral skills* (Johnson & Johnson, 1994; Macdonald, 2003).

Although learners shared that they sought epistemological knowledge to inform their decisions to trust others, they emphasized the idea of trust as a *moral imperative* associated with the moral duties and obligations of the learner role which are based on *values* rather than *interest* (Baier, 1986; 1991; Johnson & Johnson, 1994; Sztompka, 1999; see Finding 1). Learners' social theory of trust, therefore, reflects what in sociology has been noted as a shift from a world of “hard” interpersonal relationships to “soft” interpersonal relationships. *Hard* interpersonal relationships focus on the socially embedded individual and are bound by interest and social capital. Conversely, *soft* interpersonal relationship focus on people as members of society, individually and collectively, who are bound by “right, proper, obligatory relationships, invoking values rather than interests as the justification for prescribed conduct” (Sztompka, 1999, p. 4):

After the long domination of the ‘hard’ instrumental picture of social ties based on interests and calculation, fiscally mediated relationships, individualistic, egoistic rationality, we witness the rediscovery of the other face of society, the area of ‘soft’ moral bonds. Viable society is perceived not only as the coalition of interests, but as a moral community.

This is not to say that *soft* bonds do not have the potential to fulfill one's interests and to provide benefits. Rather the primary goal of *soft* bonds is based on shared values.

The following sections consider learners' performances of trust in the context of interpersonal social interactions from the rational and moral perspectives.

Rational Relational Trust

Learners' rational relational information included epistemological knowledge about other's trustworthiness from what Sztompka (1999) categorized as primary sources

of information. Primary sources of trust information consist of other's immanent qualities: trust reputation, current performances of trust, and appearance and demeanor (Sztompka, 1999). Learners gleaned such information through direct social interactions with others and indirect observations of others interacting with class members, team members, or others within a shared group (see Finding 2). They used this epistemological knowledge to refine their general understandings of others' trustworthiness. Knowing others was important in ascertaining whether they could be trusted and would behave in a trustworthy manner in future interactions. Learners' descriptions of performances of trust and how they assessed other's trustworthiness confirmed Proposition 3 and its corollaries 3a1, 3a2 and 3a4 which define the relational dimension of Sztompka's sociological theory of trust and its role in shaping decisions to trust:

Proposition 3: *Relational trust is manifested individually or collectively. The trustor's epistemological knowledge about the trustee's or collective's trustworthiness shapes the trustor's decision to trust the trustee/collective (relational dimension of trust).*

Proposition 3a. *Primary trustworthiness: The trustor's knowledge about the trustee's past reputation concerning trust, current performance of trust, and appearance/demeanor shape the trustor's perception of the trustee's trustworthiness.*

Proposition 3a1. *The consistency of the trustee's past reputation of trust helps to shape the trustor's perception of the trustee's trustworthiness.*

Proposition 3a2. *The role of the trustee determines norm-based, role-specific congruent expectations and their corresponding trustworthiness.*

Proposition 3a4. *The similarities between the trustor's and trustee's identities, as evident from their appearance and demeanor, shape the trustor's perception of the trustee's trustworthiness.*

Sztompka (1999) prioritizes the primary sources of trust information, in order of importance, as follows: *trust reputation, current performances of trust, and appearance and demeanor*. Rather than prioritizing these sources of relational trust, learners seemed to deem them equally important depending on the trust context. Prior to, or at the onset of, their social interactions, learners attempted to discern other's trust reputations from

what they knew directly or indirectly of other's previous performances of trust—their *records of past deeds*—in the context of other social learning opportunities. Learners clearly articulated that the norms associated with trusted learners are consistent, reliable, competent, ethical, and moral acts of social learning. Such a perspective of trust is extensively featured in the research literature. Integrity and consistency are important in that they reflect honesty and keeping promises, doing the right thing, and fair treatment (Bews & Rossouw, 2002; Butler, 1991; Mayer, Davis, & Schoorman, 1995; Sekhon, Ennew, Kharouf, & Devlin, 2014). Learners' conceptualizations of rational trust were, therefore, assessed through a moral lens that will be discussed in the section on “Moral Trusting Relations.”

Learners reported interacting with current team members in previous courses (i.e., shared biographies) or observing learners' trust conduct towards others within “collectives” (e.g., cohort groups; Sztompka, 1999). Learners monitored whether others performed trustworthy acts, whether they consistently did so, and assessed other's trust credentials (e.g., we were all “teachers”) to further refine their understanding of other's trustworthiness. It seemed that “being visibly trusted by some” served as an endorsement for others to trust them as well (Sztompka, 1999, p. 104). *Reputation* became a capital asset which learners could leverage to determine other's trustworthiness, to determine whether they wanted to collaborate with them, and to set future trustworthy expectations (Castells, 2001; Wittel, 2008). Although reputation is a helpful predictor of future behavior, it is not a guarantee (Ajzen, 1991).

Learners, therefore, supplemented what they learned about other's trust reputations with their observations of *current performances of trust*. They bracketed their

knowledge of other's past trust conduct to focus on their present trust performances (Sztompka, 1999). Learners monitored each other's conduct in public forums, such as online threaded discussion forums, to determine whether others completed their assignments on time, exerted meaningful effort in completing these assignments, and interacted in a respectful manner with fellow learners to ascertain other's current trustworthiness. Learners similarly monitored each other's performances of trust in private forums, such as their team workspaces (Mayer, Davis, & Schoorman, 1995; Sztompka, 1999).

Appearance and demeanor figured prominently as cues to trustworthiness for learners in both trusting and trust-compromised teams. Learners tried to gain insights into each other's personalities and identities to determine if others were "like them" and, therefore, would behave predictably (Sztompka, 1999). Learners referred to others' pictures posted on the online course site or their physical appearances and demeanors, when possible, at the outset of their course and throughout the course event to glean additional clues of trustworthiness. They also noted, for example, each other's civility. Learners who showed good manners by responding to efforts to communicate, in a timely and polite manner, as well as learners who showed self-restraint in postings were deemed to exhibit trustworthiness (Sztompka, 1999). The role of appearance in characterizing trustworthiness was revealed in the findings for Research Question 3 which sought to understand in what ways computer-mediated communication affected learners' social construction of online trust. Therefore, it will be discussed further in the discussion of Research Question 3.

Regardless of whether learners determined other's trustworthiness through reputation, current performances, or appearance and demeanor, trusting relations had far reaching consequences. They encouraged learners' sociability, enriching and expanding their networks of interpersonal ties as well as shaping more intimate relations. Learners in trusting learning teams spoke about spontaneous *sociability*, a desire to reach out to fellow learners simply for the sake of sociation (Fukuyama, 1995; Simmel & Hughes, 1949). They more readily disclosed personal information which facilitated the transition from getting to know others as defined by their roles as learners to learners who enacted these roles in specific ways, colored by their interests, passions, and personal lives (Weber & Carter, 2003). Self-disclosures nurtured friendships relations among learners.

Getting to know each other personally helped team members to understand the complexities of other learners' lives which may prevent them from fulfilling some of their team obligations. Role conflicts, or demands by different roles, are a common reason that individuals may not be able to meet their obligations (Ferreday & Hodgson, 2008; Macionis, 2012). For example, if a learner has to work late, but must also meet with a team, then the learner must decide which role and obligation to fulfill. Clearly, the choice will meet the needs of one role, but will compromise the needs of the other role. Knowing the roles that others perform and the demands of these roles help to explain more fully how and why individuals behave the way they do. Gaining such knowledge and understanding promoted a more flexible trust which, in turn, encouraged tolerance and acceptance in trusting learning teams and could weather potential breaches of trust more readily than role-based trust (Bews & Rossouw, 2002; Sztompka, 1999).

In the context of this study, such self-disclosures helped team members to interpret what appeared to be “breaches” of trust as understandable and forgivable acts that prevented some learners from fulfilling their obligations. Therefore, learners in trusting learning teams were able to transition from their initial, role-defined encounters as evident in Weber and Carter’s (2003) first stage of their trust model, to the second stage where learners developed friendly interpersonal relationships. Violations of trust in both trusting and trust-compromised teams that did not meet “acceptability” criteria placed learners on a heightened sense of alert for additional betrayals of trust and prompted them to engage in more vigilant monitoring behaviors and sanctioning. Learners developed a sense of whom they could trust and in what contexts.

In trust-compromised learning teams, learners appear not to have felt comfortable to disclose personal information. They expressed that it was inappropriate or unsafe to do so as such information could readily be shared without their knowledge or permission. As Johnson and Johnson (1994) warn

Trust is not always appropriate. There are times when you will think it inadvisable to disclose your thoughts, feelings, or reactions to another person. ...A person must develop the capacity to size up situations and make an enlightened decision about when, whom, and how much to trust others.” (p. 125).

Learners in trust-compromised learning teams found that it was safer to maintain role-based interactions rather than to create friendly interpersonal relationships based on self-disclosures of personal information.

Lacking such personal information prevented them from socially constructing more robust and resilient trusting relations as their counterparts in trusting learning teams were able to develop. One consequence of this struggle is that they lacked the requisite knowledge to understand and reconcile from breaches of trust. Deutsch (1973) and

Johnson and Johnson (1994) concur: “a caring-oriented group will stress responsibility for each other, permissiveness toward members expressing their needs, heightened sensitivity to each other’s needs, and support and nurturance of each other’s legitimate needs” (Johnson & Johnson, 1994, p. 112).

Regardless whether learners were members of trusting or trust-compromised learning teams, breaches of trust affected them to varying degrees. Learners in trusting learning teams were able to mediate breaches of trust through sanctioning mechanisms (e.g., implementing mechanisms that made such breaches visible and discouraged future violations of trust). Such efforts did not make a difference in trust-compromised learning teams; that is, violators were indifferent to any sanctioning mechanisms. Breaches were manifested as betrayals, deception, dishonesty, breaches of integrity, coercive use of power, and exclusion of team members that were felt to different degrees, depending on the context. These descriptions of broken trust are consistent with the literature on violations of trust (cf. Baier, 1991; Bies & Tripp, 1995; Blomqvist, 1997; Corritore, Kracher, & Wiedenbeck, 2003; Fukuyama, 1995; Govier, 1997; Kramer, 1999; Lewicky, Tomlison, & Gillespie, 2006; Luhmann, 1979; Misztal, 1996; Seligman, 1997; Simmel, 1906; Sztompka, 1999; Weber & Carter, 2003). All of these manifestations of breaches of trust figured prominently in learners’ accounts of their online learning experiences. Learners were able to recover somewhat from breaches of trust when such breaches were atypical and infrequent.

This was the case in the trusting learning teams where learners either used monitoring and sanctions to enforce trusting behaviors or forgave violations of trust because of the “trust credits” violators had accrued (Hollander, 1964). Specifically, by

acting in a trustworthy manner during interactions with others; i.e., meeting team members' expectations, learners earned "trust credits." Depending on the credits accrued, learners could deviate from members' expectations with or without negative repercussions to anyone. Essentially, learners, who accrued sufficient trust credits, were forgiven their violations of trust. Hollander (1964) referred to such trust credits as "idiosyncrasy credit" or "an accumulation of positively disposed impressions residing in the perceptions of relevant others; it is defined operationally in terms of the degree to which an individual may deviate from the common expectancies of the group" (p. 167). Forgiving breaches of trust, however, did not always mean forgetting them. The literature on trust attests to this in the following sense. Regardless of the trust violators' efforts to 'make up' betrayals of trust, it is difficult to overcome these breaches because others will always fear the recurrence of betrayal in the future (Johnson & Johnson, 1994).

Conversely, violators in trust-compromised teams did not build sufficient "trust credits" to merit forgiveness. Instead, they repeatedly engaged in violations of trust that placed the teams and each team members' sense of identity at risk (Bies & Tripp, 1995). Teams' social structures were damaged by breaches of the norms and values that defined them as well as the reciprocal expectations learners had as members of learning teams. Learners' personal identities as "learners" were also placed at risk of being perceived as poor performers by their instructor and other learners. Breaches of trust certainly made learners in trust-compromised teams more attentive to trusting appropriately in the future; however, the interdependent nature of social learning induced them to extend trust in the face of breaches of trust without violators engaging in heroic efforts to 'make up' for their betrayals.

Rational relational trust, therefore, provided valuable insights for learners to assess each other's trustworthiness and to make preliminary assessments as to whether they would behave in a trustworthy manner in future social interactions. However, the rational perspective is limited in defining the future as learners quickly found. Barbalet (1996) clearly explains the limitations that learners found in performing and assessing rational trust: "That the future is unknown means that rational and cognitive process [*sic*] are limited in their dealing with it. What is unknown cannot be calculated, dealt with logically or analyzed. ...[T]he decision to trust cannot be based on evidence and a calculation of probabilities" (p. 82, 90); it can only be based on moral trust. This emotional apprehension, or trusting apprehension, is echoed in Johnson and Johnson's (1994) characterizations of cooperative learning experiences that they equate with morally trusting learning experiences:

"Cooperative experiences, compared with competitive and individualistic ones, result in more positive relationships among members, relationships characterized by mutual liking, positive attitudes toward each other, mutual concern, friendliness, attentiveness, feelings of obligations to each other and a desire to win each other's respect" (Johnson & Johnson, 1994, p. 99).

This is not to say that rationality does not play an important role in learners' social theory of trust. However, rather than their value-based conceptualization of trust incorporates a different type of rationality than rational choice trust. Specifically, learners' social theory reflects what Max Weber refers to as substantive rationality instead of formal rationality reflected in rational choice trust (Barbalet, 1996).

Before proceeding, it is important to take a moment to consider the distinction between substantive and formal rationality as bases for learners' rational understandings of trust. Substantive rationality is based on value-rational action; that is, "rationalization processes are ... rooted in values rather than in interests" (Kalberg, 1980, p. 1145). The

implication of this perspective is that those who uphold this view use their values to guide their rationalization processes and actions. Friendships and small groups are bound by, for example, the values of loyalty, compassion, caring, and mutual assistance. As such, the values of friendship order actions into patterns of friendships (Kalberg, 1980). Conversely, formal rationality is based upon rational calculations of self-interest (Kalberg, 1980). Learners' descriptions of rational trust seem to be reflected in the notion of substantive rationality because learners framed their social theory of trust in the context of their moral values. The following section reviews learners' understandings of moral trusting relations in their social theory of trust and how these moral perspectives underlay a substantive rational perspective of trust.

Moral Trusting Relations

Although Sztompka (1999) asserts in his sociological theory of trust that the “relational dimension of trust is addressed by the rational-choice theory” (p. 60), clearly learners' social theory of trust transcended rational choice to include moral choice. When learners expressed their understandings of trust and trustworthy behavior and expectations, they did so in the context of moral trust. Khodyakov (2007), in his study of trust as a process, came to a similar conclusion. Specifically, he found that the unpredictability inherent in social relations “encourages people to rely more on the honesty and morality of their partners than on their ability to act rationally” (p. 127).

Moral relations are characterized by a shared identity, loyalty, and care that are reflected within a moral community as trust, fulfilling one's duties, and solidarity. Learners described that moral trust is signalled in social interactions by respecting, caring, and supporting others; reliably and consistently doing one's fair share; and being

committed to the team's goal and success (Johnson & Johnson, 1994; Sztompka, 1999). These social interactions are reflective of friendships (Weber & Carter, 2003) and are supported by the literature on cooperative learning: "*Within cooperative efforts, every person can form friendships*" (Johnson & Johnson, 1994, p. 99). Caring for others incorporates a "natural" duty to help others which is predicated on the confidence and trust learners have in each other's good intentions and sincere need for help (Rawls, 1971 cited in Johnson & Johnson, 1994, p. 112). Stodel et al. (2006) confirm that caring was a critical component in engendering feelings of closeness, friendship, and community among online learners in their study.

Learners' descriptions of moral trusting relations also shaped their notions of teams and other academic associations (see Finding 2). That is, they shared Fukuyama (1995) and Misztal's (1996) perspective regarding relations and community: "This idea of society has less to do with formal organization than with a sense of belonging, trust and responsibility and duties toward others who share our values, interests and goals" (p. 206-207). The sense of belonging influenced learners' social construction of identity. It transformed learners from individuals to social beings—from an "I" to an "us" (Sztompka, 1999). Learners' notion of a moral community and its role in their social theory of trust will be discussed in the subsequent section on the "Community: Culture of Trust."

Learners' moral view of trusting relations revealed a very important insight: trust involves not only the *ability* to behave in a trustworthy manner but also the *will* to do so. Colquitt, Scott, and LePine (2007) refer to this distinction as the 'can-do' versus 'will-do' components of trust which highlight that trust is not only a matter of skills but also a

matter of *moral agency*: “trust is both a means and measure of manifested moral agency” (Kutsyuruba & Walker, 2014, p. 3). Bandura (2002) defined moral agency as “the power to refrain from behaving inhumanely and the proactive power to behave humanely” (p. 101). Moral agency in the context of trust, therefore, represents what Colquitt, Scott, and LePine (2007) refer to as “character variables that capture the ‘will-do’ component of trustworthiness by describing whether the trustee will choose to use those skills and abilities to act in the best interest of the trustor” (p. 911). In contrast, *competence* represents a ‘can-do’ attitude (Colquitt, Scott, & LePine, 2007, p. 910) which engenders trust by assuring learners that others have the requisite knowledge, skills, and abilities to contribute to their social learning effort by performing the tasks needed to achieve their social learning goals (Bews & Rossouw, 2002). The risk inherent in the ‘will-do’ component of trust is the uncertainty about other’s motivations (Misztal, 1996).

Kutsyuruba and Walker (2014) illustrate this risk,

Social relations and the obligations inherent in such relations are mainly responsible for the production of trust. In the broad sense, relational trust grows from social respect and diminishes when individuals perceive that others are behaving in ways that seem inconsistent with their expectations about the other’s role obligations to do the right thing in a respectful way for the right reasons” (p. 6).

Learners spoke about such volitional behavior in terms of care and benevolence; that is, loyalty, concern, goodwill, altruism, consideration and sensitivity to others, acting to protect the interests of others, refraining from exploiting others, refraining from engaging in opportunistic behavior, and empathy. The *virtue of care* also revealed that although learners may have the ability to be trustworthy, that they may not choose to do so. The *will* to act in a trustworthy manner mediates the *ability* to do so. The caring bonds shape the will to be trustworthy among learners. The distinction between the will to act in

a trustworthy manner and the ability to do so is important because it challenges prevalent research on social learning that maintains that trusting social learning experiences can be enacted by teaching learners the skills to perform trustworthy acts (Johnson & Johnson, 1994; Preece, 2004).

Although these skills are necessary, they do not consider individual agency; that is, learners' freedom to choose how they wish to behave. Clark (2011) in a five-year, in-depth research study on social loafing among Western and Chinese students at two New Zealand tertiary institutions illustrates the distinction between the will to act in a trustworthy manner and the ability to do so. She found that although learners expressed frustration at social loafing, which represents a breach of trust, some nonetheless engaged in it for a variety of reasons, including that they felt that the rest of the team members could do a better job without their participation or that it would be too much effort for them to participate. So, these learners clearly had the skills to behave in a trustworthy manner, but chose not to do so. The topic of social loafing and its role in and impact on social learning will be discussed in greater detail in the section on Research Question 4.

Learners also spoke of trust as a virtue—as *humanitarian caring*—“a common bond that ties all people together and obligates them to help one another” (Wuthnow, 1995, p. 66). Caring afforded learners in trusting learning teams the opportunity to get to know each other personally, beyond their roles as learners, and, thereby, helped them to develop friendships and intimate relationships necessary for social learning. (Macionis, 1989; Wuthnow, 1995). As Johnson and Johnson (1994) explain, caring promotes more satisfying and effective social (e.g., collaborative, cooperative) learning:

Within schools, caring and committed relationships are not a luxury. They are a necessity. ...[F]eeling valued, loved, wanted, and respected by others [is what]

...gives life meaning and purpose, and it is intimate relationships that create happiness. This is as true within schools as it is in general. (p. 98) ...An excellent way to promote cooperation is to teach people to care about the welfare of others. The greater the altruistic motives of the individuals involved, the more stable the cooperation” (p. 109).

This caring dimension indicates that optimal trusting relations in social learning are more personal as found in primary groups (e.g., families, friends) rather than impersonal as found in secondary groups (e.g., students in a semester course). The learning groups that learners in trusting learning teams described appear to be relatively primary (Macionis, 2012). They reflect the kind of friendships and intimate relationships described by Weber and Carter (2003) in their sociological theory of trust in primary relationships and confirm our expectations that learner relationships are personal.

The rationale for this is that effective social learning relationships require intimate self-disclosure: “[t]o complete tasks and achieve goals, group members are required to disclose...their ideas, thoughts, conclusions, feelings, and reactions to...each other. Once they do, other group members are required to respond, hopefully, with acceptance, support, and cooperativeness” (Johnson & Johnson, 1994, p. 122). Positive responses will encourage learners to take further risks and share more openly. Conversely, negative responses will discourage learners from taking further risks and may even prompt them to withdraw from participation in the group: “Interpersonal trust is **built** through risk and confirmation and **destroyed** through risk and disconfirmation” (Johnson & Johnson, 1994, p. 122).

However, such caring is not *exactly* as it is found in primary groups. Conceptions of kindness and caring are “idealistic, naïve, private” in primary groups and, therefore, must be *reconceived* in an academic setting—“we need to relearn the caring impulses of our childhoods and to understand what kindness means in an adult world,” especially in a

social world that has been transformed by complex social institutions that have assumed many social efforts and encourage indifference (Wuthnow, 1995, p. 8). Learners' need for formal academic socialization to become trusting collaborative learners will be discussed further in the section on "Learners' Need to be Socialized as Social Learners."

"Social life is more than the interaction of individuals.... It is also the process of participating in something larger than ourselves" such as a social group or formal organization (Macionis, 1989, p. 174). A social group consists of "two or more people who identify with and interact with one another" (Macionis, 2012, p. 146). Individuals can belong to primary social groups where members spend a lot of time interacting and have personal and lasting (primary) relationships or secondary social groups that are large, impersonal, and unite members to pursue a specific goal. Members of secondary social groups experience secondary relationships that "involve weak emotional ties and little personal knowledge of one another" (Macionis, 2012, p. 147). Social interactions are pleasant but impersonal. Formal organizations represent "large secondary groups organized to achieve their goals efficiently" (Macionis, 2012, p. 153). Secondary groups exist for a short duration. An example may consist of students comprising a course at a university who may or may not see each other after the course is completed. Members of primary groups consider themselves a "we" whereas members of secondary groups do not (Macionis, 2012, p. 147) indicating a shared identity in primary groups and a more fluid group identity in secondary groups.

Members of primary groups display a *personal orientation* towards others in their groups. They define themselves as *who* they are, their social identity, based upon their personal ties. These personal ties provide comfort and security—"people tend to feel they

can be themselves without worrying about being continually evaluated by others” (Macionis, 1989, p. 175). Although personal benefit such as financial and emotional support are associated with primary groups, it exists generally “as an end in itself rather than as a means to other ends” (Macionis, 1989, p. 175).

Members of secondary groups display a *group orientation* towards others in their group, defining themselves by *what* they are—or what they can do for each other. Social interactions with other learners represent a secondary relationship. Relationships in secondary groups tend to be exchange type relationships where members ensure a fair exchange and maximize their social capital. “The goal orientation of secondary groups diverts the focus of social interaction from personal matters to mutually beneficial cooperation” (Macionis, 1989, p. 176). Because of their impersonality and utilitarian nature, secondary groups exert a lesser influence in shaping members’ personal identities (Macionis, 1989). In practice, groups are relatively primary or secondary.

An extreme type of secondary groups is the social network, which represents a “web of social ties that links people, but with less common identity and less social interaction than are typical of a social group” (Macionis, 1989, p. 184). Social networks typically lack personal knowledge and a sense of membership. They are often characterized by infrequent social interactions. Interestingly, although social networks consist of weak ties, these “relationships are a valuable resource that can be used to personal advantage” (Macionis, 1989, p. 185).

Social life, therefore, beyond individual interaction was important to learners. The following section extends learners’ social theory of trust to contexts that encourage communal relations and cultures of trust.

Community: Culture of Trust

Finding 2 addressed a seminal finding in the literature on trust: *connections matter; community matters* (cf. Castells, 2001; Kreijns, Kirschner, Jochems, & van Buuren, 2007; Preece, 2004; Putnam, 2000; Rovai, 2002; Schwier & Dykes, 2007; Wellman & Gulia, 1999) because, for learners, such bonds facilitate and nurture the social construction of relational and cultural trust by influencing moral agency—the *will-do* aspect of trust. Connections and community encourage shared norms, identity, and predictability. In articulating their social theory of trust, learners clearly recognized that trust is a critical factor in shaping *cohesive* learning groups. This sentiment is reflected in the research on social learning: “Without a high level of trust, a group cannot be cohesive” (Johnson & Johnson, 1994, p. 102). Therefore, creating and promoting norms that encourage trusting and trustworthy behavior, as well as concern and affection among group members, facilitate group cohesion (Johnson & Johnson, 1994).

Learners found comfort in belonging to “collectives” which they felt created a *culture of trust* that they could leverage as trusting social capital to assure themselves of other’s trustworthiness and to predict how others would behave in contexts warranting trust (Schwier & Dykes, 2007). First, memberships in collectives helped learners to establish a *shared identity* that made them feel that they were familiar with and close to other members (i.e., appearance and demeanor). Second, they shared an *ethical code* of behavior to which members subscribed (i.e., pre-commitment). Third, learners articulated *monitoring and sanctioning* mechanisms to ensure other’s accountability in complying with the norms established by the collective (i.e., accountability). Fourth, they ensured visibility and closeness with other members to *horizontally constrain* untrustworthy

behavior (i.e., situational factors) (Sztompka, 1999). Finally, learners found *value* in belonging to collectives as well—they became “bound by the value ... [that they found] in learning together” (Wenger, McDermott, & Snyder, 2002, p. 5).

Learners’ understandings of community reflected a balance between the traditional perspective of community characterized by belonging, groupness, sameness, and longevity (Kreijns, Kirschner, Jochems, & van Buuren, 2007; Wellman, 2001) instead of community as an informational network defined by intense, ephemeral social interactions for the purpose of social exchange (Castells, 2001). This understanding of community relates to learners’ view of trusting social learning relationships as relatively primary. Members of primary groups display a *personal orientation* towards others in their groups. They define themselves as *who* they are, their social identity, based upon their personal ties. These personal ties provide comfort and security—“people tend to feel they can be themselves without worrying about being continually evaluated by others” (Macionis, 1989, p. 175). However, such communities are often also somewhat transient, limited to the duration of a course or academic program, rather than a lifetime.

Learners’ descriptions of trusting relations as well as trusting communities support the idea that social learning characterized by trust involves relatively primary, personal relations. Membership in these communities served as testimonies of credibility that mediated learners’ assessments of other’s trustworthiness. Furthermore, the longevity of communities afforded learners an opportunity to develop a history of trust interactions that imbued their relationships with the flexibility that tolerated potential breaches of trust.

Some learners in this research study found that membership in a community of other learners provided them with a foundation for *group cohesion*; it made them feel a caring bond and willingness to perform trustworthy acts for their fellow team members (Finding 2; Stodel, Thompson, & MacDonald, 2006). This sentiment expresses a belief that underlies learning communities: “learning is enhanced when there is a commitment to the collective good and people engage in learning through and with others” (Thompson & MacDonald, 2005, p. 235). Learners described communities that were characterized by cultures of trust that included normative expectations of each other, regulated learners’ behaviors, and created trusting learning teams. As Macionis (1989) explains, cultures establish what is morally right and normative expectations for behavior that promote security and trust among members:

The operation of norms shows us that culture is not simply patterns of human behavior, but is also the arbiter of what is right and wrong. Knowing that others share these standards makes possible a sense of security and trust in our personal interactions. Norms are thus part of the symbolic road map of culture, guiding us as to what is expected in social situations (p. 72).

Although learners characterized these learning communities in this way, they did recognize that all members did not adhere to their communities’ cultures of trust (Macionis, 2012). The prevalence of social loafing, even within communities of learning, clearly speaks to this reality. Nonetheless, learners found value and comfort in learning communities that promoted cultures of trust.

In the absence of structural bonds that promote trusting relations, learners attempted to create their group structures (Finding 3). At times, they were guided by instructors on how to do so. Clearly learners appreciated this help. Song et al.’s (2004) study on learners’ perceptions of “what is missing in online learning” corroborate learners’ appreciation for support from instructors. Furthermore, they identify “lack of

community” as the most prevalent challenge in learners’ satisfaction with online learning. This is not to say that instructors did not use design strategies to create communities, but that these strategies did “not guarantee” the creation of communities (Thompson & MacDonald, 2005, p. 243). Song et al. felt “the formation of a community in an online course could occur if the instructor facilitated this notion” (p. 66). Thompson and MacDonald (2005) echo this sentiment. They suggest “practitioners must thoughtfully weave strategies for community building into their course designs” (p. 234; Song et al., 2004; Vonderwell, 2003). It makes sense that design strategies for community building must be supplemented with ongoing instructor facilitation as communities are emergent social structures (Thompson & MacDonald, 2005). That is, communities are socially constructed as learners interact with each other throughout the learning event. Instructors cannot predict how each learner will participate and, therefore, prescribe how a community needs to be designed. Learners’ participations emerge; communities emerge and are in the constant state of becoming.

More often than not learners felt that they were not guided to create learning communities, but simply assigned to learning groups and tasked with a group project. Thompson and MacDonald (2005) characterize such online groups as virtual learning communities; that is, communities in which “joint learning tasks and outcomes motivate community efforts” (p. 235). This perception of virtual learning communities is prevalent in the literature on community. However, when learners talked about trusting learning communities, they seemed to describe something different, or what Thompson and MacDonald referred to as the *spirit of community* captured by Rheingold (2000): ‘as social aggregations that emerge . . . when enough people carry on public discussions long

enough, with sufficient human feeling, to form webs of personal relationships in cyberspace (p. xx)' (p. 235).

Learners' descriptions of the value and role of community in informing other's trustworthiness confirm Sztompka's (1999) Propositions 3a3 and 3b regarding primary and derived sources of relational trust as well as the trust cultivated by social structures (Proposition 6):

Proposition 3a3. *The trustor's and trustee's social capital shapes the trustee's trustworthiness. Social capital determines the visibility of the trustee (personal familiarity and direct access). The visibility of the trustees' performance of their roles shapes the trustor's perception of the trustee's primary trustworthiness.*

Proposition 3b. *Derived trustworthiness. The context—accountability of the trustee, precommitment, and trust-inducing situational factors—mediate the trustee's trustworthiness.*

Proposition 6: *The trustees' memberships in various normative social structures and their roles within these structures determine norm-based role-specific expectations and their corresponding trustworthiness.*

There is no doubt that learners' social theory of trust valued social life, personally and collectively. Learners in trusting learning teams were able to socially construct a trusting social life that supported social learning. Learners in trust-compromised teams were challenged to do so. The following section addresses learners' sentiments regarding formal socialization in preparation for trusted social learning.

Learners' Need to be Socialized as Social Learners

Johnson and Johnson (1994) define a learning group as "a group whose purpose is to ensure that group members learn specific subject matter, information, knowledge, skills, and procedures. Learning is the primary purpose of the group" (p. 462). Prior to becoming an effective learning group, a learning group must be an effective group.

Johnson and Johnson (1994) identify the following factors, among others, as elements of

an effective group: a clear and cooperative goal structure, accurate two-way communication, high cohesiveness, high trust, group “norms promoting individual responsibility and accountability, helping and sharing, and achievement,” and “high group and interpersonal skills” (pp. 462-463).

Learners experienced foundational struggles learning socially, beginning with initial attempts to communicate and social loafing. Although some felt comfortable to reach out to their instructors for help to overcome these challenges, most were left on their own to determine how to create and manage an effective social learning team. The literature on *transactional distance* bears out learners’ feelings of isolation (Moore & Kearsley, 1996). Although instructors formed interpersonal and/or pedagogical relationships with learners, to an extent, they were insufficient to help learners feel supported by instructors, especially in creating learning communities (Vonderwell, 2003).

Johnson and Johnson (1994) explain that this predicament results because instructors and learners are ill-prepared to engage in social learning:

Despite the pervasiveness of learning in groups in our society, educators receive very little training on how to conduct ...[learning] groups in ways that maximize learners’ learning. The all-too-common practice of simply asking group members to sit around a table and carry on a ‘meaningful’ discussion is all too often unproductive. One major difficulty is that, although people spend much of their lives talking with one another, most persons have failed to develop the abilities and attitudes necessary for carrying on a worthwhile discussion for the purpose of learning new information, knowledge, skills, and procedures. ...[Learning] group members must be taught the fundamental skills and attitudes necessary for group effectiveness if they are to learn anything in a ...[learning] group. They must know how to build an effective group. (pp. 462-463).

Rovai and Downey (2010) add that most faculty are not trained to teach online. Stodel et al. (2006) confirm this finding as well as extend it to learners.

Creating effective learning groups requires that instructors and learners have the requisite *group knowledge* and *social skills* to facilitate social learning (Johnson &

Johnson, 1994). Group knowledge includes how to structure effective groups and guide the development of a learning group through its stages. Social skills include group and interpersonal skills to ensure effective communication and interaction. Interpersonal communication within groups requires “unique” skills that need to be taught (Johnson & Johnson, 1994, p. 133). These skills include communicating in a complete and specific manner, ensuring that verbal and nonverbal messages are congruent, interpreting messages in a non-judgmental manner, and providing feedback on both what is said and how it is said.

In the context of trust and social learning, learners felt that both instructors and learners need to become knowledgeable about group dynamics and to learn the “social skills necessary to actualize group effectiveness” (Johnson & Johnson, 1994, p. 8). Because, as Johnson and Johnson (1994) explain, we are neither “born” with this knowledge and skills nor do they “magically” appear when needed (p. 48). Instructors and learners need opportunities to learn group skills in practice. It makes sense, therefore, that “Simply placing individuals in groups and telling them to work together does not in and of itself promote productivity;” that is, it does not necessarily create an effective social learning opportunity nor does it create trusting learning experiences (Johnson & Johnson, 1994, p. 23). Extending Laffey, Lin, and Lin’s (2006) notion of sociality, both instructors and learners need the opportunity to be socialized in the social aspect of social learning. Traditionally, academic settings have played a prominent role “in the socialization process” of individuals as learners and members of society (Macionis, 2012, p. 109). Song et al. (2004) recognize “there is a need to work with learners to assist them with establishing community or feelings of connection in online contexts” (p. 69).

Furthermore, although social structures are important in facilitating trustworthiness, they are not always readily available. Learners found themselves in learning situations where they did not know each other in a communal context and were challenged on how to participate effectively as social learners. Some learners in trusting groups were guided by their instructors on how to create policies and practices that would help them to develop their communities of learning. This strategy reflects a recommended approach on how to develop effective learning groups; that is, that instructors should teach learners how to create effective learning groups and guide them in doing so (Johnson & Johnson, 1994). In addition, it supports one of the key findings on sociability and online learning where researchers maintain that the social dimension of online learning is critical to its success and must be explicitly managed through policies and practices that help learners to develop the norms that “lead to good online etiquette, empathy, and trust between community members” (Feng, Lazar, & Preece, 2004; Laffey, Lin, & Lin, 2006; Preece, 2004, p. 294; von Krogh, 2006).

Learners in trusting learning teams found that setting and enacting normative expectations about communication were fundamentally important to ensuring the success of their online social learning experiences. Research supports the critical role that communication plays in shaping effective group functioning:

The very existence of a group depends on communication, on exchanging information and transmitting meaning. All cooperative effort is contingent upon effective communication.... Through communication members of groups reach some understanding of one another, build trust, coordinate their actions, plan strategies for a goal accomplishment, agree upon a division of labor, conduct all group activity.... It is through communication that the members interact, and effective communication is a prerequisite for every aspect of group functioning. (Johnson & Johnson, 1994, p. 130)

For some learners, their communicative normative expectations simply specified when, how often, and the purpose of their communication in terms of the tasks they needed to complete. For other learners, normative expectations went beyond task language to include moments of self-disclosure. Regardless of the nature of communication, learners found that meaningful communication is a necessary and important factor in nurturing trusting social interactions and relationships. Govier (1998) notes “Trust is a presumption of meaningful communication: we must believe that the other says what he means and means what he says” (p. 8). Learners emphasized the importance of open, rich, honest, and frequent communication in building and maintaining trust. Open communication afforded learners the opportunity to get to know each other on a more personal level by sharing self-disclosures (Weber & Carter, 2003).

Barriers to communication breached trust in trust-compromised learning teams. Members of these teams reported the struggles they encountered in trying simply to “connect” with some team members who they felt “ignored” their attempts to communicate. Non-communicative team members also became social loafers in their groups. Moreover, when they did connect, the social loafers engaged in dishonest communications such as promising to participate in team meetings and then failing to do so. Considering that “accurate two-way communication among members” is the second most important element for a learning group to be effective (Johnson and Johnson, 1994, p. 462), non-communicative members compromised the effectiveness of their learning groups.

Whether some team members failed to communicate from the outset or during team work, their actions had a profound effect upon the *development of trust, group*

cohesion, and effectiveness. Clearly evasive, dishonest, and inconsiderate communications reflected the low trust levels in trust-compromised groups created by these learners. Since one of the critical factors in shaping cohesive groups is trust, the lack or low levels of trust destroys the group's cohesiveness —“Without a high level of trust, a group cannot be cohesive” nor be effective (Johnson & Johnson, 1994, p. 102).

Insofar as *caring* is an important aspect of trust and reflective of *moral character*, learners felt that instructors and learners also need to be socialized as caring individuals not merely as skills to be taught and learned:

Kindness is not an entity, like a tree.... Rather, kindness exists as we interpret it and absorb it in our sense of who we are, not simply as a deed we perform. It is a value, an impression, a perception that is nudged, shaped, and defined by the cultural forces that surround us. (Wuthnow, 1995, p. 7).

Kindness, or caring, is subject to abuse when it ceases to be a virtue and instead serves selfish ends. For example, if someone were to help someone else because of personal gain, then such acts are no longer kindness as a virtue but instead become “a set of skills that will help us get what we want out of life” (Wuthnow, 1995, p. 28).

Wuthnow (1995) feels that the caring impulse needs to be placed into practice, guided, and reshaped for the different contexts in which it is performed. The academic setting is one of these contexts and educators “must be concerned” with teaching virtues such as caring and character in learners (p. 9). It is not sufficient to simply place someone in a caregiving context, nor are only caring deeds—“a communitarian spirit depends not only on good deeds; it also requires instruction and reflection” (Wuthnow, 1995, p. 10). Learners, therefore, need to be taught new meanings of kindness and caring in the context of a bureaucratic institution characterized by “formal rules, involving specialized activities, and being subject to norms of efficiency and effectiveness” (Wuthnow, 1995,

p. 14). When teachers and learners are kind to each other, schools function better (Wuthnow, 1995).

It is challenging, however, to teach and encourage caring in social institutions such as schools because they teach “self-interest and competition are the dominant rules rather than trust and cooperation” (Wuthnow, 1995, p. 104). Learning to care, and by extension to trust, therefore, must be

grounded in the institutional realities of our society. It must recognize the opportunities that are present in our dominant institutions for expressing kindness. It must also be aware of the ways in which these institutions encourage kindness to be misused, abused, or redefined (Wuthnow, 1995, p. 31).

In general, institutions encourage members to assume their specialized roles and to conduct themselves accordingly. Members are interchangeable. Their identities are tied to their roles. Kindness in such a context takes on a new meaning; “[i]t stands in the crevices between institutional roles” where it allows individuals to show kindness in a context that encourages “extreme indifference” and, in doing so, to personalize their roles, to create their own unique identities beyond their institutional roles, to create a self, and to humanize institutions (Wuthnow, 1995, pp. 33, 34). Moreover, the way learners can be kind to each other is by accepting, trusting, and respecting each other as a whole person (Wuthnow, 1995). “The value of caring is that the effects of one’s behavior can at least be seen directly in the activities of another person. ...Making a difference is a way of affirming that the individual person matters” (Wuthnow, 1995, p. 195).

Learners in both trusting and trust-compromised learning teams spoke of performances of trust in terms of performances of *humanitarian caring*. Humanitarianism

combines a feeling of compassion or sympathy with a value that attaches importance to helping those toward whom one feels compassion. ...Humanitarianism also connotes a common bond that ties all people together and obligates them to help one another...it is an awareness of fundamental human

affinity that sometimes motivates great acts of heroism on behalf of people in grave danger...[and] tends to evoke the language of moral duty or moral obligation (Wuthnow, 1995, p. 66).

Some learners went beyond humanitarian caring to talk about trust in terms of altruism or selfless commitment as a necessary component of a trusting learning community. In this sense, they reflected the notion of a *good society*: “There is a virtual agreement that a good society must include a strong commitment to caring, a sense of obligation towards others, and concern about the needs and interests of others” (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1991; Wuthnow, 1995, p. 42).

Summary of Research Question 1

Collectively, the findings and interpretations for Research Question 1 reflect Sztompka’s (1999) and Weber and Carter’s (2003) sociological theories of trust. Learners’ social theory of trust consists of psychological, relational, and cultural performances of trust. Psychological performances of trust were colored by a predisposition to trust, socialized in primary and secondary relationships. This predisposition was mediated by emotional responses to trust, social trusting attitudes, interdependence, the location of interaction, and identity.

Relationally, learners viewed performances of trust as an *ethical and moral social practice* that flourishes within *learning communities* defined by guidelines for *sociality* and practice that contribute to effective social learning. Performances of trust required both a learned *moral character* and *trusting skills*. The primary lesson to be learned from the findings of this research question is that learners view social learning relationships from a moral perspective and find that these relationships are critical in framing trusting social interactions and meaningful social learning experiences. Learners’ understandings of trusting team members and trusting learning communities echoed definitions of a

“good citizen” and a “good society.” The secondary lesson is that learners recognized that both instructors and learners need help in being socialized as trusting members of social learning communities.

Research Question 2: “How does trust shape the social relationships that learners form in this particular context?”

The interpretations of the three key findings for this research question refine learners’ social theory of trust by focusing on *how* trust shapes learners’ social dynamics; that is, the *interdependent* and *complex* nature of learners’ relationships in the context of online social learning. *Finding 4* recognizes that although learners are interdependently linked by shared goals (i.e., tasks) and rewards, their social relations are shaped by virtue of their identities as learners and members of an academic community. The “*sacred*” (Sztompka, 1999, p. 95) nature of academia creates a *culture of trust* (Sztompka, 1999) which warrants trust among learners regardless of whether they are trustworthy. This academic culture of trust is further reinforced by the culture of trust embedded in *friendships* learners form in academic environments.

The personal nature of learners’ relations in trusting learning teams engendered an intimate trust (i.e., friendship; Weber & Carter, 2003) beyond academic trust which allowed them to develop close interpersonal relations and a cohesive whole guided by normative processes for trustworthy values and conduct. Learners in trust-compromised relations were never able to establish cooperative relations with all members of their teams and, therefore, were unable to achieve *team unity and cohesion* which are critical to effective collaborative learning (Johnson & Johnson, 1994).

Finding 5 reveals one of the reasons why they were unable to do so. Breaches of trust are a natural part of social relations. In the context of trusting relations, the limited and somewhat benign nature of these breaches, as well as learners' personal interactions, afforded them the opportunity to mediate the harm caused by breaches of trust. In the context of trust-compromised relations, the egregious and pervasive nature of breaches of trust as well as impersonal interactions debilitated team relations.

Finding 6 shows that regardless of whether learners form trusting or trust-compromised relations, the *interdependent* nature of social learning requires that they collaborate. The scope and complexity of learning tasks are simply too much for one learner to manage. In the broader context of the postmodern world, this reliance on others reflects a key defining characteristic of this era: specialization or division of labor. In a postmodern world, knowledge is specialized such that one person cannot solve a problem independently. Therefore, people need to trust each other and work interdependently to achieve their individual and collective goals (Macionis, 2012; Sztompka, 1999). Depending on the nature of the task, people form various types of collaborative relationships which demand different types and degrees of trust (Sztompka, 1999). Learners recognized these realities. They worked together on team tasks that were designed with interdependence in mind as they simply could not complete social learning activities by themselves. They had to form collaborative relationships and extend trust to team members, regardless of whether others were trustworthy.

The types of cooperation and corresponding types of trust that shaped learners' social relations reflect the nature of friendship relations described by Weber and Carter (2003) and the typology of cooperative relations and trust explicated in Sztompka's

(1999) Propositions 4 and 5. Trusting learning teams developed mutual trust, generalized trust, and abstract trust as reflected in Proposition 4:

Proposition 4: *Cooperative relations require mutual trust, generalized trust, and abstract trust.*

Proposition 4a. *Cooperative groups form a network of mutual trust where each member trusts the other members.*

Proposition 4b. *Cooperative members of groups have a generalized trust in the cooperative group as a whole.*

Proposition 4c. *Cooperative members have an abstract trust in the organizational processes that ensure successful cooperation.*

Proposition 5: *The type of relations that shape cooperation among group members determines the type of trust required of its members.*

Proposition 5a. *Cooperative relations based on little interdependence, role identities, and low risk (i.e., mechanical solidarity) require instrumental (rational) trust (i.e., expectations of regularity, reasonableness, and efficiency).*

Proposition 5b. *Cooperative relations based on medium interdependence, social identities, and medium risk (i.e., organic solidarity) require both instrumental and axiological (moral) trust (i.e., additional expectations of moral responsibility, kindness, truthfulness, fairness).*

Proposition 5c. *Cooperative relations based on high interdependence, social identities, and high risk require instrumental, axiological, and fiduciary (caring) trust (i.e., additional expectations of disinterestedness toward self-interests, representative actions, and benevolence and generosity).*

Proposition 5d. *Cooperative relations that have the character of “public goods,” whereby all benefit equally regardless of individual contribution, are at risk of freeriding.*

The following sections expound on these findings and their interpretations.

Trust as the Default Condition in Academia and Friendships

All learners in this study felt that the interdependent nature of social learning required them, to some degree, to trust others in their teams. Learners are interdependently bound socially and by their shared tasks. Beyond the need for trust engendered by learners’ social learning opportunity, it seems that *trust as a default condition* in learners’ social interactions emerged from the profound impact that academia as a moral social institution exerts upon its members (Durkheim, 2010) and the

solidarity (i.e., friendship, community) that some learners felt toward each other as individuals sharing the same “fate” (Brown, 2000; Lewin, 2010).

Learners’ moral theory of trust exists in the context of academia. As such, their theory is informed by the culture of trust that defines academia. Learners’ view of academia as an agent of socialization (see Research Question 1) are consistent with Durkheim’s (1956; 1961; 1977) functionalist theories of school and society as well as sociological research on education (Macionis, 2012). Both maintain that the social purposes of schooling are to leverage social interactions in order to socialize learners into the various roles, behaviors, and values of academia and society (Ballantine & Spade, 2015). Doing so teaches learners how to become “good” citizens (Gracey, 2001, p. 95) which for learners in this study meant being trustworthy members (e.g., individuals with academic integrity; Macfarlane, Zhang, & Pun, 2014). *Elijah*, for example, shared how the syllabus captured the moral and ethical expectations academia has of students. They are to complete specific work, according to guidelines of academic integrity, and interact appropriately (e.g., respectfully, in a timely manner). Learners in trusting learning teams shared how their instructors provided them with guidelines for developing trusting relations and structuring their teams (see Research Question 1: Learners’ Need to be Socialized as Social Learners). *Lily*, for example, shared that her professor promoted trust by providing templates for team roles and corresponding expectations and equitable work effort.

Trust, honesty, and integrity are among the key moral virtues socialized in academic environments (Durkheim, 2001). In fact, trust is such a seminal part of the academic social fabric that it is “often taken for granted” in school organizations

(Kutsyuruba & Walker, 2014, p. 9). In addition to explicit efforts of trust-building, there also seems to be an underlying coercive element in social learning which mediates learners' decision to trust, for better or for worse. Despite evidence to the contrary, learners expected others to be trustworthy. Learners in both trusting and trust-compromised learning teams initially trusted fellow learners even in the face of epistemological evidence indicating that others were not trustworthy. Learners trusted even in the face of a predisposition not to trust others. *Zoeyu* captures this notion when she says: "yes, [we trusted each other] but probably because it was forced because you knew the teacher was monitoring the posts."

Learners' view of forced trust is supported by Blomqvist (1997) who also refers to it as "forced trust" (p. 273) and may be understood in terms of Durkheim's (2010) notion "social facts." Durkheim analyzes how social groups maintain themselves not only by their norms but also by the "power of external coercion" which acts as a constraint on the groups' members (p. 113). It seems that in socializing participants as learners, academic institutions also exert a coercive power over them. That is, participants learn appropriate academic behaviors and attitudes. Conversely, they also learn the sanctions that will be imposed on them if they do not abide by these expectations. Academia, therefore, socialized and induced social learners in this study to trust others. Trust became what Kutsyuruba and Walker (2014) refer to as the "default condition" (p. 6).

Learners' social theory of trust in the context of social learning also reflects Durkheim's view of the classroom as a *small society* and his emphasis on moral values and cohesion to maintain *social order*. Learners in trusting learning teams were able to create small societies whereas learners in trust-compromised learning teams were unable

to do so. A differentiating factor between these two types of teams appears to be the ability to develop friendship relations. Learners in trusting learning teams spoke of their social relations in terms of friendship and family which is a common theme in the literature on group learning and the sociology of education (Brookfield, 1994; Campbell, Larrivee, Field, Day, & Reutter, 1994; Senior & Howard, 2014).

Learners in friendship relations; that is, trusting learning teams, found solace and support in engaging in personal social interactions. Stodel et al. (2006) confirm that learners value a sense of personal caring in learning. They quote one of the students in their study, Maire, who expresses appreciation for this sense of personal care: ‘it sort of showed that people still do need that interaction aside from just the academic’ (Getting to Know Others section, ¶3). Learners in trust-compromised teams did not refer to each other in intimate terms. In fact, they refrained from any personal interaction as they did not trust that others would maintain the privacy of their disclosures. They were concerned that others could indiscriminately share personal disclosures with anyone on the Internet.

Learners in trusting learning teams clearly described the type of friendship that contributed to their collaborative learning success. Consistent with their social theory of trust and the research on friendship in learning, learners described their friendships in terms of shared values, rather than social exchange, and solidarity (Hartup & Stevens, 1997; Weber & Carter, 2003). Friendships bound learners as a community. They felt a sense of cohesion and belonging resulting from the idea that they were ‘all in the same boat’ (Roberts, 2009, p. 369). Friendships enabled learners to develop an “ask anything” culture (Roberts, 2009, p. 369). As *Lily* explained: “We formed a great bond through the gmail chats especially that allowed us to be comfortable asking each other for help.”

One of the goals of inculcating moral academic virtues in learners is to provide a safe place where they can “reveal thoughts and feelings about their studying and undertakings” (Day, 2009, p. 9.10). Learners in trusting learning teams established relations reflective of the moral academic environment in which they studied. They felt comfortable to voice their concerns and to ask questions which would further and deepen their understanding of the learning material. *Bay* explained the importance of taking time to create trusting personal bonds in order to establish a safe learning environment:

I'm a pretty typical Type A kind of personality. I tend to be very goal/task oriented and work very well with folks who are the same way....however, I've learned to appreciate that other personality types "need" this type of activity [social interaction]. I always am sure to contrive some when I'm a leader and participate fully when I'm a participant. I think that many people are afraid of taking risks or being "wrong" so building a sense of community allows them to be vulnerable more so than if it was a "cold" interaction as the online sort often are. (*Bay*)

Learners developed a sense of *mutuality* (Hartup & Stevens, 1997) which ensured that they were engaged with each other personally and academically. They cared about other's personal lives and sought ways to support each other personally so that they could succeed collaboratively. This was, for example, expressed by providing emotional support and adjusting task assignments and due dates to accommodate personal needs. These adjustments, however, never compromised their collaborative learning experiences. *Lily* and *Toni* illustrated these points:

some of the participants had children or had to be to bed by a certain time, or they had prior arrangements throughout the week. They would just let the team know, and we would pick up the pieces where need be. (*Lily*)

Because we knew each other I think it was the opposite [We were more relaxed about breaches of trust]. We knew that we were all very busy, so we allowed room for more of a lax behavior. (*Toni*)

Learners in trust-compromised learning teams limited their questions to what was necessary to complete the work. Their social relationships were reduced to task interactions. *Faith* illustrated this point as she explained how *Alex's* absence resulted in tasks that were not completed. *Alex* was responsible for eliciting feedback from the client and contributing a section to the final team project. By “disappearing,” he compelled his team members to redirect their efforts to mitigate the harm resulting from his reduced work effort and to, somehow, complete his work:

He was attending the online course sessions and would promise that he would attend the team meetings but then wouldn't show up. It was terrible. ... We were relying on him to keep us in contact with the client... he was our intermediary. He was our connection to the client so he was a key player for the project. So his absence was sorely felt. We needed feedback from the client so that we could generate a product that met their needs. Now that was missing... It would have looked bad if we sent someone else or stopped talking to the client all of a sudden. At first, his missing one or two meetings was okay, we just kept on working on ongoing products. But once we came to a junction where we needed client input... it became a problem... The client had been so faithful in actively participating in the project... it wouldn't have been right for us to suddenly disappear. It was frustrating... He also had some contributions he was supposed to submit for the project. We had to pick up the slack on that too... the work load grew exponentially. UGH!!! He had a section that he was supposed to have completed before he disappeared. We had also divided up the projects into sections... he had a section... Let me remind you that he was the one who insisted on our doing the project. (*Faith*)

Learning socially in the context of friendships also had implications for *socialization* and developing *social competence*. Friendships provided what Hartup (1989) terms as “cooperative socialization contexts” (p. 124). Friendship is very important in human development. It provides security and self-validation which are necessary for developing social competence. Therefore, individuals who have friends are “more socially competent than those who do not; they are more sociable, cooperative, altruistic, self-confident” (Hartup & Stevens, 1997, p. 359). Hartup and Stevens (1997) explain that friendships may be the optimal contexts for learning cooperation and

intimacy because of their intensity and horizontal nature; that is, their equal power base. *Neely* aptly expresses this idea when she describes interacting with her peers. Because they were equals, they shared a common language that facilitated talking about course material:

Learning from someone on your own level makes you feel more confident. I'm not really sure how to explain it properly. Sometimes instructors use big words or just repeat things out of the textbook. That doesn't help. When you learn from another classmate, it not only puts things in laymen terms but it helps both people understand the concept. (*Neely*)

In addition, friendship is correlated with *psychological well-being* which Johnson and Johnson (1994) identify as a key component of successful cooperative learning because psychological health promotes building and maintaining interdependent relationships which are the mainstays of collaborative learning. Learners in trusting learning teams shared the joy they felt in learning socially.

The lack of such friendships for learners in trust-compromised learning teams seems to have created difficult learning contexts that compromised learners psychological and social well-being and their ability to collaborate. Beyond the absence of friendship, the presence of *problematic relationships* seems to have had a more profound impact on learners ability to form collaborative social relations. Learners in trust-compromised learning teams were plagued with persistent breaches of trust. Therefore, whereas friendship teams were free to engage in social interactions that supported their learning activities, learners in trust-compromised learning teams spent a lot of time negotiating whether and how interactions and activities would take place (Hartup, Social relationships and their developmental significance, 1989). Problematic relationships took their emotional and psychological toll on learners in trust-compromised learning teams. This was clearly evident in *Faith's* frustration over *Alex's* disappearance and the harm it

caused. Hartup and Stevens (1997) report “the number of problematic relationships one has and the frequency with which one interacts with problematic persons are more closely related (negatively) to well-being than the number of supportive persons available and opportunities to interact with them” (p. 359). Learners in trust-compromised learning teams were unable to develop a social identity. They were individuals embedded socially, but were never quite able to become one with their teammates.

Learners in trusting learning teams came to assess their “personhood” as members of teams rather than individuals (Csikszentmihalyi & Rochberg-Halton, 1981). As Csikszentmihalyi and Rochberg-Halton’s (1981) explain, they moved “from the level of personal consciousness to that of community. ... When a group is in an entropic state the intentions of its members cancel out each other instead of contributing toward each person’s goals” (p. 11). In essence, learners expected others to collaborate, to become one, or as Durkheim (2010) expresses it “all hearts vibrate in unison... because a single force is thrusting them in the same direction. Each is led by all” (p. 113). Acting in unison benefitted the trusting learning teams collectively and its members individually (Johnson & Johnson, 1994).

They understood that “Working together to achieve a common goal produces increased effort, higher achievement, and greater productivity than does working alone” (Johnson & Johnson, 1994, p. 96). Learners in trust-compromised learning teams were unable to develop such a team structure which according to Johnson and Johnson (1994) is a precursor to effective cooperative learning. *John* was troubled by how his original team failed to schedule an initial meeting much less develop a team structure. Having failed to do so, they were unable to proceed with their team task. The instructor

intervened and reduced the team from five members to two, *John* and someone else. The instructor also reduced the scope of the team assignment to accommodate the work effort of two learners. Clearly, team learning was compromised.

And, perhaps, this is the key message from how trust shapes learners social interactions: Academic friendships are marked by an affective component which facilitate the development of social relations with “good outcomes”—both socially and cognitively (Hartup & Stevens, 1997, p. 365; Senior & Howard, 2014). Trust played a central role facilitating these good outcomes. Senior and Howard (2014) explain:

trust was seen as central to developing friendships and producing contexts where the social interactions between friends stimulated conceptual development at an individual student level. In this sense, collaborative learning was evident as students developed shared meanings and understandings through social interaction, which demonstrates learning at both an individual and social level (see Gillies, 2000). (p. 6).

These friendships were distinguished by acts of *cooperation, reciprocity, commitment, an equal power base, a sense of mutual attachment and common interests, mutual understanding, disclosure, and loyalty* (Hartup, 1989). These attributes created a sense of security, self-worth, and well-being among learners such that they felt safe and were able to cope (Hartup & Stevens, 1997) with the challenges of social learning and their collaborative tasks. Friendships became a resource for understanding course material. Friendships provided a context in which learners could regulate their learning.

Even though friendship colored learners' relations in trusting learning teams, they experienced breaches of trust. In fact, both trusting and trust-compromised teams were characterized by breaches of trust. Whereas learners in trusting learning teams were able to recover from these breaches, learners in trust-compromised teams were unable to maintain collaborative relations.

Breaches of Trust

Although the literature on social learning is replete with examples of ways that social learning promotes better learning, there are also instances when social learning fails to live up to its potential. In their study of why teams “do not function the way they ought to,” Salomon & Globerson (1989) found that rather “than pool their mental efforts, teams or particular team-members, often show *reduced* expenditure of mental effort, loafing behavior, even effort-avoidance, in ways that debilitate learning” (p. 90). These reduced efforts manifested themselves as breaches of trust in this study. Breaches of trust stand in stark contrast to expressions of friendship and community that, for learners in this study, were hallmarks of social trust. Friendship and community represented caring and support which shape mutual interdependence among participants and assured them that they were committed to each other, personally and academically as a team. Conversely, learners who breached trust were perceived as unsupportive and, as reported by Ormond’s dissertation study (as cited in Ferreday & Hodgson, 2008), ‘were seen as threatening the ideal of the learning community’ (p. 643). Realistically, breaches of trust were performed in both types of teams; however, there was a qualitative difference between breaches of trust in trusting learning teams and those in trust-compromised learning teams.

Learners described breaches of trust in trust-compromised learning teams as colored by *coercive use of power*. The use of coercive power clearly violates the spirit of collaborative learning. Johnson and Johnson (1994) suggest that such conflicts can be resolved by reestablishing mutual influence among team members. Learners in trust-compromised learning teams lacked the power to do so. This had a debilitating effect on

team work. Unable to reestablish mutual influence, learners' communication decreased and their ability to create a collaborative team diminished. Team members, for example, failed to communicate appropriately, if at all; did not share knowledge and information; and did not contribute equitable work effort. Ormond (as cited in Ferreday & Hodgson, 2008) reports the same examples of unsupportive acts in her study: 'not contributing, not being accessible and not responding to a call for a change in behaviour' (p. 643). These acts adversely impacted the morale of team members in this study as well as the quality of their team work. Understandably, learners became distrustful and, sometimes, resentful of those who breached trust (Johnson & Johnson, 1994). As *John* described:

We sent each other emails and volunteered to do certain sections. ...Some kids took very long to email back. I'm not sure as to why but it probably came down to some excuse. They would say that they hadn't checked their email or that they had been too busy and didn't understand the requirement. If I remember correctly the girl and I ended up doing the project. She emailed the professor and he said it was ok if we did something together and made it a little shorter. One of them [the original team members] didn't contact us until the day before the due date. The other's we told through the discussion board. I remember not going out of our way to let them know; they had not responded to us or participated in the preparation. I hate to think about it that way, but we didn't owe them anything...they left us out to dry. (*John*)

Although learners in trust-compromised learning teams reported that breaches of trust inspired learners to assume responsibilities and to engage in additional learning to compensate for the reduced efforts of the social loafer(s), learning as a team suffered. Ormond reports that unsupportive acts in her research denied others the opportunity to learn. The consequences of debilitating effects is that "a few individuals may perform well and learn well in teams, but the teams as social systems, not as collections of individuals, cannot be said to achieve an optimal level of learning behavior" (Salomon & Globerson, 1989, p. 96).

It is remarkable to note how the actions of one or a few learners could have had such a profound impact upon a whole learning team. Yet, this is what learners in trust-compromised learning teams reported. Lewin's (2010) research on social conflict within social groups sheds light on this. Specifically, Lewin explains that social groups are bound by their *interdependence*. As such, they can be viewed as 'dynamical wholes' where a "change in the state of any subpart changes the state of any other subpart" (Lewin, 2010, Kindle Location 1508). Members of small social groups are especially interdependent and exert an even stronger mutual influence upon each other. Learners in this study were members of small learning groups and, therefore, as Lewin explains "every move of one member will, relatively speaking, deeply affect the other members, and the state of the group" (Lewin, 2010, Kindle Locations 1560-1561).

Researchers have attempted to examine the conditions under which social loafing prevails. Social loafing appears to prevail when learners' unique contributions are not identifiable, groups lack cohesiveness, and the spirit of commitment to the group is lacking (Johnson & Johnson, 1994). Sztompka (1999) describes such cooperative relations as characterized by the appearance of "public good." This idea is captured in Proposition 5d of Sztompka's sociological theory of trust:

Proposition 5d. *Cooperative relations that have the character of "public goods," whereby all benefit equally regardless of individual contribution, are at risk of freeriding.*

Salomon and Globerson (1989) report that social loafing appears to be more prevalent in disjunctive and conjunctive tasks where a group's work depends on the ablest or least able member, respectively. They add that social loafing will least likely occur in additive tasks where everyone's contribution is necessary to complete the tasks.

Johnson and Johnson (1994) found that social loafing prevails on additive tasks where individual assessments are not made (Johnson & Johnson, 1994, p. 254).

The findings of the current study reveal that social loafing was present regardless of whether the tasks were conjunctive, disjunctive, or additive; whether individual work was identifiable; and whether individual assessment was included as part of the social learning experience. Although learners participated in additive tasks, breaches of trust forced them to restructure the scope of their tasks in order to complete them. The fact that they were additive was not sufficient to prevent social loafing. When learners felt that instructors would support them in identifying and sanctioning social loafing, they did so. These actions mitigated and discouraged further social loafing. But when learners felt that instructors would not support them in identifying and sanctioning social loafing or when learners were concerned that reporting social loafers would cause them to “fail” the course, they did not report them or misrepresented the efforts of social loafers. *Mary* said

We did not let him [the instructor] know [that one of the team members was not doing any work]. [I felt] sympathy [for the social loafer]. I would not want any person to fail and I end up carrying the blame. (*Mary*)

Clearly social loafing is very disruptive in developing trusting social relations and, by implication, effective social learning. Therefore, it is important to try to understand why it may occur. Research reports that one of the reasons that some learners may be unsupportive is because they are having difficulties managing the demands and needs of their social identities (e.g., learner, spouse, parent, or different nationality or culture) (Cooke & Kothari, 2001). Social loafers may lack the capacity, understanding, or inclination to be supportive (Ferreday & Hodgson, 2008). This reason seems to have contributed to social loafing in trusting learning teams and may also have contributed to trust-compromised learning teams. Insofar as communication was debilitated in the latter

teams, it is difficult to say with certainty why social loafing occurred. Regardless, frustrations and tensions emerged in both trusting and trust-compromised learning teams as supportive learners experienced unsupportive acts by others. In trust-compromised teams, the lack of support became the de facto standard for social loafers.

But, in trusting learning teams, learners managed to mitigate the harm from social loafing and thwart further attempts. They delegated unique parts of the task to each learner and leveraged technology to document everyone's efforts; thereby, exposing social loafing and building trust. *Bay*, for example, used color coding to highlight each team members' contributions. Doing so, discouraged further social loafing. In addition, learners in trusting learning teams were able to mediate potential social loafing due to conflicting commitments because they developed personal relations where they felt comfortable disclosing such conflicts. As noted previously, *Lily* explained how some learners' commitments to their children at times conflicted with team efforts. Cognizant of these potential conflicts, team members adjusted their efforts to accommodate both personal and academic needs.

Learners in trusting learning teams emphasized the importance of *sociality* and *personal disclosure* (Weber & Carter, 2003). They made a point of describing how they took the time to share the demands and needs in their "other lives" as efforts to develop intimacy and because these demands and needs had the potential to affect team work. Ferreday and Hodgson (2008) refer to these moments of social interaction as the "5 Minute Social" thread where learners engage in non-academic sociality and talk about life in general. These five minutes were important to the learners in Ferreday and Hodgson's study as it afforded them an opportunity to "catch up with one another" (p.

645). Sharing personal information helped learners in trusting learning teams restructure their work so as to accommodate each other's needs. Learners' in trust-compromised learning teams were unable to create such personal, intimate relations which would have provided them insights into the demands and needs of each other's identities. Instead, supportive learners in trust-compromised learning teams reported that unsupportive learners provided what they interpreted as disingenuous reasons (e.g., technology problems) for their lack of participation.

Some researchers believe that social loafing is emblematic of the American educational system. Specifically, in the broader context of American education, reduced learning effort is referred to as *student passivity*. A key criticism of the educational system is that its bureaucratic nature encourages “*student passivity*—a lack of active participation in learning” (Coleman, Hoffer, & Kilgore, 1981; Macionis, 2012, p. 476). Rigid uniformity, a focus on numerical ratings rather than *soft* variables such as creativity and enthusiasm, rigid expectations tied to performances on standardized testing, impersonal relationships, and highly prescriptive curricula which disempower individual learning and teaching represent five ways that bureaucratic academic institutions undermine education and promote student passivity. Macionis (2012) reports that the problem of student passivity prevails in both public and private academic institutions as well as at all grade levels. In fact, it is common among college and university students—“Passivity seems to be a classroom norm. ...Most college students find little value in classroom discussion and see their proper role as listening quietly and taking notes” (Macionis, 2012, p. 477).

Interdependence: The Need for Others

Learners' social interactions were structured by the interdependence designed in their learning tasks. Following best practices for the design of social learning, learners described that instructors designed teamwork with *positive interdependence* in mind (Johnson & Johnson, 1994). Learners shared that they were bound by a common *goal* and typically by the same *reward*; they had to work together to complete the learning assignment and were awarded the same grade. This was a universal message that learners from both trusting and trust-compromised teams shared. At times, learners were asked to evaluate each other's efforts and provide this feedback to instructors. Learners did not know if or how this information was used to determine grades.

In addition to potentially developing mutual, general, and abstract trust in their social relations, interdependence warranted additional types of trust. As Sztompka (1999) explains, depending on the nature of tasks and social interactions, cooperative relations are characterized by acts of trust along a spectrum characterized by rational (instrumental), moral (axiological), and altruistic (fiduciary) trust. Whereas rational trust involves relations based on shared interests and the least expectations and risk, altruistic trust is characterized by moral bonds involving the greatest expectations and risk. Sztompka (1999) describes the three different types of relationships and their characteristics in Propositions 4 and 5 and their corollaries:

Proposition 4: *Cooperative relations require mutual trust, generalized trust, and abstract trust.*

Proposition 4a. *Cooperative groups form a network of mutual trust where each member trusts the other members.*

Proposition 4b. *Cooperative members of groups have a generalized trust in the cooperative group as a whole.*

Proposition 4c. *Cooperative members have an abstract trust in the organizational processes that ensure successful cooperation.*

Proposition 5: *The type of relations that shape cooperation among group members determines the type of trust required of its members.*

Proposition 5a. *Cooperative relations based on little interdependence, role identities, and low risk (i.e., mechanical solidarity) require instrumental (rational) trust (i.e., expectations of regularity, reasonableness, and efficiency).*

Proposition 5b. *Cooperative relations based on medium interdependence, social identities, and medium risk (i.e., organic solidarity) require both instrumental and axiological (moral) trust (i.e., additional expectations of moral responsibility, kindness, truthfulness, fairness).*

Proposition 5c. *Cooperative relations based on high interdependence, social identities, and high risk require instrumental, axiological, and fiduciary (caring) trust (i.e., additional expectations of disinterestedness toward self-interests, representative actions, and benevolence and generosity).*

Learners reported taking courses with different content, in different departments.

One would expect that this variation would engender different social learning opportunities that would span the various types of relations and trust in Sztompka's (1999) typology of cooperative relations and trust. However, learners did not report such variations. Instead, all learners described cooperative relations that demanded *fiduciary trust*, the most demanding and riskiest type of trust. This was evident in their discussions of the moral and ethical trusting behaviors expected of others (see Research Question 1). Learners expected each other to behave in a trustworthy manner (e.g., reliable, consistent, competent, caring). The need for such demanding and intimate trust from the outset seems counterintuitive as the research on trust emphasizes that it takes time to build trusting relations and even more time to build caring trusting relations. Perhaps the answer lies in the idea that trust is relative; that is, that trust is a three-part relation: A trusts B to do X (Putnam, 2000). Learners trusted each other for a specific reason—to do X.

In the case of social learning, X represents a social learning activity that for the learners in this study represented an important activity that would contribute to their

academic and professional development. The learners in this study chose to take specific courses and undertake higher learning because they believed that doing so would help them to learn the requisite knowledge and skills to complete their degrees and become more proficient professionals in their area of study. In the broader context of a society that shaped learners, these sentiments highlight the American values of *practicality and efficiency* (Macionis, 2012) and how they inform learners' goals in education.

In the context of trust and social learning, practicality and efficiency means that learners wanted to engage in meaningful activities; that is, activities that would help them to achieve their personal, academic, and professional goals. Learners spoke about attending higher education to attain a level of competence and credentialing to help them obtain new employment or to be able to be more effective in their current employment. Some even spoke of education as a means to achieve the “American dream.” At times, some learners felt that they simply had to complete assignments—“pay their dues” so to speak—in order to achieve a higher goal such as completing course requirements for a degree which would, in turn, afford them the opportunity to obtain desirable employment and the lifestyle that accompanies it. Macionis (2012) notes “students seek out subjects of study that they feel will give them an advantage when they are ready to compete in the job market” (p. 469). Learners, therefore, took participation in learning activities very seriously as they were part of the social construction of their identities as students and, where appropriate, professionals. Even when learners simply took courses to fulfill degree requirements, they were serious about their studies as they ultimately led to a degree that would help them achieve their life goals.

Returning to trust as a three-part relation, learners, therefore, trusted others with something very important and valuable to them. Such trust was supposed to evoke a deep caring trust from others, beyond rational trust. It was supposed to evoke *fiduciary trust*—an altruistic benevolence and generosity of others from the outset (Sztompka, 1999). Learners trusted each other with something valuable, their education, their future; in the context of social learning, they took the ultimate risk. Their success and other's perceptions of them relied on other's fulfillment of their fiduciary duties. It makes sense, therefore, that the moral, deeply felt quality of the bonds associated with fiduciary trust engendered equally deeply felt emotions resulting from breaches of trust.

Although a small minority of learners used language to rationalize that they were not interested in caring relations with others, their conceptualizations of trust did not confirm these rationalizations. They described their theories of trust in moral terms, in fiduciary terms—altruistic benevolence, generosity, and caring towards others. Learners in trusting learning teams were able to experience fiduciary trust as, from the outset, they expressed care and concern for each other. They became friends and expressed care in terms of communicating with each other in a timely and responsive manner, communicating interest and commitment to each other and their team's goal, considering each other's preferences and interests in allocating learning tasks, and offering to help each other. Learners in trusting learning teams turned to each other when they needed help. *Saoirse* shared the joy she experienced in participating in a trusting collaborative experience:

I knew I could rely on both of them to carry their weight and contribute positively to our big research project. ...I took a chance by doing that project with the other two students. We had an option to do it alone. I was so grateful to have help from two wonderfully competent and very informative classmates. At the end of our

term, we provided reflections on our experiences. I was amazed how many people in our class wished they had collaborated with other students, how frustrated and lonely and isolated they felt trying to navigate such a big research project alone. This really solidified my trust (and joy) in regards to having such a great collaborative experience. (*Saoirse*)

Learners in trust-compromised teams were not able to effect fiduciary trust as caring for each other was destroyed by those who breached trust in their teams. Learners in trust-compromised teams did not have the “luxury” of extending fiduciary care as they struggled to “survive” as a team and complete a team assignment without the benefit of a complete team. Even though they were unable to turn to their team members for help, they recognized that they did need help from others. They turned to themselves, personal friends, and Internet resources to provide this help. Sam expressed the isolation of working alone and need for others as he turned to both friends who were content experts in the course he was studying and Internet resources:

I referenced other sources for my solutions... MIT open courseware and YouTube were the best options... You can find the topic you need and get the best explanations, if you don't understand one teacher there are others that can explain it differently... I had “subject matter” friends if it got bad and we would meet. But mostly MIT courseware and YouTube. ... So, for better or worse we find a way to learn what we have too. (*Sam*)

Summary of Research Question 2

Collectively, the findings and interpretations for Research Question 2 reflect the practice of learners’ social theory of trust developed in Research Question 1. In social learning, learning is enacted through social interaction that is shaped by the academic environment, learners’ current social interactions, and the design of the learning task. The culture of trust embedded in the academic environment acts as an agent of socialization to encourage and, at times, coerce, learners to trust others even if they appear to be untrustworthy. The friendships that learners develop in academia act as additional agents

of socialization where learners develop trusting, intimate relations that facilitate risk-taking necessary in effective social learning.

Learning communities and cohorts discussed in Research Question 1 promoted trusting friendships. In their absence, learners found themselves trying to develop friendship relations while at the same time learning collaboratively for the first time. Learners in trusting learning teams were able to establish social relations characterized by trust, even in the presence of breaches of trust. Learners in trust-compromised learning teams were plagued by breaches of trust that debilitated their teams.

Nonetheless, all learners recognized that they were interdependently bound to complete their learning tasks. Depending on whether they were in trusting or trust-compromised learning teams, learners reached out to members of their teams, themselves, friends outside the course, or the Internet to provide the necessary knowledge, skills, and support to complete their tasks. Learners in trusting learning teams trusted their team members to provide competent, reliable, caring help. Lacking trust in their team members, learners in trust-compromised teams had to turn to themselves or others outside their teams for help.

Research Question 3: “How does computer-mediated textual communication shape learners’ performances of trust in an online context?”

An interpretation of the three key findings for this research question reveals that they shed light on three important areas of online social learning: identity, the role of the instructor, and the affordances of technology in mediating instruction, social interactions, and learning. *Finding 7* addresses a prevalent concern in online interactions; that is, the management of identity online through forms of presence. The permanence and visibility

of online textual identities afforded learners insights into others' potential trustworthiness. *Finding 8* considers the role of the instructor in online social learning. Whereas there is an emphasis on learner-centered pedagogies in modern education (Mehlenbacher, 2010), learners appear to have preferred a more inclusive approach that viewed the instructor as a *partner, nurturer, and guide* (Cadwell & Rinaldi, 2003) who actively participated in demonstrating and promoting the social appropriation of technology. Learners valued active *teaching presence*. *Finding 9* demonstrates the myriad of ways, both positive and negative, which the design of computer-mediated textual communication technology mediates learners' social interactions.

The social and cultural contexts in which these findings were played out shaped learners' views of the effectiveness of computer-mediated textual communication in facilitating performances of trust and social relations. Lombard and Ditton (1997) suggest that "the identical media form and content might generate a sense of presence in one media user and not in another, or might generate presence in the same user on one occasion but not another one" (p. 22). Learners in trusting learning teams established friendly (trusting) relations that were able to mediate and moderate any adverse effects resulting from the social appropriation of computer-mediated textual communication. They, for example, shared personal stories and experiences and used humor, which helped others to know who they were outside of the online classroom (Fontaine & Chun, 2010). They cultivated "a personality that is emotive, open, and supportive" (Wildflower, 2010, p. 393)—a sense of presence. Clearly, learners' identities influenced their development of presence in computer-mediated textual communication.

The *sense of presence* (Rudestam & Schoenholtz-Read, 2002); that is, learners' feelings that they knew each other and were connected, mediated learners' *social presence* (Short, Williams, & Christie, 1976) as shaped by the affordances of computer-mediated textual communication. Learners in trusting learning teams felt connected by their sense of presence and social presence. Therefore, they developed a "powerful sense of virtual proximity that enables socialization and collaboration" and the performance of acts of trust online (Agger-Gupta, 2010, p. 244). Presence had a significant impact on the development of trust (Cyr, Hassanein, Head, & Ivanov, 2007) by facilitating a sense of belonging and safety (Gayol, 2010). Learners in trust-compromised teams lacked the sociality necessary to do so. These findings and interpretations support research that proposes that

whether or not a network of Internet users amounts to a virtual community will depend on how users relate to each other, rather than on the special properties of the medium. Like any other communicative medium, CMC will only be as good for collective thinking as its users make it (Mercer, 2002, p. 129).

Social Presence: Creating a Self through Pictures and Text

All learners felt a *sense of presence* to some degree in their courses. Learners in trusting learning teams engaged in frequent and more meaningful social interactions that contributed to feeling a greater sense of presence than learners in trust-compromised learning teams. Consistent with the research findings in these areas, learners in trusting learning teams, as compared to their counterparts in trust-compromised learning teams, were able to develop intimate, friendly relationships (Walther & Burgoon, 1992); reported higher levels of satisfaction with their online learning experiences (Gunawardena & Zittle, 1997); enjoyed greater degrees of interactivity (Tu & McIsaac, 2002); experienced more meaningful online discussions with their team members

(Polhemus, Shil, & Swan, 2001); and experienced affective learning (Kearney, Plax, & Wendt-Wasco, 1985).

Learners in trust-compromised learning teams lacked the *personal connections* that could engender meaningful relations and interactions that promote presence. They did not express themselves emotionally (e.g., self-disclosures), lacked open communication (e.g., expressing disagreement), and were unable to achieve group cohesion (e.g., looking out for each other) (Garrison, Anderson, & Archer, 2000). The lack of a sense of presence and social presence depersonalized their learning and demotivated them. They expressed greater frustrations with the limitations of computer-mediated textual communication, their teachers' effectiveness, and affective learning. One of the sources of these frustrations no doubt emerged from their communication problems. Learners in trust-compromised learning teams interacted with team members who did not communicate in a timely manner, if at all. Fontaine and Chun (2010) share how communication problems among learners in Teleland compromised their sense of presence and trust: "The latency in the feedback caused all students to feel a loss of connection and community and produced consequent distrust, frustration, and anxiety" (p. 41).

Contrary to the prevailing research that supports the idea that media characteristics moderate social presence, learners in trusting learning teams expressed that the limitations of technology could be overcome by a variety of strategies such as using emoticons, frequently communicating, disclosing personal information, and expressing care and understanding. Their efforts are supported by research that indicates "the key to success in online learning involves using strategies that facilitate

communication and enhance social presence among online learners, not just applying the newest technologies” (DuVall, Powell, Hodge, & Ellis, 2007, p. 24).

Learners viewed others’ online pictures and computer-mediated textual communication as valuable resources in assessing others’ trustworthiness and establishing a sense of copresence, or an awareness of being and interacting with others (Fontaine & Chun, 2010). In the absence of face-to-face encounters, they turned to picture representations, when available, seeking traditional cues of trustworthiness from the appearance and demeanor of others (Sztompka, 1999). It is a common practice in online learning for instructors to encourage learners to post pictures of themselves. The idea is that doing so helps to present learners as real and credible individuals and, thereby, promote trusting social relations among them. In practice this is not always the case. Learners may choose to present themselves in “the best light” through their pictures or online communications (Stodel, Thompson, & MacDonald, 2006, pp. "Perceiving and Being Perceived by the Other," ¶1). Learners in trust-compromised learning teams experienced such discrepancies that undermined their trust in others.

Kim shared how her class members’ pictures presented inauthentic selves. (Goffman, 1959). When *Kim* met her classmates in person she could not identify them based on the pictures they had posted. She commented on how the pictures were “polished and so unnatural.” The discrepancy between learners’ performed identities and real identities became a barrier to learning for *Kim*. She was unable to perceive others, to know who they were. This prevented her from establishing meaningful social relations with her classmates and limited her ability to engage in meaningful learning dialog with them: “it was kind of hard to even respond or comment to someone’s post in the

discussion board.” *Kim*’s experiences and concerns regarding the accuracy of images and identities portrayed online as well as their impact on relationship building is echoed by online learners in other studies as well (Stodel, Thompson, & MacDonald, 2006).

Learners in this study also viewed computer-mediated textual communication as a resource (Suthers, 2005) that promoted visibility, awareness, and accountability (Erickson, Smith, Kellogg, Laff, Richards, & Bradner, 1999). CMC technologies record everyone’s participation in a persistent medium (Herring, 1999; Suthers, 2005); they maintain “a written, visible, and persistent record of conversation” (Haythornthwaite, 2009, p. 26) of participants’ previous and ongoing communication with their colleagues and their instructors. These transcripts contained both quantitative and qualitative data that were available for discourse and retrospective analyses (Harasim, 2012). Erickson and Kellogg (2000) explain that the persistence of CMC

opens the door to a variety of new uses and practices: persistent conversations may be searched, browsed, replayed, annotated, visualized, restructured, and recontextualized, with what are likely to be profound impacts on personal, social, and institutional practices. (p.68).

Learners in this study leveraged the persistent quality of computer-mediated textual communication to glean information about others’ social presence and performances of trust. Research on social presence attests to the importance of being able to present oneself well in text in order to create a real sense of oneself, form friendly relations, shape learning communities, enhance their satisfaction with their online learning experiences, and improve their learning outcomes:

The ability to present oneself well in text, known as the creation of social presence, ...is now considered a critical factor in community building in online classes. Both instructors and students need to be able to present themselves as real people in the online classroom. This ability is positively linked to student satisfaction with online learning as well as successful achievement of learning outcomes (Garrison, Anderson, & Archer, 2003; Gunawardena & Zittle, 1997;

Picciano, 2002; Rovai & Barnum, 2003). Picciano (2002) asserted that ‘Students who feel they are part of a group or ‘present’ in a community will, in fact, wish to participate actively in group and community activities’ (p. 24). Participation and interaction online equates with successful course outcome. (Palloff & Pratt, 2010, p. 374).

By engaging learners, social presence also impacts retention in online education. Cheng, Lehman, and Armstrong (1991) report that 90% of learners who engage in collaborative learning persist to completion as compared to 22% who learn in isolation.

Learners found that social presence was closely associated with trustworthiness, trust, and trusting. All learners were aware of the persistent quality of computer-mediated textual communication and its implication—*accountability*. Learners in both trusting and trust-compromised learning teams appropriated these perceived affordances (Norman, n.d.) to “get to know” others—to create a sense of their identity—and to assess their trustworthiness. They valued and studied the trustworthy cues that others left behind in their textual performances. Specifically, learners focused on what others said, how they said it, and the timeliness of their interactions to determine how others signaled trust and whether they could be trusted in future social learning endeavors. They looked for such trust signals as honesty, reliability, dependability, caring and observed the stability or consistency of these signals (Corritore, Kracher, & Wiedenbeck, 2003; McKnight & Chervany, 2000). These assessments had implications for learners’ social interactions with others. If they found others to be trustworthy, then they extended trust. If, however, they found them to be untrustworthy, then they became more vigilant about monitoring ongoing activities and placing mechanisms in place to encourage trustworthy behavior. Whereas some learners conducted informal heuristic analyses of others’ activities, other learners conducted more rigorous and formal analyses.

Saoirse, a member of a trusting learning team, observed others' work ethic and online behaviors. She noted if others turned their assignments in on time, the quality of the work, and how they interacted with others. These indicators apprised her of others' trustworthiness:

My trust came from observing the other students' work ethic and online behaviors. I could tell if they turned in assignments on time (or ahead of time), if they participated in group discussion boards, if they responded to others in a respectful way. I also felt confident in their abilities because I knew a little about their backgrounds and goals for their own career paths. The fact that we 'recognized' one another from previous classes laid the foundation for our trust to work with one another. I had seen their work in classes that were much more independently based. I knew I could rely on both of them to carry their weight and contribute positively to our big research project. (*Saoirse*)

Harper, a member of a trust-compromised learning team, informally observed others' postings to assess their "personalities" and infer their trustworthiness:

After just a few weeks into a class, you could start to pick up on various students' personalities, just through their postings. Some students would pick the most obvious of the discussion questions and just write a line or two and then other students would really go for the more complex ones. Then, there would always be disagreements and I suppose even misunderstanding because of the way students wrote or responded to postings. There was also some griping to the professor about the assignments. (*Harper*)

Jamie, a member of a trust-compromised learning team, began with a formal risk analysis of similar signals of trust as *Saoirse*. She kept tallies during the first week of the term to determine when learners posted, the quality of their posts, and their responsiveness. As time progressed, she continued with informal risk analyses of her team members trustworthy behavior. Gathering such data helped Jamie to determine whether she could trust others to complete their work or whether she needed to implement a contingency plan to complete the work herself:

I never fully trust any team member. I always had a contingency plan for writing the entire group project myself, just in case. And as the weeks progressed, you would find out, who was dependable or not. So, I guess... No I am not a trusting

person. ...[I would note] how late they would post their first info doc on themselves, and their discussion questions every week. How long it would take for their replies to come in. Would they just post the minimum or would they actually read everyone's, and post to those they had comments on. I would take tallies on them the first week, that was my risk analysis of the people. ... Interestingly enough, I would say 85% of the time [during our teamwork], the response was that they were fine. But by the end of the week, the finished product was not produced. So Sunday rolls around and the whole team is scrounging, waiting, reviewing and often I am the one up late doing the final draft. (*Jamie*)

In addition to studying the trust signals that others left behind in the text, learners also observed the *stability and consistency* of such signals. Stability or consistency across learning contexts was important to learners as these indicators revealed two crucial facts: (1) the risk involved in trusting others in future endeavors and (2) the authenticity of their performances of trust (i.e., trusting identities). As *Faith*, a member of a severely trust-compromised learning team, found out “trust based on reputation alone is vulnerable to strategic misuse, as inherently untrustworthy actors can build up a good reputation to ‘cash in’ by not fulfilling in the final transaction” (Riegelsberger, Sasse, & McCarthy, 2007, p. 57). *Alex*, a critical member of her team who chose the project, was the resource expert, and liaison to the stakeholder, built a trusting reputation in “public;” that is, in view of the instructor and class and, for a while, in “private” amidst his team members. However, then, he consistently breached trust with promises to participate, disappearing, and shirking his responsibilities to the team.

By promoting *visibility, awareness, and accountability*, the persistent quality of CMC rendered this technology as a *socially translucent technology* (Erickson & Kellogg, 2000; Erickson, Smith, Kellogg, Laff, Richards, & Bradner, 1999). Typically, socially translucent technologies are designed with human-computer interfaces that provide social cues about users' presence and activities (e.g., Amelung, Laffey, & Turner, 2007; Erickson & Kellogg, 2000). The learners in this study, however, appropriated computer-

mediated textual communication as part of their social practice and, in doing so, reshaped the persistent textual records of learners' history of interactions as an activity awareness tool intended to assess trust reputation and assure future trustworthy behavior. Learners' reshaped the affordances of computer-mediated textual communication that, in turn, reshaped their social world (Simões & Gouveia, 2011).

Teaching Presence: The Role of the Instructor as Partner, Nurturer, and Guide

Learners' perceptions of *teaching presence* and its impact on their experiences of online social learning cannot be underestimated in this study and is strongly supported by the research on teaching presence. Learners valued when their instructors actively participated as partners, nurturers, and guides in their online learning. Teaching presence facilitated the sense of connection and community that helped learners develop trusting relations, even in a context—online threaded discussion forums—typically considered unfriendly toward sociality.

Shea, Li, and Pickett (2006) found “62% of total variance for class community can be accounted for by measures of teaching presence;” specifically, directed facilitation (p. 184), and that a “strong and active presence on the part of the instructor—one in which she or he actively guides and orchestrates the discourse—is related both to students' sense of connectedness and learning” (p. 185). The role of instructors in directed facilitation becomes one where, for example, they synthesize disparate discussion threads, refocus groups from digressions, model critical thinking, and foster collaboration (Gayol, 2010; Wildflower, 2010). Instructors take an active part in co-creating “a positive and kind learning environment” (Mehlenbacher, 2010, p. 264; Stevens-Long & Crowell, 2010).

Shea, Li, and Pickett (2006) add that teaching presence is a strong predictor of trust and learners' sense of community (Shea, Li, & Pickett, 2006).

Research examining learners' perspectives on online learning often reports that learners are disappointed with their instructors' teaching presence and that they feel disconnected from them (Gayol, 2010; Hult, Dahlgren, Hamilton, & Söderström, 2005; Stodel, Thompson, & MacDonald, 2006; Vonderwell, 2003; Woods, 2002). Therefore, it is unsurprising that learners in this study echoed these sentiments (Gayol, 2010; Hult, Dahlgren, Hamilton, & Söderström, 2005; Vonderwell, 2003; Woods, 2002). Learners missed their instructors, and the valuable guidance that their instructors could provide. They expressed this sentiment in the context of online threaded discussion forums where interactions typically lacked the personal, trusting social exchanges found in trusting learning teams. Some of the consequences of such disconnects include failure to persist in learning and achieving learning outcomes (Mehlenbacher, 2010). *Sandy* captures how cold and alone the online world can feel when it is devoid of teaching presence and the potentially lost learning opportunities that can ensue from this void:

He would post the assignments online, set a due date, show our grade the following week and on to the next assignment. Either you understood the material or not...if you asked a question and no student participated in your thread. You would get a generic response from the professor, stating a page number to find your answer. (*Sandy*)

Conversely, *Saoirse* illustrates how meaningful online communication can be when it is shaped by teaching presence:

I think it is vital not only to communicate, but to do so often. I find with my best and most positive online trust relationships, it's usually with the people in an online class that check their email every day, read and respond to discussion boards everyday (or almost that often) and keep current with dialog, ideas and projects that build from participation from many people. ...These aspects are what are lacking in my "specific" classes. We have long spans of time between assignments and very little communication on discussion boards/emails. This can

be frustrating because the projects are difficult and complex. We should be able to help each other more by talking to one another. I will say that the professors for these courses have always been VERY helpful, communicative and responsive on a daily basis. (*Saoirse*)

The online threaded discussion forum is a ubiquitous, and highly contested, tool used to facilitate online social learning (Thomas, 2002). Some learners, instructors, and researchers view it as “an ideal place” to promote learner-centered “truly collaborative” learning where learners become “the architects of their own learning” by shaping the quality of their online discussions (Wildflower, 2010, p. 390). Active conversations among learners and instructors “are the keys to success in the online classroom” (Palloff & Pratt, 2010, p. 373). When, however, vibrant interactivity necessary to create a sense of community is lacking, online threaded discussion forums have the potential to become a place to “report in and not as a medium of discussion” (Stodel, Thompson, & MacDonald, 2006, "Cognitive Presence," ¶4). This is how the learners in Stodel et al.'s (2006) research on online learning felt. Online threaded discussion forums were “merely a way of reporting in – a façade of participation” (“Cognitive Presence,” ¶5).

Learners in the present study felt similarly, to some degree, because of the way that online threaded discussion forums were implemented in their courses. Instructors required learners to make a specific number of posts and to respond to a specific number of others' posts. Even in the rare circumstances where instructors facilitated meaningful conversation online, learners' efforts were ultimately assessed based on the number and type (e.g., original, response) of posts. Although the number, frequency, and length of comments are considered important measures of participation and collaboration in online threaded discussion forums (Mehlenbacher, 2010), Garrison (2007) feels that they are insufficient in promoting meaningful learning: “Direction and facilitation is required to

establish cohesion and ensure messages are developmental (i.e., more than “serial monologues” or personal declarations)” (p. 66). Amelung, Laffey, and Turner (2007) note the danger inherent in simply designing “artificial tasks” based on number of postings:

Instructors often impose artificial tasks such as requiring a number of postings to a discussion board to force some minimal level of engagement. Students quickly “learn” to only complete tasks that are directly related to course assessments and all too rarely become engaged in dialogue to enhance learning. (p. 75)

Maggie illustrates their point:

We were required to post onto online discussion threads and the professor said it would be counted into the final grades. But soon we found it wasn't really seriously counted [because] the professor had never mentioned and/or urged people to post. If s/he really cared about it, then s/he would find out that people are not serious about that requirement and s/he would comment on that. (*Maggie*)

Thomas (2002) observes that meaningful interactions do not come “naturally to students as they work in a virtual learning environment” (p. 363). Therefore, they need “soft,” human, scaffolds to help them master content, conceptual understandings, thinking and reflection, and relationships (Hill, Domizi, & Collier, 2009). As *Saoirse* illustrated, learners in this study valued their instructors’ direct facilitation of the online threaded discussion forums and recognized, as the research supports, that without their instructors’ facilitation of their communication they would have been unable to develop meaningful interaction and a sense of community (Johnson & Johnson, 1994; Palloff & Pratt, 2010; Song et al., 2004; Thomas, 2002). Practice, as well as research, show that teaching presence (e.g., direct facilitation) is considered “a significant determinate of student satisfaction, perceived learning, and sense of community” (Garrison D. R., 2007, p. 67). Sfard (1998) explains the reason that teaching presence is so important to learners’ development. In an academic world that espouses learning-as-participation and promotes

social learning, the instructors' role becomes paramount in socializing learners to the world of learning:

Learning ...is now conceived of as a process of becoming a member of a certain community. This entails, above all, the ability to communicate in the language of this community and act according to its norms. The norms themselves are to be negotiated in the process of consolidating the community. While the learners are newcomers and potential reformers of practice, the teachers are the preservers of its continuity. From a lone entrepreneur, the learner turns into an integral member of a team. For obvious reasons, this new view of learning can be called the *participation metaphor*. (Sfard, 1998, p. 6).

Stodel et al. (2006) concur: "As educators, we need to spend more time teaching learners how to communicate, collaborate, and build community effectively online if we want to enhance social presence" ("Social Presence," ¶10).

David, a learner in a trust-compromised learning team, clearly articulated how an instructor can develop teaching presence in online threaded discussion forums to create a safe social space wherein learners would feel comfortable expressing their thoughts and questions, engage in meaningful and reflective dialogue, participate collaboratively, and guided by their instructor:

I think there is a responsibility to the leader of the forum. When I ran web forums, it was my responsibility to maintain communication with everyone, both on topic... , and in off topic areas. It was my job to get people to talk about their home lives, their work, or things that bothered them. We had areas where people could post online word games (for example, I write a single word to a sentence, then you do, then I do, then you do, and soon, we have the first sentence to a story). We would post about gasoline prices, or whatever. The idea being that you not only gave the participants an option to participate, but as a facilitator, you WERE a part of these conversations and promoted them to build community. I'm going to say it: I've never felt that way on forums for my classes. My professors are just as transient as I was. ... I don't think that the design of the course promotes or discourages social relationships; I think the professors that lead them either promote or do nothing to promote community. If a professor enters the forum only to check that a student has done the work, then the student will understand that, and only participate to satisfy the requirement. The technology is there to spur conversation and to allow for community development. I know this because I've done it in my own forums, and all the forums that I've been a part of over the years. And yes, 5 months in a class is PLENTY of time to become

friends with someone or for a community to develop. But because of either the apathy of the instructor, or the apathy of the learner based on the instructor's behavior, community doesn't develop because it's not functionally required. I think that professors should develop a specific thread for off topic communication, and then do their best to participate themselves. You cannot just make a place for people to chat, and expect them to do so. Community development requires that there be a leader that promotes said community, and participates as well. In short, a professor should always be engaged in off topic communication if he or she wants community development. (*David*)

To summarize, learners in this study, as in other studies of online learners, valued teaching presence, especially in the form of *directed facilitation*. They recognized that to excel, they needed their instructors to model learning online as well as the social appropriation of technology. Doing so created a climate of trust where learners felt safe to venture forth beyond their zone of proximal development (Vygotsky, 1978).

Deconstructing Barriers to Computer-mediated Textual Communication

Consistent with the channel research on computer-mediated communication, learners found computer-mediated textual communication “cold,” socially unwelcoming, and prone to misunderstandings resulting from the disembodiment of interpersonal communication (cf. *social presence theory* (Rice & Love, 1987; Short, Williams, & Christie, 1976); *cues-filtered-out and media richness theory* (Daft & Lengel, 1984; Kiesler & Sproull, 1992; Rutter, 1984); or *social information processing theory* (Walther, 1992; 2011; Walter, Anderson, & Parks, 1994; Walther & Burgoon, 1992; Walther & Parks, 2002)). They agreed that this coldness or lack of sociality stemmed from the reduced channels in textual communication; specifically, visual and audio information “crucial to conveying meaning and building relationships are diminished” (Fontaine & Chun, 2010, p. 37). The loss of such information increases interpersonal uncertainty and lowers trust (Riegelsberger, Sasse, & McCarthy, 2007). Among learners in trusting learning teams, the ambiguity in text (Hudson, 2010) became an opportunity for further

learning and relationship building. However, for learners in trust-compromised learning teams it became another, often insurmountable, obstacle to reducing uncertainty and building trust.

As *Harper* shared, “Then, there would always be disagreements and I suppose even misunderstanding because of the way students wrote or responded to postings.” Interestingly, one learner, *Diana*, in a trusting learning team reported that richer cues, as exemplified by Adobe Connect voice, were more constraining than the poorer cue medium of computer-mediated textual communication. *Diana* explained the reason for this: Adobe Connect voice enforced *turn-taking* whereas synchronous computer-mediated textual communication afforded learners to speak “out of turn” and, thereby, enrich the dialog and learning. For this reason, *Diana* and her colleagues supplemented Adobe Connect with text chat to conduct “back channel conversations” intended to clarify ongoing learning:

We usually have synchronous sessions on Adobe Connect. Voice on [there] ... is not that easy because only one person can talk at a time. Students usually type in the chat window. ... We also have back channel conversations in the chat window while the instructor is speaking. The instructor can see our comments of course. ... I can recall one time where I thought the instructor said a certain word and I typed that in the chat to clarify. The word I thought she said made the comment funny. I got clarification on what she really said. ...: I think it was something about having cookies spread out on her bed, but she really said copies. (*Diana*)

Hudson (2010) affirms *Diana* and her colleagues’ sentiment in the context of American culture: “Americans have a tendency to interrupt others in the middle of a thought—it shows interest and enthusiasm and collaboration in the joint development of ideas” (p. 282). Without knowing *Diana*’s, or her team members’ cultures, it is impossible to support the cultural perspective of Hudson’s observation. However, his sentiment reinforces *Diana* and her colleagues’ views regarding social learning. At times,

it is messy, dynamic, and socially constructed as learners attempt to internalize new understandings (Vygotsky, 1978). As evident from *Diana's* excerpt, trusting interactions also include *social talk* and reflect learning in a community context. *Diana* thought her instructor was talking about “cookies spread out on her bed” which evoked a humorous scene. Harasim (2012) emphasizes the importance of such social commentary in contributing to and reflecting the existence of a community:

Social discourse creates social glue: to encourage members to develop friendships and thereby motivate them to participate regularly.

Social discourse occurs in most formal and informal educational settings and can contribute to a tone that invites participation. The volume of social comment ranges around 25% of the total exchange, enough to be welcoming but not disrupt the discussions” (p. 164).

Learners in trusting learning teams disclosed personal information that helped them to get a real sense of others—both other learners and their instructors and engaged collaboratively on their learning tasks. They established personal relationships, friendships, and learning communities. Learners compensated for the lack of nonverbal cues by explicitly setting new norms and developing new social competencies to socially appropriate textual communication. Learners in trusting learning teams leveraged their trusting social relations (i.e., friendships, learning communities) to socially appropriate technology such that they could extend and deepen their trusting relations. Their efforts are consistent with research studies which have “shed some light on the initial challenges of the visual interface acting as a cold barrier, and the design of instruction favoring the development of a sense of belonging by introducing social presence, cognitive presence, teaching presence, and transactional presence as relevant constructs in online learning environments” (Gayol, 2010, p. 218).

As *Diana, Bay*, a member of a trusting learning team, also found synchronous chat as a more effective and efficient tool to garner feedback, clarify misunderstandings, and work collaboratively: “it allowed for a more efficient sharing of ideas as all four of us could immediately get feedback, make revisions, and repeat. If a comment was unclear or... misinterpreted, we could clarify immediately rather than wait for reply emails.” In these cases, computer-mediated textual communication facilitated communication, clearing up misunderstandings, and promoting collaborative learning, all of which nurture trusting relations. However, trusting relations also created the context in which these acts could take place. Learners in trusting learning teams leveraged their social relations to make the technology work for them. Clearly, learners could develop online learning communities that provided emotional support, sociability, and knowledge to complete their learning tasks (Hiltz & Wellman, 1997) despite the textuality of the medium.

Learners in trust-compromised learning teams reported that the lack of facial expressions, body language, and speech intonation hampered their ability to perceive others, form an impression of them, and to express emotions which contributed to their online anxieties and uncertainties about others (Bente, Rüggenberg, Krämer, & Eschenburg, 2008; Berger, 1979; Rudestam & Schoenholtz-Read, 2002). Unable to perceive others readily, they were challenged to trust others. As repeatedly found throughout this study, learners in trust-compromised learning teams lacked the social connections that would help them to overcome the barriers erected by the dehumanizing, cold characteristics of computer-mediated textual communication. Technology exacerbated already trust-compromised relations, adding yet another layer of risk and uncertainty. *Charlie*, a member of a trust-compromised learning team, explained how

failing to “see” others, whether in person or a picture, created a barrier to getting to know others online. He extended his thoughts by adding that he did not think that the computer-medium textual communication medium is appropriate for relationship building. *Charlie* felt that relationships were reduced to “accepting” others to complete the task at hand:

The hardest part I think is developing a relationship with anyone else. Not seeing a face, or just a small avatar, make it hard to gauge a personality. But all in all, with other students, we accept each other, like them or not, to get the task at hand completed. And we really aren’t there to build a relationship. Which is disappointing. The lack of a face-to-face interaction does have a lot to do with it. All my undergrad work was in classrooms, 5 hours a night for 8 week semesters, I worked, and studied with the same group of people for 6 years. You build those relationships. (*Charlie*)

Conversely, *John*, another learner in a trust-compromised learning team, shared an alternative, positive view of disembodiment. Specifically, *John* explained how nonverbal cues shape communication. Sztompka (1999), as well as the general research on trust, emphasize how important bodily cues are to assessing others’ trustworthiness. However, *John* alluded to the potential inauthenticity inherent in physical communication. Communicators observe nonverbal cues and tailor their messages accordingly. The messages they share, therefore, are to some degree inauthentic as they do not reflect what the communicators would have said without the cue feedback from their communicating partners. For this reason, *John* felt that computer-mediated textual communication may reflect more authentic communication:

If I am having a conversation with someone online who is to say that if I were standing in front of you reading your expressions as I speak that I would say the same things or even believe the same things? In that way text can be more revealing of the truth. (*John*)

Hudson (2010) concurs: “paradoxically, another person’s physical presence can lead to a psychological distancing” which Farr (1991, cited in Hudson, 2010) explained happens

‘because the skin is such a compelling boundary from a visual perspective’ (p. 253).

Therefore,

Far from diminishing the power and accuracy of messages, the asynchronous online format of dialogue that strips away visual images has the effect of purifying and strengthening the transmission of information and meaning, in effect by eliminating the extraneous confusion of unconscious, random, and inaccurate signals that are sent by one’s physical presence. Again, there is a dramatic improvement in the ratio of signal to noise. (p. 284).

Lily, a member of a trusting learning team, affirmed that some learners need the disembodiment, space, and time that asynchronous computer-mediated textual communication affords in order to reflect on what they want to say and how they wish to say it (Stevens-Long & Crowell, 2010). *Lily* expressed the pressure that she feels to respond immediately when in a face-to-face situation that results in incomplete or inappropriate responses:

I am the type of person that needs a moment to formulate thoughts. While I can have a face-to-face conversation, it’s difficult for me when I’m expected to immediately respond. ... it was difficult to take everything we had learned in a lecture and just talk about it. I did better when I could take even 1-2 minutes to piece it all together. Then, what came out (through written or oral language) was much more formulated. It contained all of the things I wanted to say instead of “Oh...I forgot this...Oh and this too!” (*Lily*)

Whether synchronous or asynchronous, *Lily* captures a distinctive quality of computer-mediated communication: messages travel instantly, but recipients have the option to respond instantly or after reflection on more thoughtful replies (Mercer, 2002).

Repeatedly, learners in trusting learning teams showed that the social constraints of computer-mediated textual communication could be mediated by their sociability, trusting relations, and the design of learning activities as communities of learning. *Toni* and *Diana* explain how the affordances of computer-mediated textual communication can impose barriers to social interaction and how trusting relations can deconstruct such

barriers. Technology is a medium that can physically transmit a message, but it cannot enforce the norms associated with communication. Only human beings can ensure that they respond, and that they do so in a timely manner, to ensure trusting relations:

Toni: Technology (Texting and emailing) guarantees the delivery of the message, but not a response. The response is sent back out at the discretion of the sender. Talking in person allows for immediate responses and compromise.

Diana: You build trust I think by listening to each other, responding.

Diana captures what is essential in trusting relations and computer-mediated textual communication: “the full exercise of people’s innate capacities for listening and responding” (Hudson, 2010, p. 284).

Lacking such trust, learners in trust-compromised learning teams lacked the affordances of technology and sociality to ensure that their teams, as a whole, communicated and worked collaboratively. Messages were sent and essentially ignored. The examples of breaches of trust clearly illustrate the foundational and prevalent communication problems that plagued trust-compromised learning teams. *Faith* and *John*’s words are haunting reminders:

Faith: He was attending the online course sessions and would promise that he would attend the team meetings but then wouldn’t show up. It was terrible.

John: they had not responded to us or participated in the preparation. I hate to think about it that way, but we didn’t owe them anything...they left us out to dry.

Although some learners in trust-compromised learning teams knew how to socially appropriate computer-mediated textual communication as a tool to promote social interaction and social learning, they lacked the trusting social relations needed to do so. For these learners, the asynchronous nature of computer-mediated textual communication created a barrier to getting to know each other and to develop trusting relations. Learners in trust-compromised learning teams, as reported in the literature

(Stodel, Thompson, & MacDonald, 2006), experienced computer-mediated textual communication as a constricted communication medium because there was no guarantee that their efforts to communicate would be reciprocated. Learners reached out to team members who either responded in an untimely and unresponsive manner or simply ignored them. Learners felt isolated due to the lack of responsiveness and the missing cues resulted in misunderstandings. Silences were difficult to deal with; learners felt helpless (Stodel, Thompson, & MacDonald, 2006).

Summary of Research Question 3

The interpretations of the findings for Research Question 3: “How does computer-mediated textual communication shape learners’ performances of trust in an online context?” reveal that a *sense of presence, social presence, and teaching presence* are important factors in mediating the effectiveness of computer-mediated textual communication. In addition, the *qualities* of the medium have the potential to mediate social interactions. However, more importantly, this study shows that instructors’ and learners’ *trusting relations* play an important role in *mediating* and *moderating* the affordances of computer-mediated textual communication and their impact on social learning. Learners in trusting learning teams were able to leverage their trusting relations to overcome the social deficits of computer-mediated textual communication. Learners in trust-compromised learning teams lacked the trusting foundation to overcome the interpersonal uncertainties and risks introduced by a disembodied medium.

Research Question 4: “How does trust shape the social construction of knowledge? That is, how does trust mediate learners’ social construction of knowledge in online social learning?”

An interpretation of the three key findings for this research question considers learners’ social theory of trust and how its enactment in social interactions and social relations shapes online social learning. *Finding 10* reiterates the importance of trusting relations in ethical social learning. Moral trusting friendships allow for personal and academic disclosures necessary for group cohesion and effective social learning. Trusting relations create a *safe emotional and intellectual space* where learners can take risks and expose their vulnerabilities—two precursors to deep, critical social learning (Johnson & Johnson, 1994). *Finding 11* reiterates the importance of *others* in social learning—whether they are other learners, instructors, or expert sources. Learning does not occur in a vacuum. In trusting learning teams, it occurs within the team. In trust-compromised learning teams, learners struggled to find others who could help them learn. *Finding 12* reiterates the importance of the social dimension of social learning. When *sociality* among learners (and instructors) is compromised, social learning is compromised. The most egregious enactment of nonsociality is *social loafing* which debilitates the possibility of social interactions, communities of learning, and social learning (Salomon & Globerson, 1989).

Who Owns the Conversation?

Day (2009) identifies learner *openness* as an important factor in fostering mutual respect and trust in a learning context. Conversely, trust and mutual respect nurture openness. Learners can be open when they have a sense that their “learning environments

are such that it is safe to reveal thoughts and feelings about their studying and understandings” (Day, 2009, p. 9.10; Johnson & Johnson, 1994). Such personal disclosures are necessary for learners to work together more effectively, to complete tasks, and to achieve social learning goals (Johnson & Johnson, 1994). Such disclosures are also at the center of an ethical dilemma in online collaborative learning: Who owns the conversation? (Agger-Gupta, 2010). For some learners, such as doctoral students, the answer to this question can impact their research agendas. For others who cherish their privacy, the answer to this question can result in the “appropriation” of their identity by sharing their words.

Learners’ moral theory of social trust created the ethical academic context in which it was safe to have such conversations. Learners in both trusting and trust-compromised learning teams acknowledged that trusting friendships ensured the sanctity of their conversations—their words, their selves. Learners in trusting learning teams were able to enjoy open conversation that promoted deeper learning. Conversely, lack of trust mediated the affordances of computer-mediated textual communication to introduce new “dangers” to the safety and openness of online conversations (Ferreday & Hodgson, 2008) necessary for collaboration and social knowledge building (Bruffee, 1998). Lack of trust placed learners at risk of having their conversations appropriated by others for their personal designs and shared, in its authentic or altered form, with anyone with access to the Internet. Learners felt that such acts placed them at great potential personal risk and stunted the learning process by, in effect, silencing them. Learners’ rights were at risk of being violated by those who may appropriate the intellectual content of their discussions and publish it as their own.

Learners' concerns about these potentialities raise awareness of key ethical issues that impact online social learning—the theft of online identities and intellectual capital as well as cyberbullying (Agger-Gupta, 2010). “Current ethical and legal codes do not reflect the complex nature of conversations in online forums” (Agger-Gupta, 2010, p. 237). Nor do they protect participants. US copyright acts do not address issues of ownership in the context of online collaboration (Agger-Gupta, 2010). Innovation and creativity are regarded as individual and not social acts (Agger-Gupta, 2010). Furthermore, “although an online forum may be accessible to the public, the activities engaged there might be confidential to the participants” (Bowker & Tuffin, 2004, p. 231). However, US copyright laws do not consider the public vs. private dilemma (Agger-Gupta, 2010).

Lilly, a member of a trusting learning team, clearly illustrates how trusting friendships create respectful relations, both personal and academic, which mediate the risks in online social learning. In trusting contexts, learners share personal information, respect the competence of others, and openly share what they know to collaboratively create a final product. By cultivating “a personality that is emotive, open, and supportive” (Wildflower, 2010, p. 393), learners were able to shape a trustworthy presence of who they were outside the virtual classroom—they created a “great bond.” They felt safe to disclose personal issues that may interfere with their academic duties and to expose their academic vulnerabilities. It was not important to them who contributed what to the learning experience as long as everyone did so equitably and to the best of their abilities (Johnson & Johnson, 1994):

With the people I trusted, I depended on them more. I asked them for their opinion, and I considered their opinion. I was able to engage in intellectual

conversations with them and open myself up to another point of view and experience. With those I didn't trust as much, I didn't value their opinion. I suppose you could say I was less interested in what they had to say. Their effort level and experiences in class showed me that they didn't have similar goals and that they didn't take education as seriously. I don't mean to say I was rude to them, but I didn't engage with them outside of the specificity of the project. Those I trusted, I was able to joke with, laugh with, and be more vulnerable in my admission of not understanding something or needing help. ...Our emails started very formal... Then they started becoming more relaxed. We all still addressed each other respectfully and maintained a safe environment... But, though I've never seen these people, I feel like I "know" them. ...In the "name of course" project, we had a great balance of personalities. While people's personalities don't shine through online right away, they certainly do eventually present themselves in a unique way. Throughout the first few weeks, we were mainly trying to figure out each person's role. Through that process, people started taking on different roles — the role of leader, supporter, editor, facilitator, etc. We tried to keep with those roles throughout the following weeks, but there were definitely times when we would need each other to help us out. We formed a great bond through the gmail chats especially that allowed us to be comfortable asking each other for help. For example, some of the participants had children or had to be to bed by a certain time, or they had prior arrangements throughout the week. They would just let the team know, and we would pick up the pieces where need be. (Lily)

Lilly's example illustrates one of the main goals of collaborative learning: to socially construct a learning experience/product (Kolko, 2000). Everyone picked up the pieces where need be. Kolko (2000) addresses the question regarding individual and collaborative authorship in the context of collaboration in MOOs: "It is precisely the interweaving of selves that occurs in MOO environments that makes the question of intellectual property a thorny one" (p. 260). A similar situation occurs in social learning where learners interweave their questions and knowledge to produce a team outcome. However, by doing so, learners also engage in deeper and more meaningful learning (Johnson & Johnson, 1994).

In *Lilly's* experience such sharing was mutually beneficial; however, *Maggie*, a member of a trust-compromised learning team, expressed concern about the personal and professional safety of openness in a learning context and the risk of having your thoughts

judged, “re-shared,” or appropriated without your knowledge or permission. *Maggie* highlights the ethical issues surrounding the notions of consent, privacy, confidentiality, and intellectual property:

In the environment of online learning, trust is to believe that your peer learners can do works that they are assigned to, and you can share your opinions with them without being worried about they being judgmental, or re-sharing with others. (*Maggie*)

In terms of doctoral study, there is another level of trust: the results you post onto the shared document, can be used/copied by another team member, as part of her/his publication in the future. (*Maggie*)

Maggie's ethical concerns have more pronounced ramifications for her because she is a doctoral student who will most likely pursue a career in academia. Within this context her “survival” (Frey, 2003, p. 205) will depend, to a large extent, on publications of innovative work in refereed journals. *Maggie*, her department, and university will be ranked based on these publications. These publications will also shape her career, income, and internal recognition. As a beginning scholar, *Maggie* will “derive larger benefits than an already established scholar” from publications (Frey, 2003, p. 211). *Maggie*'s concerns are, therefore, well founded. In the absence of trust, *Maggie*'s ethical concerns silenced her conversation and, thereby, stunted social learning. Wildflower (2010) emphasizes how important confidentiality is in promoting optimal online learning: “Students need reassurance that what is said online will be read only by an agreed list of people and will not be quoted outside the classroom” (p. 391).

Diana, a member of a trusting learning team, revealed another important aspect of “Who owns the conversation?” *Diana* repeated a warning that her instructor shared with her and her classmates regarding the use of Google Docs. She explained that Google owns and has access to anything posted in Google Docs. Furthermore, *Diana* was told

that Google routinely mines the data in Google Docs, assumes authorship, and publishes it as its original research. These acts compromise the original authors' ability to publish their own work:

We were told about an author who had issues getting his journal article published because it was posted on Google Docs. So we went and read the fine print on that website and they can do whatever they want with your content once it is posted.
(*Diana*)

Diana's experience sheds light on another ethical concern regarding the "uncertain frontiers" of online life: "The power of unnoticed surveillance is omnipresent" (Agger-Gupta, 2010, p. 243). We do not quite understand its impact on our privacy. This concern not only applies to users of Google Docs, but essentially to users of other technologies such as a wireless network in an academic environment. Olsen (2000) reported in *The Chronicle of Higher Education* that wireless networks are vulnerable to unauthorized surveillance as "they are easily penetrated, with the penetration remaining undetectable with our current technologies" (Agger-Gupta, 2010, p. 243).

Relying on Each Other

Regardless of whether learners were members of trusting or trust-compromised learning teams, they realized that they needed others to help them become knowledgeable and proficient to complete their collective and individual tasks. Learners formed different levels of community (Thompson & MacDonald, 2005) within their academic environments: their immediate teams, their classmates, their friendship circles (Senior & Howard, 2014), or online academic communities. Depending on whether they were members of trusting or trust-compromised learning teams, learners turned to others in these different communities. Learners in trusting learning teams formed communicative, connected communities. They, therefore, turned to their immediate others in their

learning teams, their friends, as trusted others to help them (Czerepaniak-Walczak & Perzycka, 2014). Learners in trust-compromised learning teams struggled to communicate with each other much less establish connected communities. As such, they relied upon themselves or others such as friendship circles and academic communities to help them. Whoever, learners turned to, shaped the nature of their learning conversations. A couple of learners also identified two social learning contexts in which they felt trust might not even be necessary (Stodel, Thompson, & MacDonald, 2006).

Friendship in trusting learning teams ensured that learners openly shared resources, helped others as well as asked for help; equitably, divided the work; and contributed to the accomplishment of mutual goals (Johnson & Johnson, 1994). Learners turned to their friends within their learning teams for help because team members were non-judgmental and helpful (Senior & Howard, 2014). *Lily*, a member of a trusting learning group, explained how important it was to turn to trusted others in a learning group. While engaging in learning activities, learners expose their vulnerabilities; they open themselves “to being wrong and to struggle with concepts and unfamiliar ideas.” They open themselves to have others “evaluate” them—to have others evaluate the depth of their understanding (Czerepaniak-Walczak & Perzycka, 2014). Turning to trusted others within her learning team helped *Lily* to express her vulnerability; that is, to engage in meaningful learning.

Friendship colored the nature of learners’ conversations when soliciting or providing help. One of the key benefits of trusting friendships is that friends can be open and honest with each other; they can engage in *conflicts* knowing that their conflicts will ultimately be resolved in an equitable and collaborative manner (Hartup, 1989). Hartup

and Stevens (1997) explain how friendship socialization facilitates academic conflict, deeper learning, and successful task completion:

Friends engage in large amounts of talk, and conversations with friends during problem solving are laced with both suggestions and criticisms (Nelson & Aboud, 1985). Conflicts frequently occur and may be closely related to the socialization that occurs between friends. In one investigation with school-aged children (Azmitia & Montgomery, 1993), difficult deductive reasoning tasks were more frequently solved by friends working together than nonfriends. Although social interaction differed between friends and nonfriends in numerous ways, task success was significantly related to only one measure—transactive conflicts. Socialization between friends thus may rest mainly on the free airing of disagreements in a cooperative, task-oriented context rather than on modeling or reinforcement. Other results suggest that friends also use coercion with one another, but it is different from the criticisms and persuasions that mark interactions between nonfriends; reasoning and explanations are more common (Dishion et al., 1995; Nelson & Aboud, 1985). (p. 363)

Lily, a member of a trusting learning team, illustrates Hartup and Stevens' (1997) point. She explained how she disagreed with her team leader and how her disagreement was resolved in a respectful manner:

On the other hand, my trust in a person in another project was broken... She was our team leader and did a phenomenal job with leading our team through a very difficult project. And 95% percent of the way through, she had done a great job with her work in the project as well. But, as all people do something, she dropped the ball on the last 5%. I have a great deal of respect for her, but I feel like she thought she had put in enough work. She didn't seem willing to keep going to the very end and truly make our work the best it could be. Looking back, I could have pushed harder, but I didn't want to offend the work she had already completed. It was the last section of our project that she was responsible for working on.. And she attempted to group two parts of the assessment into one (less work...). The rubric and the project details listed clearly (in red) that these two parts were not to be grouped. So, I tried to respectfully tell her about this. So, she basically took half of the text from one part and half from the other and put them into the two different sections. It worked okay (we got a 1/4 for each of those parts), but when I attempted to demonstrate how we could change the project, she rejected the changes. She said something like "I really think it's fine the way it is." And, I had to respect that. I could have gone through and changed that section and submitted without her knowing... But, I had enough trust in her to say, okay, maybe it really is fine the way it is. (*Lily*)

Learners in trust-compromised learning teams could not be assured of such deep, reflective learning nor did they have the time to engage in such conflicts as they were too busy managing problematic social relations (Salomon & Globerson, 1989). Social interactions and social relations in trust-compromised learning teams were reduced to *social exchanges*—discussions about who was going to do what and when. In addition, these social exchanges spent an inordinate amount of time attempting to mitigate the harm caused by the problematic relationships in their teams; that is, social loafing. Mitigation included how work neglected by social loafers was going to be completed, if possible. Sometimes, learners had to rescope their activities to ensure that they could complete them given their resource constraints (limited time and effort). Because the quality of social interactions was reduced to social exchanges, learners in trust-compromised learning teams were deprived of the benefits of transactive conflicts; they were deprived of deeper social learning (Salomon & Globerson, 1989). *Angel*, a learner with special needs in a trust-compromised learning team, noted: lack of trust results in monitoring others rather than learning. This is what happened to trust-compromised learning teams.

Faith, a member of a trust-compromised learning team, turned to a team member, Robert, to acquire the necessary knowledge and competence to complete team work neglected by, *Alex*, the social loafer. However, she emphasized that she primarily relied upon herself to “pick up the slack.” Social loafing had made her wary of trusting anyone else in the team:

Because I trusted them, I decided to join them in the big project...we could have easily taken a smaller project and gotten a good grade but I trusted them to do the work.... Trust definitely influenced which project we decided to take on.... Not only to Robert but trusting myself...since I wasn't an expert on “subject area”

training. I had to rely on myself a lot more...since we had to take up the slack.
(*Faith*)

Consistent with *Angel's* observation regarding monitoring activities in trust-compromised learning, *Faith* and her remaining active team members spent an inordinate amount of time monitoring their compromised learning effort. Because *Alex*, the social loafer, engaged in ongoing social loafing, he continuously introduced new challenges and risks to the learning experience. Although *Faith* and her team completed the assignment and received an "A," lack of trust and reliance on each other altered their conversation and, thereby, debilitated their team as a learning social system (Salomon & Globerson, 1989). Despite the "A," pursuing self-interest, resulted in a "poor outcome for all" (Johnson & Johnson, 1994, p. 108).

John, a member of a trust-compromised learning team, explains the poor outcome for all. He recognized the learning loss incurred when learners cannot trust and turn to each other for help. Socially interacting with others allows you a view of what and how others think. Such insights inspired John's thinking—John's learning. When the conversation among learners is silenced, then learning is silenced as well. Johnson and Johnson (1994) confirm what *John* learned: "**in groups there is process gain—the interaction among group members results in ideas, insights, and strategies that no one member had previously thought of**" (p. 225).

Two learners, *Kelly*, a member of a trust-compromised learning team, and *Diana*, a member of a trusting learning team identified two types of social learning conditions that they felt do not warrant trusting others—full-class asynchronous online threaded discussion forums and cooperative learning. According to *Kelly* and *Diana*, learners in these conditions loosely interact with each other. Learners make individual contributions

that are aggregated into a whole. Although in practice, these two forms of learning may be enacted as *Kelly* and *Diana* described, their intended design differs. Learners in both scenarios are expected to develop friendly relations that promote deep, collaborative learning (Johnson & Johnson, 1994).

Social Loafing: A Way of Learning

As noted throughout this chapter, the presence of trust nurtures social behaviors and social learning. The absence of trust promotes individual, competitive behaviors (Johnson & Johnson, 1994). The quintessential example of individual behavior was enacted by social loafing which more so than any other activity debilitated social learning. As already noted, it can destroy the learning team as a social system (Salomon & Globerson, 1989). This is unsurprising as Johnson and Johnson (1994) identify building trust as a prerequisite stage to social learning. In the absence of trust, the subsequent stages (developing a unique group identity, initiating group work, functioning productively and maturely, and terminating the group) fail to develop effectively. Although instructors designed individual accountability in many of the social learning activities, learners in trust-compromised learning teams, for a variety of reasons, did not report social loafing. They did not accurately hold others accountable in view of the instructor. Therefore, their social relations assumed what Sztompka (1999) refers to as ‘public goods’ where all team members benefitted equally regardless of their individual efforts. Such relations are vulnerable to social loafing, or freeriding as Sztompka refers to it.

Learners reported that social loafing prevails in both online and face-to-face learning. It is simply a way of learning for some learners. Learners’ experiences are

supported by research on social learning. Colbeck, Campbell, and Bjorklund (2000) describe two social loafing examples that students reported to them and how they and/or their instructors addressed social loafing. In one case, learners tried to identify and leverage a social loafer's strength. In the other case, learners reported social loafing to their instructor who rearranged the social learning teams:

a CCNY student tried to find a task that would capitalize on a slacker's strength. He told us, 'One Student doesn't do any work, but talks a lot.' He asked her to give the team's final presentation. He had been reluctant to seek the instructor's help with the slacker because 'You don't want to go to the professor every other minute. This makes you look bad because you don't know how to work in groups.' A University of Washington student was not so reluctant to seek help for dealing with slackers. She reported the 'two people who didn't do anything' to the instructor, who 'assigned the deadbeats to the same group after that.' (p. 73)

Colbeck, Campbell, and Bjorklund add that although instructors may design goals and reward interdependence in a social learning activity, learners in their study reported "little evidence that all members of student teams were 'united around a common goal' (Johnson & Johnson, 1994, p. 82)" (p. 71). Instead, most of the work was done by one or two team members. Learners in trust-compromised learning teams in this study reported similar experiences.

Mary, a member of a trust-compromised learning team, recounted that social loafers were always present in her groups and that she had to undertake a greater burden to complete work not done by them. She expected social loafing as a learning norm. Despite the harm that the social loafers caused her, *Mary* did not report them. She did not want to cause them any harm; she did not want them to fail because of her actions:

To be very honest, I was always the group representative and I ended up doing most of the work. ... We called them joy riders. "People enjoying a ride that they have not paid for" We did not let him [the instructor] know [that one of the team members was not doing any work]. [I felt] sympathy [for the social loafer]. I would not want any person to fail and I end up carrying the blame. (*Mary*)

Faith, another member of a trust-compromised learning team, did not feel safe reporting social loafing as she had seen her instructor's negative reaction to another team that had reported difficulties in working together. So *Faith* and her teammates suffered in silence as *Alex*, the social loafer, repeatedly engaged in breaches of trust. *Peter*, yet another member of a trust-compromised learning team, also suffered in silence. Like *Mary*, he simply accepted social loafing as part of social learning. He said, "It wasn't fair, but what could we do?"

Whether social loafers took advantage of others' kindness as in *Mary's* and *Peter's* cases or others' inability to "effectively retaliate" as in *Angel's* and *Faith's* cases, they did so continuously in trust-compromised learning teams as their behavior had its rewards (Johnson & Johnson, 1994, p. 108). They received a "good" grade without exerting the necessary effort while the rest of the team members were stressed and overworked. In trusting learning teams, learners were able to curtail social loafing because learners had formed trusting, cohesive learning groups as described by Johnson and Johnson (1994). In their learning groups: (a) there was ongoing interaction, (b) learners got to know each other, (c) learners cared about each other, (d) learners practiced reciprocity, and (e) exploitation was thwarted by making it more rewarding to cooperate (Johnson & Johnson, 1994). Learners in trusting learning teams were more likely to report social loafing to their instructors who had protocols in place to address such behavior. Learners also effectively used tools (e.g., color coding) to accentuate each member's contribution. They were able to highlight individual accountability and personal responsibility (Johnson & Johnson, 1994).

Without interviewing social loafers, it is difficult to conjecture as to why they may have engaged in behavior they clearly knew was harmful to others. As noted in Research Question 2, Breaches of Trust, sociologists conjecture that student passivity may contribute to social loafing. In addition, another contributing factor may be the cultural value placed on *competition and personal achievement* in American education as well as the importance of *credentials* (Macionis, 2012). The United States has been called the credential society because of its emphasis on education—“companies hire applicants with the best education” (Macionis, 2012, p. 475). Yet, in contrast to such competitive, individualistic expectations, accrediting agencies such as the Accreditation Board for Engineering and Technology (ABET) identify “an ability to function on multidisciplinary teams” and “an ability to communicate effectively” as two student outcomes in its Criteria for Accrediting Engineering Programs, 2015 – 2016 (ABET, 2014).

Summary of Research Question 4

The interpretations of the findings for Research Question 4: “How does trust shape the social construction of knowledge? That is, how does trust mediate learners’ social construction of knowledge in online social learning?” cast trust as a risk mitigator and learning facilitator. Learners in trusting learning teams felt safer to expose their vulnerabilities, to openly share their knowledge, and to turn to each other for help in trusting relations. They were bound by a *moral code* underlying their trust. Trusting relations assured them that others would not harm them—personally, academically, or professionally. Such openness was critical for collaborative inquiry. Learners in trust-compromised learning teams lacked such relations. The result is summarized by Johnson and Johnson (1994):

Group members will more openly express their thoughts, feelings, reactions, opinions, information, and ideas when the trust level is high. When the trust level is low, group members will be evasive, dishonest, and inconsiderate in their communications. (p. 119).

Learners in trust-compromised learning teams expressed these fears whether it was in terms of who owned the conversation, whom they could rely upon for help, or the debilitating effects of social loafing. The lack of trusting—intimate—relations created a context in which individual and competitive interests could thrive.

Hudson (2010) uses the term *candlepower* to describe the quality of online relations that are built on a foundation of trust and foster collaborative inquiry:

Candlepower is the shorthand for a surprising quality of online [textual] dialogue—the intimacy it creates among participants. ...in a higher education context, candlepower takes ...[a] foundation of trust and applies it to learning—critical thinking, questioning of assumptions, collaborative inquiry...trust and the willingness for risk taking [is what]...makes all this possible. (Hudson, 2010, p. 268).

Summary of Research Questions 1-4

When considering all research questions, their respective findings, and interpretations, additional patterns emerge. The first findings and interpretations from all research questions address the role of trust in transitioning the learner from an individual to a socially embedded individual. The second findings and interpretations from all research questions consider the evolution of the socially embedded individual to the social individual. Moreover, the third, and final, findings and interpretations from all research questions focus on the role of sociality in online social learning.

Findings 1, 4, 7, and 10 reflect different dimensions of learners' moral theory of social trust; that is, moral trust evident in close friendships of caring as described by Weber and Carter (2003) (Finding 1). Although rational trust permeates moral trust, it is tempered by moral norms that learners learned during their primary socialization at home

that were then reacculturated by the moral friendship cultures of trust they found in academia (Finding 4). These moral norms taught them altruistic care that facilitated their development from self-motivated individuals to socially embedded individuals.

Computer-mediated textual communication highlighted learners' identities through the textual presentations of their selves (Finding 7). Such knowledge either confirmed or disconfirmed learners' moral sense of trust and shaped their learning experiences and outcomes. Learners in trusting learning teams forged academic friendships that united them into cohesive wholes that were able to withstand the challenges of collaborating with others, especially online. Social loafers in trust-compromised learning teams debilitated their learning teams from becoming social wholes and reaching their optimal learning potentials.

Findings 2, 5, 8, and 11 focus on how learners and their instructors enacted their social roles in an academic setting to create a sense of a real person behind the text; that is, presence, and to form interdependent bonds. Learners in trusting relations created a sense of presence online such that their team members "knew" who they were and what to expect from them. They consistently behaved in a trustworthy manner. These characteristics bonded learners into a camaraderie, or learning community, which nurtured their learning and helped them to overcome the conflicts that emerge when learning together (e.g., breaches of trust, transactive conflicts). Learners in trust-compromised learning teams were unable effectively to structure their teams such that they could meaningfully communicate and work together. Unable to communicate personally, they were unable to create a sense of presence or bond as a learning community (Findings 2 and 5). The presence or absence of such bonds were critical to

learners as they shaped their interdependence and whom they could turn to for help in learning (Finding 11). Learners also expressed a desire for their instructors to more actively engage in online threaded discussion forums and to promote social learning and community in these contexts (Finding 8). Learners

Findings 3, 6, 9, and 12 explore different dimensions of the role of sociality in online social learning. Learners need to be explicitly socialized as social online learners (Finding 3). These social skills are critical as the nature of social learning reveals that social learning requires learners to work together interdependently in order to accomplish their goals (Finding 6). The use of technologies, such as computer-mediated textual communication, have the potential to create challenges to social learning. However, these challenges can be mediated by learners' sociality. Specifically, trusting social relations can guide learners to socially appropriate technologies in ways that compensate for the challenges created by such technologies. For example, learners can use socio-affective communication to compensate for the lack of non-verbal cues. Lack of sociality, as expressed by breaches of trust, seem to have debilitating effects on social learning.

Theoretical Implication of this Study

Learners' stories suggest the need to consider moral constructs when explaining their performances of trust as well as the implications of such performances in the context of social learning. Learners' shared cognitive and affective understandings of trust which they viewed through a *complex moral lens*. They recognized that human beings "are fundamentally social creatures and human interaction is fundamentally shaped by moral concerns" (Hitlin & Vaisey, 2010, p. 9). Learners' morality was *instituted* by cultures of trust inherent in the social structures (e.g., academia) to which they belonged and

constituted through self-reflective reasoning and the social construction of shared understandings of morality with others in the context of social interactions. Learners viewed cultures of trust as authoritative sources of moral codes (e.g., respect, reciprocity, caring, promise keeping) that defined what trust is and how it should be enacted in social interactions. They appropriated these moral codes through self-reflection to determine what moral codes they personally felt guided trust and trust building. Beyond *imitation* of authoritative trusting moral codes and *self-reflection*, learners also added a distinctively sociological moral understanding of trust. Specifically, learners felt that institutional and personal moral codes that enact and nurture trust needed to be further refined through processes of social construction and mutual understanding (e.g., cooperation and communication with others). Learners recognized that they possessed different understandings of morality. Therefore, they needed to negotiate a mutual understanding of what moral codes would shape their performances of trust and the implications of trusting relations.

Another theoretical implication of this study suggests that social pedagogies need to be revisited in order to further understand how they could benefit from a humanistic sociological approach to learning. Social pedagogies appear to have been highly influenced by social psychological and psychological theorists who have emphasized the development of theories that try to optimize and maximize learning for individuals. This is evident in the influence that psychologists and social psychologists such as Dewey, Piaget, Vygotsky, Bandura and Bruner have had on social learning theories. Furthermore, cognitive theories seem to continue to heavily influence social learning theories. Emphasis is placed on the knowledge and skills that learners develop, by themselves or in

concert with others. Regardless of the context, the emphasis is on individual knowledge and skills which is evident in how assessment is typically conducted in the academic environment.

The focus on the individual, even in social learning, appears to neglect the social obligations and humanity inherent in social relations. That is, the values that define a good society. Humanistic sociology has the knowledge, theories, and empirical findings to inform social learning theories such that learners not only gain the requisite *knowledge* but also the values that nurture a *social will* to engage in productive social learning. Humanistic sociology is founded on encouraging values that promote social justice which one would think would discourage harmful social learning behaviors such as social loafing. Human beings are not born as social beings. They need to be socialized as such. Similarly, learners need help to learn how to become responsible, caring members of a learning community as much as competent members. As is evident in this study, some learners had the requisite skills, but engaged in nonsocial behaviors that debilitated social learning.

Practical Implications

The results from this study echo the sociological notion that human beings require lifelong socialization, even in familiar contexts. Educators, therefore, cannot assume that learners in higher education have been previously socialized on what it means to be online social learners and what attitudes and behaviors are expected of them to engage in meaningful and successful social learning. The results from this study encourage educators to raise their awareness of the moral dimensions of social learning, especially in reference to moral factors that shape performances and breaches of trust, and to

formulate strategies that encourage moral and trusting relations. Conversely, the results from this study also encourage educators to become aware of learner attitudes and behaviors that undermine a moral social order and, by extension, a trusting learning context.

Insofar as communicative models of morality underlie performances of trust, educators may also wish to focus on an awareness of the communicative relations among learners. Learners in trusting learning teams repeatedly pointed out that discussion, argumentation, debate, compromise, and negotiation along with consensus-seeking attitudes and mutual meaning making were the hallmarks of trusting interactions and relations. In addition, these learners also pointed out the importance of moral emotions (e.g., good deeds and gratitude, mutual respect) in enhancing trust and nurturing social cohesion.

In practice, these implications can be enacted by adapting Johnson and Johnson's (1994) suggestions for the elements that constitute an effective learning group. These are the types of efforts educators can engage in to nurture trusting learning environments:

1. *Establish a culture of trust*: Negotiate a shared understanding of trust; discuss acts which build trust and conversely breach trust, emphasizing that these acts require *ongoing* efforts; discuss what trust-based and trust-compromised learning looks like; have learners create a "manifesto" of trust documenting their understanding of trust and the trusting guidelines that everyone agrees to abide by. This element ensures a common understanding of trust and the factors that ensure trusting relations.

2. *Structure the teams*: Define teams; communicate team goal(s) and task requirements; identify team members' strengths with respect to the task; leverage knowledge of their strengths to suggest roles learners may wish to adopt to achieve their team goal and task requirements; specify norms of individual and team accountability. This element establishes interdependence among learners and guides them to take personal responsibility for their learning.
3. *Structure social learning*: Establish a plan for frequent, appropriate, and meaningful communication and collaboration; identify a common work space; encourage sociability in addition to task-based interactions to help learners develop a personal sense of others and a climate of support, acceptance, and understanding; encourage transactive conflicts to promote deep, critical thinking and consensus to achieve agreement; monitor learners' social interactions and work effort. This element synthesizes a culture of trust and team structure into a practice of trusted social learning where learners engage in activities that nurture mutuality and trust.

Revisiting Limitations of this Study

Many of the potential limitations of this study identified in Chapter 1 emerged as realities during the implementation of this study. However, any negative consequences were mediated with appropriate strategies. For example, a few learners initially struggled to explain their understandings of trust and to recall its role in their online social learning experiences. At times, conversational prompts from the interviewer resolved these

struggles. At other times, learners were only able to answer some questions in general or not answer at all. This was not of significant concern in this study as it was the exception.

Communicating with someone they might see in their academic, professional, or social circle after the interview did not appear to be an issue. Learners who had such personal relationships with the interviewer were enthusiastic in their participation and forthcoming in their stories.

The most significant limitation to this study was gaining access to a sufficient number of learners for this study. The concern did not appear related to the topic of study, trust, but rather to time constraints. A number of additional learners wanted to participate; however, they were not able to because of time constraints within their academic, professional, and personal lives. In order to remedy this limitation, additional snowballs were initiated. Because the snowballs were initiated in different contexts, the study averted convenience sampling.

Fluency in written English and familiarity with Skype did not appear as limitations in this study. For some learners, English was their second language. In these instances, the interviewer tried to make learners feel at ease by sharing that English was her fourth language. This seemed to ease any potential concerns, and learners participated freely, regardless of the quality of their language skills. In addition, these learners felt comfortable with written English as they were graduate students accustomed to writing and publishing papers.

Finally, computer-mediated textual communication has been criticized for lacking affective language. This does not appear to have been a limitation in this study. Some learners used emoticons and paralanguage to express affect. Others did not. The lack of

affective language, however, does not appear associated with the communication medium but rather with the personality of the learner. Some learners express themselves affectively while others express themselves rationally.

Summary and Conclusion to this Research Study

The purpose of this study was to contribute to the conversation on what could potentially make online learning more satisfying and successful. Insofar as research on online social learning points to the social dimension; that is, the relations among learners and instructors, as a potential factor in positively mediating learning experiences, we explored such relations. In particular, the focus was on trusting relations as trust is considered the “glue” that binds all social relations and facilitates risk taking and deeper, more critical thinking in collaborative learning. Our conceptual framework of trust was informed by a broad literature base on psychological, social psychological, and sociological perspectives with special emphasis on Sztompka’s (1999) sociological theory of trust and Weber and Carter’s (2003) research on the emergence of trust in friendship and love relations. Because of its emergent nature, Weber and Carter’s research also provided the methodological framework for this study.

Our study was contextualized in online learning that includes computer-mediated textual communication as one of its communication media. We focused on exploring the emerging, interactive, social construction of trust from the learners’ point of view using a qualitative, open-ended interviewing approach with snowball sampling to identify participants. Our study and interview questions were framed by the following research questions:

1. How do learners perform trust in social interactions in the context of online social learning?
2. How does trust shape the social relationships that learners form in this particular context?
3. How does computer- mediated textual communication shape learners' performances of trust in an online context?
4. How does trust shape the social construction of knowledge? That is, how does trust mediate learners' social construction of knowledge in online social learning?

We interviewed 30 learners in two sessions: the first consisted of one-hour chats and the second of a 30-minute follow-up to clarify any confusion or fill in missing information. In the tradition of qualitative research, data from these interviews were subjected to several levels of analysis in order to elicit the findings and interpretations of these findings.

The findings and interpretations reveal that learners socially construct moral theories of trust in their social interactions which consist of both rational and affective components. The rational component shapes their studies and assessments of other learners' performances of trust and their trustworthiness. The affective component shaped a moral lens through which they viewed the rational component. The effect of this affective component is that it created bonds of friendship among learners in trusting learning teams that facilitated the social appropriation of technology and transactive conflicts which contributed to deeper, critical thinking. The lack of this affective component resulted in trust-compromised learning, characterized by ongoing breaches of trust.

Suggestions for Further Research

This study was based on learners' interpretation of the social construction of trust in the context of their online social learning experiences. Individual learners became representatives of online learners in general. Therefore, a prudent suggestion for further research is to study several teams of learners to "triangulate" their interpretations of their online trusting learning experiences and to determine if they are consistent with each other and the research findings of this study. Considering learners' interpretations of the prevalence of social loafing, it is highly likely that studying whole teams will also reveal the behaviors and perspectives of social loafers as well. Since social loafing has such a debilitating effect on social learning, insights into social loafing may provide clues as to why it occurs and how it may be remedied or prevented.

In addition, such research could also benefit from sociological research on morality, and how it shapes trusting relations and trusting social orders. Although the study of morality has been "neglected" for decades by sociology (Hitlin & Vaisey, 2010), currently there a "revival of the 'sociology of morality'" which will have "something vital to add to the conversation" on moral phenomena and, by extension, trust (Hitlin & Vaisey, 2010, p. 11).

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APPENDIX A

IRB-approved Confidentiality Statement

Understanding Your Participation

IRB Project Number: 1209575

Performances of Trust among Learners in the Context of Online Social Learning: The Social Dimension of Online Learning

Please read this page carefully.

Hello,

I am a PhD student in the School of Information Science and Learning Technologies (SISLT) at the University of Missouri. I am interested in researching the social dimension of online learning. Specifically, how learners experience trust in their online classes and how trust affects their online experiences and quality of their learning. I would like to invite you to participate in my doctoral research study, which is part of a series of studies to explore trust in an online learning environment.

Although there is much research on trust and how important it is in influencing social relationships, learning outcomes, economic outcomes, etc., we really don't know the specifics of trust, especially from the learner's perspective. I would like to learn more about this. So, I would like to ask you to participate in exploring how trust may shape the social relationships that you form with other learners, how trust may affect your learning experiences, and how technology may affect your trust and learning experiences.

We ask you to participate in two sessions: one interview and one review. Each session will require 60 minutes of your time. We will use Skype text chat to communicate with you. You can create a Skype account for free by downloading software at www.skype.com, and you can use any username that you wish. Regardless of whether you use your real identity or another identity, your confidentiality is assured. We will refer to you only by a designation of "Learner #."

In the interview, I will ask you a series of questions about what you think trust is, how it shapes your social relationships, how these relationships affect your learning, and how technology may affect trust in online relationships and learning. After the interview, we will review your responses and reflect on them. I want to represent your perspectives accurately, so I will ask you to meet with me a second time on Skype to review our reflections with you.

If you need a break, just tell me. You may withdraw from this study at any time.

If you have any questions, please ask them at anytime— before, during, or after the interview. My contact information is mawzt@mail.missouri.edu (email) or [margarida.kanaris](https://www.skype.com/people/margarida.kanaris) (Skype id).

If you have any questions or concerns about the study and wish to speak to someone else, please feel free to contact either

Dr. James Laffey
Faculty Advisor- SISLT
E-mail: LaffeyJ@missouri.edu
Phone Number: (573) 882-5399

Joi L. Moore
Associate Division Director- SISLT
E-mail: MooreJoi@missouri.edu
Phone Number: (573) 884-2797

Thank you,
[Margarida Kanaris](https://www.skype.com/people/margarida.kanaris)

Campus IRB Approved 10/11/2013

APPENDIX B

Thank You Note

Hello Everyone,

We would like to thank you very much for participating in our study on the role of trust in online social learning. Although the same thank you note is being sent to all of you, please know that each of you uniquely contributed to this study. Sometimes you shared experiences and, at other times, you provided unique insights into how and why online social learning is effective or fails. Without having completed our analyses, we can already see that your contributions will benefit the field of online learning. In fact, you already have as we have submitted and published three papers on the preliminary findings.

Some of you have expressed an interest in learning more about our findings. We would like to extend this invitation to everyone. If you would like a copy of these papers and to receive updates on our findings, please respond to this email (mawzt2@mail.missouri.edu).

We know that you are very busy, and we would like to thank you again for your generosity of time and your thoughtful insights. You took our research very seriously and sincerely tried to help us to understand your experiences in online social learning.

We wish all of you the best in your studies and work. Please let us know if you have any questions.

Sincerely,

Margarida Kanaris
PhD Candidate, School of Information Science
and Learning Technologies
University of Missouri-Columbia

Jim Laffey
Professor, School of Information Science and
Learning Technologies
University of Missouri-Columbia

VITA

Margarida E. Kanaris was born in Rio de Janeiro, Brazil, the daughter of Athanase and Aikaterini Karahalios. She spent most of her childhood in Rio; Bremen, Germany; and Athens, Greece before immigrating with her family to the United States.

After graduating as valedictorian of her high school class and skipping her senior year in high school, Margarida gained early admission to the university where she studied mathematics and English. After completing separate undergraduate degrees in these fields, Margarida pursued graduate degrees in English and computer science as well as a graduate certificate in Autism and pervasive developmental disorders. At the same time, Margarida worked in academia, the defense sector, and private industry.

Margarida then began her doctoral studies at the School of Information Science and Learning Technologies of the University of Missouri in 2008. During her doctoral study she engaged in both a national research study and online teaching.