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An exploratory case study of students' perceptions of online graduate education

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AN EXPLORATORY CASE STUDY OF STUDENTS' PERCEPTIONS OF ONLINE GRADUATE EDUCATION

A Dissertation

Submitted

in Partial Fulfillment

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Doctor of Education

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ABSTRACT

The purpose of this study was to investigate graduate students' perceptions of online education. Online learning has grown tremendously over the past several years and has made learning and teaching opportunities more available to many people throughout the world. As an increased number of higher education institutions use online education as a means of delivering courses and programs, educational researchers have been working tirelessly to uncover and delineate the factors that facilitate and enhance success in online learning. One major factor that researchers (e.g., Pérez Cereijo, 2006) have established as a predictor of success is students' perceptions of online learning. Hence, understanding how learners perceive the online learning environment could assist course designers in developing effective online learning experiences.

A qualitative, in-depth exploratory case study approach, with limited quantitative data, was used to investigate a group of graduate students' perceptions of an online learning environment of a specific course, the factors which motivate them, and their sense of community in this environment. Data was collected using an online survey, personal interviews, online course interaction observations, and e-mail follow-up questions designed to address the research questions.

Results showed evidence that most participants were satisfied with their online experience, and that they were self-regulated and self-motivated learners. The findings also indicated that the lack of social connection may decrease participants' levels of satisfaction of their online learning experience, impact their desire to ask for help from other class members, and lead to a weak sense of being connected in a learning

community. The findings also showed that the common concerns in this online learning environment were a sense of social connection and using technology to enhance connection in online learning. Based on the results of the study, the researcher provides the online instructional designers and instructors with some recommendations to engage online learners in active learning communities.

CHAPTER I

INTRODUCTION

Online learning has increased remarkably during the last decade due to the expanding role of the Internet in making learning and teaching opportunities available throughout the world. Online courses and program offerings are increasingly growing in education as well (Allen & Seaman, 2004; Allen & Seaman, 2005). According to a survey conducted by the Sloan consortium, a leading organization which promotes online education, nearly 3.5 million students were taking at least one online course during the fall 2006 term in the United States, representing almost 20 percent of total enrollments in higher education (Allen & Seaman, 2007).

In higher education, an increased number of faculty are being required to adapt their courses for online delivery. As they do, faculty and researchers find that an effective online course is much more than just converting materials of a face-to-face course into electronic format and making it available online. Levin and Sun (2002) pointed out the current circumstance of Internet-based distance education:

> Most distance learning courses resemble traditional classroom courses or poor imitations-talking heads, lots of text, and streaming video. Distance education has failed to take advantage of the Internet as a new medium. It tends to be more mass than individual, to involve more one-way than interactive communication. This typical primitive response to new media mirrors past actions: When motives were invented, producers filmed plays. With the advent of television, radio actors performed on screen. And when distance learning started happening via Internet, universities asked faculty to duplicate their courses online. (p. 5)

Undoubtedly, some people may question the quality of online courses. For example, they may ask "What can educators do to create meaningful online learning environments that improve online learning experiences?" One answer was given by Willis (1992),

stating that an effective course consists of many factors, such as learner characteristics, course organization, preparation of the teachers, and instructional strategies. In fact, effective online courses do not exempt an instructor from the general rules, such as understanding the learners' needs so that instructors can design instruction that is most appropriate for the learners (Dick, Carey, & Carey, 2005). In addition, understanding students' perceptions is essential to an understanding of their learning (Struyven, Dochy, Janssens, & Gielen, 2008). Understanding the learners' perceptions of online learning is the first step to designing effective courses and creating a meaningful learning environment.

A learning environment is a place where learning occurs successfully; it consists of students, instructors, materials, and effective instructional strategies. An ideal learning environment provides opportunities to engage learners actively. It is designed to motivate learners to learn, encourage learners to interact with each other, and receive help from a supportive learning community. As Pérez Cereijo (2006) stated, perception is a predictor of success in online learning; following the aforementioned characteristics of an ideal learning environment, course designers will understand how learners perceive the online learning environment, and take that into consideration to design effective courses for online learners.

However, there has been limited research (e.g., Grant & Thornton, 2007; Kitahara & Westfall, 2007; Meyer, 2007; Pérez Cereijo, 2006; Vesely, Bloom, & Sherlock, 2007) conducted on students' perceptions of online learning, and how it relates to the quality of learning experience, motivation, and a sense of the learning community. These three

concepts influence students' perceptions regarding the effectiveness of online learning. In the social cognitive theory, Bandura (1986) assumes that an individual's cognitive processes and the social environment are interrelated. The theory describes learning in terms of the interrelationship between behavior (forming a learning community), environmental factors (online learning), and personal factors (motivation). These three factors interact through a process that Bandura (1986) called *reciprocal interaction.* According to social cognitive theory, the learner acquires knowledge as his or her environment converges with personal characteristics and personal experience. New experiences are evaluated in relation to the past; prior experiences help to subsequently guide and inform the learner as to how the present should be investigated. People learn not only through their own experiences, but also by observing the actions of others and the results of those actions. As a result, understanding of the three factors mentioned above could help in the design and delivery of effective online courses.

Significance of the Study

The shift from face-to-face to online learning environments encourages a closer look at the quality of instruction and instructional design. The views on the effectiveness of online education are diverse and contradictory. Most studies, however, discuss the general factors that impact the effectiveness of online education regardless of the relationship between learners' perceptions and the overall learning environment. A study conducted by Jiang and Ting (1998) showed that there was a positive correlation between students' perceived learning in online courses and the contribution to online discussions. Research also found that students' perceptions of computer-mediated communication affected their

attitudes toward the use of computer-medicated communication (Althous, 1997; Sturgill, Martin & Gay, 1999).

Perception seems to predict success in online education. The significance of this study is in its attempt to focus specifically on students' perceptions of an online educational environment, in relation to achievement, motivation, and the learning community. Research of online education has generally focused on group comparisons of online or distance learners versus traditional classroom students (e.g., Artino, 2007; Berge & Mrozowsk, 2001; Bernard et al., 2004; Russell, 1999; Sitzmann, Kraiger, Stewart, & Wisher, 2006). On the other hand, distance education experts (e.g., Abrami & Bernard, 2006; Bernard et al., 2004; Saba, 2000) have challenged researchers to focus future studies on attributes that contribute to success in distance learning environments, such as motivational factors and cognitive attributions. This study provides insights into the way online educators can enhance their teaching and improve their students' learning by addressing the factors discussed above.

Research Questions

This study investigated students' perceptions of online education in a mid-size, midwestern public university, and examined how these perceptions relate to overall online learning experience, motivation for learning, and sense of learning community. More specifically, the study attempted to answer the following research questions:

1. How do students enrolled in an online course perceive their learning experience?

2. How do students enrolled in an online course think about their motivation to learn in that environment?
3. How do students enrolled in an online course think about their membership in an online learning community?

Definition of Terms

To enhance the understanding of this study, definitions were given for relevant terms. The uses of these definitions were limited to the population, settings, and results of this study. The principal investigator of this study developed the definitions, unless noted.

1. Distance Education: A method of formal education where learners are separated. It includes learning, teaching, communication, design, and management. The forms of distance education include: correspondence study; Internet conducted either synchronously or asynchronously or both; telecourse / broadcast delivered via radio or television; CD-ROM; and Mobile learning (Moore & Kearsley, 2005).
2. Dual-mode University: A university that offering courses both on-campus and online.
3. E-learning (electronic learning): Instructional content or learning experiences delivered or enabled by electronic technology. This form of learning currently depends on networks and computers but will likely evolve into systems consisting of a variety of channels (e.g., wireless, satellite), and technologies (e.g., cellular phones, PDA's) as they are developed and adopted. E-learning can

take the form of courses as well as modules and smaller learning objects. E-learning may incorporate synchronous or asynchronous access and may be distributed geographically with varied limits of time (Wentling et al., 2000).

4. Face-to-face Education: A method of formal education, where the learners meet on a regular basis in a shared physical space.
5. Learning Community: A group of individuals who share interest in the acquisition of knowledge through open interaction among members.
6. Learning Environment: The place and setting where learning occurs; it can be anywhere and is not limited to a physical classroom.
7. Online Learning Community: A group of people, connected by technological communications, who actively engage in fostering the creation of knowledge and sharing values and practices (Ludwig-Hardman, 2003).
8. Online Education: Planned learning and teaching activities occurring via the World Wide Web.
9. Online Learning: A course where most or all of the content is delivered online. Typically it has no face-to-face meetings (Allen & Seaman, 2007). Used interchangeably with web-based Instruction/Learning.
10. Web-based Instruction/Learning: Student interacts with the instructor and other students via a network. Used interchangeably with Online Learning.
11. Synchronous Learning: Learning occurs at same time, in same places or different places (Simonson, Smaldino, Albright, & Zvacek, 2006).

12. Asynchronous Learning: Learning occurs at different times and in different places (Simonson et al., 2006).

CHAPTER II

REVIEW OF LITERATURE

Many higher education institutions are moving rapidly toward the use of technology to deliver courses and programs at a distance. Online teaching and learning is one of the models. To design and deliver effective online courses, students' perceptions of online learning must be considered. The purpose of this study was to investigate graduate students' perceptions of online education in relation to the quality of the learning experience, their own motivational factors, and the concept of membership in a learning community. A review of the literature summarizes the emergence of online education, how adult online students learn, and the three factors that play essential roles in successful online learning, namely, perception of online learning experience, motivation attributes, and sense of learning community.

The Emergence of Online Education

Distance education is not a new phenomenon; it began in the mid-nineteenth century in Europe (Valentine, 2002). Over 100 years ago, correspondence learning, one of the earlier forms of distance education, had been the dominant means until educational radio and television emerged in the mid-20th century. In the late 1970s and early 1980s, cable and satellite television came into use. The introduction of the Internet and digital applications in the 1990s, combined with the changing demographics of the learner, created a new direction for distance education (Simonson et al., 2006). These new technologies bring educational opportunity to students and economic affluence to higher

educational institutions. There is no doubt that the Internet has become the popular choice for distance education (Dabbagh & Bannan-Ritland, 2005).

Distance education has received considerable interest in recent years. Moore and Kearsley (2005) compiled a list of ideas showing how distance education has drawn attention from different dimensions, such as the educational system, educational psychology, educational sociology, quality of education, economics of education, and so on. Their insightful list provides a clear vision that there are certain needs for distance education, in addition to traditional education settings. The suggested reasons include:

- increasing *access* to learning and training opportunities
- providing opportunities for *updating skills*
- improving the *cost effectiveness* of educational resources
- supporting the *quality* of existing educational structures
- enhancing the *capacity* of the educational system
- *balancing inequalities* between age groups
- delivering educational campaigns to specific *target audiences*
- providing emergency training for *key target groups*
- expanding the capacity for education in *new subject* areas
- offering combination of education with *work and family life*
- *adding an international dimension* to the educational experience. (p. 8)

There have been many definitions of distance education (e.g., Greenberg, 1998; Keegan, 1995; Teaster & Bliexzner, 1999). The distance learning environment has changed dramatically, from one of the earlier forms of distance education, namely, correspondence courses to today's computer-mediated learning. Simonson and others (2006) redefined distance education as: "institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors" (p. 7). The delivery of distance education is divided into two groups: synchronous and asynchronous (Lever-Duffy, McDonald, &

Mizell, 2005; Simonson et al., 2006). Synchronous distance learning occurs at the same-time; it could be in same place or different places, such as traditional classrooms, satellite, compressed video, and fiber-optic systems. Asynchronous distance learning, on the other hand, is where learning occurs at different times and in different places, such as correspondence through regular mail or e-learning/online learning (Simonson et al., 2006). The use of online courses in higher education is discussed next.

Online as a Means to Deliver University Courses

In 1993, the first Web browser, Mosaic, was developed. This software provided a new way to learning at a distance (Maddux, Johnson, & Willis, 2001). Since the web browser first appeared, the time American adults spent online has dramatically increased. Greenspan (2002) reported that the number of Internet users increased from a total of 17.5 million, about 9 percent of American adults in 1995, to 66 percent, a total of 137 million users in 2002. The average person accessed the Internet 8 hours per week, from home or workplace (Greenspan).

The rapid emergence of the Internet and World Wide Web was the biggest development in distance education. Some universities started to offer web-based courses in the 1990s. The online Campus of the New York Institute of Technology is one of the examples that offered entire degree programs online. Penn State University was the first university which offered an online graduate degree in Adult Education. Other higher education institutions soon adapted the web-based models, and started converting from a face-to-face only setting to dual-mode status. By the end of the 1990s, 84.1% of the public universities, 83.3% of the 4-year public colleges, and 74% of community colleges

offered online courses. Private institutions had lower rates, 53.8% for universities and 35.5% for 4-year colleges (Green, 2001). A survey conducted by the Sloan Consortium (Allen & Seaman, 2006) found evidence that institutions have recognized the Internet value as an educational tool, and the research showed that institutions are developing online distance learning programs. The survey of 2,200 U.S. colleges and universities found that 96% of large institutions have some online offerings; 62% of Chief Academic Officers rated learning outcomes in online education as the same or superior to face-to-face instruction; 58% of schools identified online education as a critical long-term strategy; and overall online enrollment increased from 2.4 million in 2004 to 3.2 million in 2005 (Allen & Seaman, 2006).

Some universities deliver their online programs via the departments created by the conventional universities, such as Virtual Temple by Temple University, NYU Online by New York University, eCornell by Cornell University, and so on, while others are created specifically to offer online learning, which are called *virtual universities*. Among the many virtual universities, the University of Phoenix is one of the largest and most successful online universities. The university founded in 1976, is a for-profit higher education institution, offers degrees ranging from an Associate of Arts in General Studies to a Doctor of Management in Organizational Leadership. Capella University is another example of private, for-profit, web-based virtual universities that target adult professional audience.

Online Education Learning Systems

Online education became very popular in higher education in the late 1990s, as the Web evolved, especially for graduate programs. Some of the online programs have adopted integrated Learning Management Systems (LMS) such as Blackboard, WebCT, FirstClass, eClassroom, and so on. These integrated LMS provide the benefits of both synchronous and asynchronous communication on one platform. Discussion forums are one of the features of an LMS and allow students and instructors to interact by posting and reading messages. Students and instructor post their assignments or activity responses to the discussion forums (Moore & Kearsley, 2005).

Nowadays, technology adds more options to online course integrated-tools selection. A number of online participatory applications defined as *Web 2.0* can be used for teaching and learning purposes in a way that is learner-centered, affordable, and accessible. Some of the commonly used components of Web 2.0 are wikis, podcasts, and blogs. Some of the benefits of these tools are "strictly Web-based and typically free, support collaboration and interaction, and are responsive to the user" (McGee & Diaz, 2007, p. 32).

A Wiki is one of the major tools of Web 2.0, and is relatively new in academia, even though it was introduced more than a decade ago (Chao, 2007; Evans, 2006), but it has become popular as a teaching tool recently. Wiki is a "type of web page designed so that its content can be edited by anyone who accesses it, using a simplified markup language" (Oxford English Dictionary, 2007, p.1). The term *wiki* is derived from the Hawaiian phrase, wiki-wiki, which means quick. In educational settings, a wiki is "a web

communication and collaboration tool that can be used to engage students in learning with others within a collaborative environment" (Parker & Chao, 2007, p. 57). Higher education has started to take advantage of wikis as a means of promoting deeper learning in education settings (Chen et al., 2005). A wiki was implemented as a communication platform for the online course offered in this study for facilitating online learning groups (Augar, Raitman & Zhou, 2004).

Seitzinger (2006) reported that a growing awareness of the benefits of constructivist online learning environments has drawn online educators' attention. Miers (2004) summarized that constructivist learning should be meaningful, active and manipulative, constructive and reflective, intentional, authentic, challenging and real-world (or simulated), cooperative, collaborative, and conversational. Wikis allow learners to participate in building resources collaboratively. The collaborative nature of wikis means that knowledge building focuses on the community rather than on the individual learner. Parker and Chao (2007) pointed out that collaborative learning is more powerful when it occurs in a community learning environment where people share their knowledge, information, and resources with the group. Wikis can serve this purpose.

On the other hand, a wiki has its weaknesses, as some educators have pointed out (e.g. Elrufaie & Turner, 2005; Wang & Turner, 2004). The problems of wikis include: all content is modifiable by any user; all content is public; and the wiki is forever evolving (Elrufaie & Turner, 2005; Wang & Turner, 2004). As the technology has been developed, some of the problems have been solved, for instance, only invited persons can be

members of a particular wiki site and can view and make changes to the site. This improvement also gives users the option of making their discussion public.

No matter what kind of online education learning system is used, the effectiveness of online courses is still the main concern. The next section reviews findings of research studies that compared online courses to face-to-face courses.

Online Courses versus Face-to-Face Courses

As online education becomes more popular, researchers continue to focus on the effectiveness of online education compared to face-to-face instruction. Some critics claim that online learning is not as effective as traditional classroom learning because of its lack of face-to-face interaction (Bullen 1998; Ward & Newlands, 1998). However, proponents of online education (e.g., Conrad & Donaldson, 2004; Legutko, 2007; Pérez Cereijo, 2006) believe that the effectiveness of education depends on the content, methodology, organization, and presentation of the teaching and learning process, whether it is face-to-face or online. Is the physical presence of the instructor and students an essential element of learning? Is the lack of verbal and visual cues to the detriment of learning? Researchers (e.g., Curtis & Lawson, 2001; Salmon, 2002) claimed that this is not necessarily the case. Salmon (2002) pointed out that the lack of verbal and visual cues can mean freedom from the distraction of physical presence. Curtis and Lawson (2001) compared online collaboration with face-to-face collaboration and concluded that it is similar in many ways, while more planning is required for online collaboration. Being familiar with the online system affects the nature of the collaboration. In addition, Hara and Kling (1999) reported that the key dissatisfactions of web-based instruction were: (a)

lack of prompt feedback from instructors, (b) ambiguous instructions for assignments, and (c) technical problems.

However, Russell (1999) reported that over 350 studies were done since 1928 that showed no significant difference between students in face-to-face settings and distance learning settings. Some researchers (e.g., Maki, Maki, Patterson, & Whittaker, 2000; Nelson, 1985) even reported that adult students learned better in a distance education mode than their counterparts who studied in regular classes. Knowing that many students commute from a distance and are not able to attend classes at a specific time, Leonard and Guha (2001) promoted online courses and conducted a study comparing students' perceptions on conventional/traditional class settings and online experiences. The results showed that the majority of students in face-to-face courses favored online courses but hesitated to take them; on the other hand, students taking online courses found that they met their academic needs and improved their technological skills. In general, adult learners appreciate the efficient and enjoyable learning environment. In many cases, however, even though adult students enjoyed their distance learning courses and found them valuable, they still preferred the traditional classroom. These negative attitudes towards online education might be caused by problems such as unfamiliarity with student's responsibility in online learning, unfamiliarity with technology, inexperienced instructors, and so on.

Since most adult students have little experience with online learning, they may be reluctant to take online courses. In some situations, some adult students may think online courses are easier than traditional classes and require less effort, and, thus, doubt the

quality or effectiveness of online education. Studies have shown that this is not the case. Distance students have to do more work than in a classroom course to get better results, they reported less comfort, and thought their online courses were more rigorous (MacGregor, 2001; Maki et al., 2000). In a more recent study, Meyer (2003) compared the role of time and higher-order thinking in face-to-face versus threaded discussions. She pointed out that constructing knowledge does take more time but provides greater benefits. Online discussions give the time necessary to construct higher-order thinking and interaction.

On the other hand, some research suggests a different point of view regarding online learning. For instance, Pillay, Irving, and Tones (2007) assessed students' readiness required for academic achievement and satisfaction within the online learning environment. They found that students are often less satisfied with online learning environments than classroom environments if they do not have the prerequisite personal and technical qualities required in online settings. Furthermore, there have been instances in which studies have reported significantly poorer learning in online courses. For example, Brown and Liedholm (2002) report significantly poorer performance on examinations for virtual graduate microeconomics classes. However, these findings are in the minority.

No matter what kind of delivery mode is chosen, instructional effectiveness is based upon the content, methodology, organization, and presentation of the teaching/learning process, whether online or face-to-face (Conrad & Donaldson, 2004; Legutko, 2007; Pérez Cereijo, 2006). There is no one perfect delivery mode. Each delivery mode has its

strengths and weaknesses. The next section will take a close look at the advantages and disadvantages of online education.

Advantages and Disadvantages of Online Education

The effectiveness of online education has been frequently debated by educators, especially by those who advocate face-to-face learning environments over the online setting (e.g., Brower & Klay, 2000; Grijavia, 2006) . Maltby and Whittle (2000) claimed that the majority of students prefer a face-to-face setting because they feel that it offers better educational value. To these educators, online education is far less desirable than face-to-face classrooms.

The opponents of online education often refer to lack of interaction among students and between students and the instructor as one of the major drawbacks of online education. Brower and Klay (2000) express concern that this lack of personal contact may cause criticisms over academic quality in a distance-learning environment. However, researchers (e.g., Conrad & Donaldson, 2004; Palloff & Pratt, 2007) argue that the lack of interaction can be improved by engaging the instructor and learner in a collaborative learning process in building the knowledge base. Concerns regarding academic dishonesty have also been cited as problems associated with distance learning programs (Grijavia, 2006). It is true that it may be difficult to monitor academic dishonesty for examinations performed online. Also, course expectations are often not clear, and because of the physical separation between the instructor and student, problems may be difficult to resolve (Baker, 1986). Other disadvantages of online education might include

lack of guidance from the instructor, low student motivation, and unfamiliarity with technology.

To the contrary, proponents of online education (e.g., Conrad & Donaldson, 2004; Legutko, 2007; Grant & Thornton, 2007; Pérez Cereijo, 2006) believe that the efficacy of education depends on learners' perceptions of online education and on the content, methodology, organization, and presentation of the teaching and learning process, whether it is face-to-face or online. Research findings show that there was no significant difference between online learning and face-to-face learning; most students are satisfied with their online learning experiences (i.e., Blcok, Udermann, Felix, Reineke, & Murray, 2008; Hannay & Newvine, 2006; Legutko, 2007; Powell, 2007; Meyer, 2007).

Key advantages of online learning include flexibility, convenience, the ability to work in any place where an Internet connection is available, and at one's own pace. Although the debate over the advantages and disadvantages of distance learning still continues to this day, online education is here to stay. How do we make the best of it? The way in which educators design and deliver effective courses, whether it is in the classroom or online, should depend very much on understanding the learners.

Understanding Adult Online Learners

The majority of distance education learners in the United States are adults, typically between the ages of 25 and 50 years (Moore & Kearsley, 2005). Adult learners differ from the traditional college-age student in some significant ways (Howell, William, & Lindsay, 2003). An understanding of the nature of adult learning is a useful base for

understanding the online students. To that end, why adults enroll in online courses, their characteristics, and how they learn are explored in the next section.

Why Do Adults Enroll in Online Courses?

Adults usually have jobs, families, and social obligations that may restrict their access to face-to-face instruction. It may not be practical for many adults to take conventional courses, so online courses become an alternative for them. The growing population of adult learners views online learning as a flexible and valuable option. it allows them to balance the demands of work, family, and other responsibilities (Holder, 2007).

Some adult learners enroll in online courses to get: college credit courses, noncredit courses, practical knowledge, and to improve their general knowledge. Convenience is the major motivation for adults to enroll in online courses (Northrup, 2002). Web-based learning also opens up a world of information not available in a textbook. Adult learners can benefit from the flexibility and convenience of online education, as they are able to take courses based on their schedules at anytime and from anywhere. No matter what the reasons are for taking online courses, adult learners are found to be more serious and dedicated, and highly motivated about what they are doing (Northrup).

Characteristics of Adult Learners

Brookfield (1996) maintained that "the differences of class, culture, ethnicity, personality, cognitive style, learning patterns, life experiences, and gender among adults are far more significant than the fact that they are not children or adolescents..." (p. 379). Compared to traditional students, adult learners are more likely to be self-directed,

self-motivated, goal- and relevancy-oriented, and less dependent on instructors. Upon enrolling in a course, they usually know what goals they want to attain and usually have more life experiences and practical knowledge to bring into class discussions. Howell and his colleagues (2003) believe that the characteristics of adult learners also apply to non-traditional distance students. Malcolm Knowles's (1978) *andragogy* theory, which means the art and science of helping adults learn, best outlines the characteristics of adult learners as follows:

- Rather than depending on an instructor, adults like to have some control over what is happening and to exercise personal responsibility.
- Adults prefer to define for themselves what should be learned, or at least to be persuaded that it is relevant to their needs.
- Adults like to make decisions about how to learn, what to do, when, and where or at least for these decisions to be discussed.
- Adults appreciate that their personal experiences be used as learning resources.
- Adults see learning as necessary for solving problems in the present instead of acquiring knowledge for the future. They assume that they have the basic knowledge or need to obtain information that can be used immediately.
- Adults generally have more intrinsic motivation.

On the other hand, physical and cognitive changes that take place as people age are important to note because they can affect learning. Older learners have slower reaction times than younger learners; and their vision generally declines from the age of 18 to 40. After age of 40, there is a sharp decline in vision for the next 15 years. Also, people need

more time to learn new things as they age. However, when adults can control the pace of learning, they can often effectively compensate for their lack of speed and learn new things successfully (Cross, 1981). When contextual learning approaches are used, less decline is found in the memory process as people age, and adult learning is grounded in the real lives of adults regardless of color, or ethnic background (Merriam & Caffarella, 1999).

Adult learners' motivation may not be the same as traditional younger students. Researchers have identified different typologies of learners, depending on their underlying motivation. Houle (1961) divides adult learners into three learning orientations: goal-oriented learners who use education as a means of achieving some other goal; activity-oriented learners who participate for the sake of the activity itself and the social interaction it provides; and learning-oriented learners who seek knowledge for its own sake. Boshier, Morstain and Smart have suggested at least six factors that serve as sources of motivation for adult learning, which are: (a) social relationships: to make new friends, to meet a need for associations and friendships; (b) external expectations: to comply with instructions from someone else; to fulfill the expectations or recommendations of someone with formal authority; (c) social welfare: to improve ability to serve mankind, prepare for service to the community, and improve ability to participate in community work; (d) personal advancement: to achieve higher status in a job, secure professional advancement, and stay abreast of competitors; (e) escape/stimulation: to relieve boredom, provide a break in the routine of home or work, and provide a contrast to other exacting details of life; and (f) cognitive interest: to learn

for the sake of learning, seek knowledge for its own sake, and to satisfy an inquiring mind (cited in Merriam & Caffarella, 1999, p. 54).

How Do Adult Learners Learn?

Theorists believe that experience, learning style, and cultural influences play a role in the learning process. To begin with, Dewey (1916/1997) emphasized the value of individual experience and collaboration with others in the learning process. Knowles (1980) extended Dewey's work to adult learners because adult learners are self-directed and their experiences play a role in an active learning environment. Piaget (1969) emphasized the importance of connections between meaningful learning and the learner. He described engaged learning as we come to know the world when new experience is built on prior experience. Vygotsky (1981) believed that social actions help students learn from others' perspectives. Kolb (1984) classified learning into four inventory areas: concrete experience, active experimentation, reflective observation, and abstract conceptual. Kolb believed that all four elements were required for effective experiential learning, and that individuals have different preferences and natural styles. Kolb's perspective is important to consider when teaching because using different teaching styles can help students learn better (Kolb).

Perry (1970) postulated that students go through four stages of development in their critical thinking skills: dualism, multiplicity, contextual relativism, and commitment within relativism. As students move through these stages, they become more sophisticated critical thinkers and change their views about the nature of knowledge as they progress. Their view of authority changes as well, and it impacts how they think

about teachers and other sources of information. Adult learners are usually in the final two stages of Perry's model: contextual relativism and commitment within relativism. In contextual relativism, learners realize that opinions need support to gain validity; while in the commitment within relativism stage, learners can view problems from a variety of different viewpoints and recognize that best answers for questions depend on the approach from which the question is being asked (Perry, 1970). The learners take on roles of meaning-makers and are capable of presenting unique views on a question on their own.

The theories discussed above identify crucial elements that impact adults' learning, such as learners' prior experience, learning style, need for interaction with others, and cultural influence. When these elements are taken into account, an online course is more likely to be successful. In general, adult learners are likely to be self-directed, self-motivated, and goal- and relevancy-oriented. Howell and his colleagues (2003) believe that the characteristics of adult learners also apply to adult distance students. By understanding online adult learners' characteristics and their approaches to learning, online educators are equipped to create meaningful, active, and engaging online learning experiences for the adult learners.

While many educators have reported on the possibilities of online learning, there have been limited studies (e.g., Grant & Thornton, 2007; Kitahara & Westfall, 2007; Meyer, 2007; Pérez Cereijo, 2006; Vesely et al., 2007) conducted on students' perceptions of online learning and how they relate to quality of the learning experience, motivation, and sense of the learning community. These are essential factors in successful online

learning. The ways in which these factors interact within an online learning group has not yet been explored.

Conceptual Framework for Understanding Online Learning

Bandura's (1986) social cognitive theory provided a basis for conceptualizing the importance of perceptions when determining the quality of learning experiences, motivation, and a sense of the learning community in instruction. Social cognitive theory explains student achievement in terms of a three-way, dynamic, reciprocal model, in which personal factors, environmental influences, and behavior continually interact (see Figure 1).

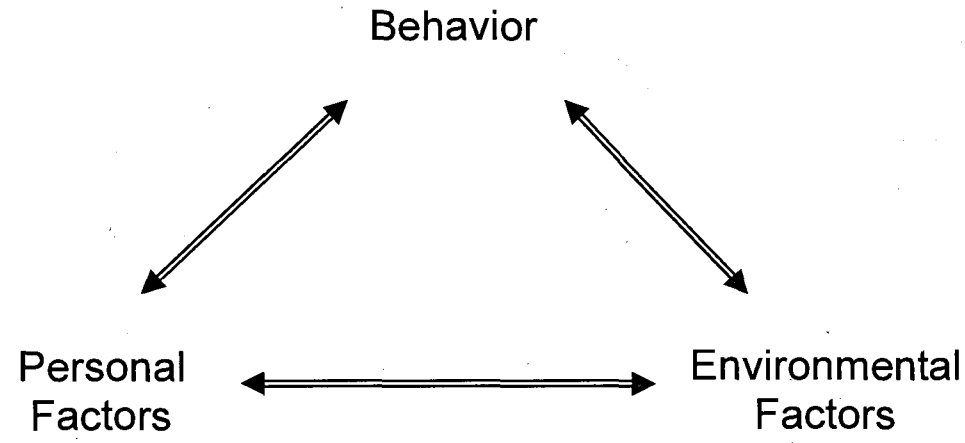

Figure 1. Social Cognitive Theory Diagram.

Social cognitive theory explicates the role of confidence, motivation, repetition, and emotional support in relation to behavior development. It also provides the framework for

learning theories that focus on interactivity in education. In this theory, people are viewed as active agents in their development and are self-organizing, proactive, self-reflecting and self-regulating rather than as reactive organisms. Further, from this theoretical perspective, human functioning is viewed as the product of a dynamic interplay of personal, behavioral, and environmental influences. How people interpret the results of their own behavior informs and alters their environments and the personal factors they possess, which in turn, informs and alters subsequent behavior (Bandura, 1986). Pajares (2008) suggested that by using social cognitive theory as a framework in educational settings, instructors can improve their students' emotional states and their self-beliefs and habits of thinking (personal factors), improve their academic skills and self-regulatory practices (behavior), and restructure the learning environment that may undermine student success (environmental factors).

In online learning, learners are required to put more effort into their independence and self-regulated learning strategies, and adapt the learning context to fit into the online environment. Therefore, self-regulated learning refers to students' capabilities that "enable [them] to be independent learners and develop a core resiliency" (Alderman, 2004, p. 132). Situated learning claims that human thought is adapted to the environment; people perceive, think, and behave in a social context; knowledge is constructed by participating in communities of practice (Clancey, 1997; Lave & Wenger, 1991; Lemke, 1997). Self-regulated learning and situated learning theories are applied to strengthen the foundation for this study.

Self-regulated learning is an important aspect of learning and achievement in academic contexts. It uses Bandura's social cognitive theory as its theoretical framework. The theory refers to the processes by which individual learners attempt to monitor and control their own learning, including their thoughts (e.g., competency beliefs), emotions (e.g., interest), behaviors (e.g., engagement with learning activities), and social contextual surroundings (e.g., selecting a comfortable place to study; Pintrich & De Groot, 1990; Zimmerman, 2000). Moreover, self-regulated learning is a self-initiated action that involves goal setting and regulating one's efforts to reach the goal, self-monitoring (metacognition), time management, and physical and social environment regulation (Zimmerman & Risemberg, 1997).

Self-regulated learners possess unique characteristics. They handle learning processes independently, prepare learning activities that match their learning objectives, conduct and monitor these activities, and search for feedback on their learning progress (Winne, 2001; Winne & Hadwin, 1998). The self-regulated learner uses general metacognitive strategies to monitor and regulate their learning (e.g., Boekaerts, 1999; Pintrich, 2004).

Researchers (Heckhausen & Dweck, 1998; Lens & Vansteenkiste, 2008) suggest that the use of self-regulated learning strategies is a motivationally-driven process. That is, some students seem to use self-regulated learning strategies to improve their learning and academic achievement. Students who are self-regulating are much more likely to be successful in school, to learn more, and to achieve at higher levels. In the online learning

environment, it is even more important that individuals foster self-regulated learning (Heckhausen & Dweck, 1998; Lens & Vansteenkiste, 2008).

Moreover, in an online learning environment, learners need to adjust their learning behaviors to fit into this unique context. Situated learning explains the need for such adaptation. Situated learning, or situated cognition theory, is based upon the notion that knowledge is contextually situated and is fundamentally influenced by the activity, context, and culture in which it is used (Brown, Collins, & Duguid, 1989). Clancey (1997) pointed out that situated cognition theory claims that "every human thought is adapted to the environment, that is, *situated*, because what people *perceive*, how they *conceive of their activity*, and what they *physically do* develop together" (pp. 1-2) in a fundamentally social context.

Situated learning discussions often refer to the idea of a community of practice; in the situative perspective, learning is conceived as increasing participation in communities of practice (Lave & Wenger, 1991). This suggests any group of people who work together to accomplish some activity usually involves collaboration between individuals with different roles and experience (Clancey, 1997). Collaborative learning explains that the best learning occurs when students are actively engaged in the learning process and work in collaboration with other students to accomplish a shared goal. Collaborative learning moves teaching practice from teacher-centered to student-centered education (Palloff & Pratt, 2005). In the online environment, collaboration is the "heart and soul" (Palloff & Pratt, 2005, p. 6) of an online course, and a sense of community has to exist in order for collaboration to occur (Johnson & Johnson, 2000, Palloff & Pratt, 2005).

Three Major Factors in Online Learning

Social cognitive theory describes learning in terms of the interrelationship among behavior (forming a learning community), environmental factors (online learning), and personal factors (motivation). These three factors interact through a process that Bandura (1986) called "reciprocal interaction." A diagram using social cognitive theory as a base, and expanded with self-regulated learning and situated learning, was developed to visualize the main factors that promote success in online learning (see Figure 2). The main factors, including online learning experience, motivation attribute, and sense of learning community are mutually interacting with each other. This section explores the factors in detailed.

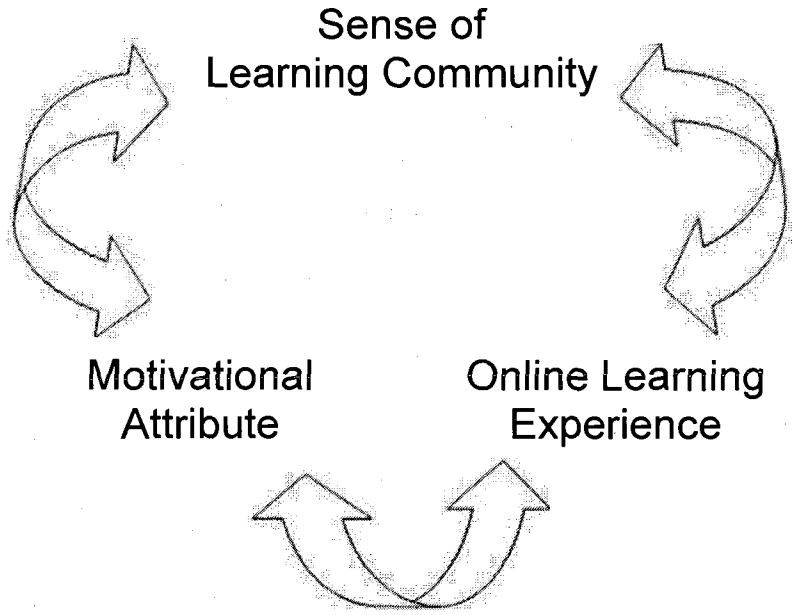

Figure 2. A Model of Online Learning

Online Learning Experience

A learning environment is a place where learning occurs; it can be anywhere, not necessarily a physical classroom. A learning environment typically includes four components: an enabling context, resources, a set of tools, and scaffolds (Hannafin, Land, & Oliver, 1999). An online learning environment includes, but is not limited to, content, instruction, interaction among an instructor and students, support, and teaching and learning tools including computers and the Internet that are designed to enhance a student's learning experience. Research found that students' perceptions of a learning environment are positively related to their subsequent learning behavior and the quality of their learning outcomes (Ben-Ari & Eliassy, 2003; Fraser & Fisher, 1983; Konings, Brand-Gruwel, & van Merriënboer, 2005). These relationships between students' outcomes and their perceptions have consequences for the design of learning environments such as course design. In order to learn, students need to feel comfortable with the instruction that they receive (Biller, 1996).

Researchers (e.g., Grant & Thornton, 2007; Pérez Cereijo, 2006) claimed that the effectiveness of learning is fundamentally impacted by the learners' perceptions of online education. Misconceptions about online education may lead to failure, dissatisfaction with online learning, or dropping out. As more and more classes are taught in a distance education form, a full understanding of the circumstances that facilitate student satisfaction/completion is critical to course developers, administrators, and instructors. Being aware of students' perceptions of online course delivery helps faculty tailor courses to meet the needs of the students.

Kember (1995) developed a model (see Figure 3) for student progress that focused on adult learners in distance education settings. The model focuses on "the factors that affect a student's successful completion of a distance education program with particular focus on the extent to which students are able to integrate their academic study with often conflicting employment, family, and social commitments" (Moore & Kearley, 2005, p.169). Kember's model suggests that student's characteristics, such as educational qualifications, family status, and employment lead a student to either success or to having difficulties achieving social and academic integration, which affects their achievement. The model also suggests that students' achievement can be improved by increasing students' intrinsic motivation and having a well-planned curriculum when designing a distance course.

Coggins (1989) pointed out that a student's educational background is one of the best predictors of success in distance education. The more formal education the students have, the more likely they are to complete a distance course. Researchers (e.g., Dabbagh & Bannan-Ritland, 2005; Moore & Kearsley, 2005) reported that student satisfaction with online education has been shown to predict course drop-out rates and intentions to enroll in future online courses. Knowledge and understanding of factors contributing to graduate students' conceptions of overall online experience may help academic institutions better meet distance students' needs, improve the quality of their academic experiences, and improve the design and delivery of online courses in the future.

Characteristics of a good online course. Adult learners tend to be autonomous, self-directed, and goal-and relevancy-oriented; they need to know the rationale for what

they are learning. They are also motivated by professional advancement, external expectations, the need to better serve others, social relationships, escape or stimulation, and pure interest in the subject (Brookfield, 1996; Howell et al., 2003; Knowles, 1978). An online course must take these characteristics into consideration in order to assist online learners to get the most out of their online experience. Moore and Kearsley (2005) summarized the course elements that may affect the success of students:

- The perceived relevance of the content to career or personal interests
- The difficulty of the course and program (i.e., amount of time/effort required)
- The degree of student support available
- The nature of the technology used for course delivery and interaction
- The extent of the pacing or scheduling involved
- The amount and nature of feedback received from instructors/tutors on assignments and on course progress
- The amount and nature of the interaction with instructors, tutors, and other students. (p. 173)

Seven Principles for Good Practice. Chickering and Ehrmann (1996) elaborated on seven guidelines or principles for online education practitioners and students to improve teaching and learning. These guidelines were first published by Chickering and Gamson in 1987, and were based on decades of research of good teaching and learning in colleges and universities. Later, Chichering and Ehrmann (1996) extended and implemented the Seven Principles in new environments integrated with technologies, including online learning environments. The Seven Principles of Good Practice are: (a) encourage contacts between students and faculty, (b) develop reciprocity and cooperation among students, (c) use active learning techniques, (d) give prompt feedback, (e) emphasize time on task, (f) communicate high expectations, and (g) respect diverse talents and ways of learning (Chickering & Ehrmann, 1996).

The quality of online courses and students' satisfaction is determined from different perspectives, such as course design, course interaction, course content, course support, and technology used. Factors which support Chickering and Ehrmann's Seven Principles of Good Practice that lead to student satisfaction with online instruction include: interaction among students, quality and timely interaction between student and professor, consistent course design across courses, technical support availability, and flexibility of online courses (Leonard & Guha, 2001; Young & Norgard, 2006). Some studies (e.g., Chandras, DeLambo, & Eddy, 2005; Leonard & Guha, 2001), however, found that even though some students favored online courses they are less likely to enroll in them due to a lack of face-to-face interaction with the instructor and classmates.

Beyond course material and online instruction, students' knowledge of and comfort with technology as essential indicators of online learning experience are well documented. Students' effective use of technology has been found to positively impact their learning satisfaction and learning outcomes (Lim, 2001; Lorenzetti, 2003; Loubeau & Heil, 2000; Osika & Sharp, 2003). Since the success of online learning depends on motivation and application of technology, technological and computer support for online students is one of the concerns in online learning (Huebner & Wiener, 2001).

Generally speaking, studies on students' online learning experiences:

> ...indicated that most learners agreed that course design, learner motivation, time management, and comfortableness with online technologies impact the success of an online learning experience. Participants indicated that technical problems, a perceived lack of sense of community, time constraints, and the difficulty in understanding the objectives of the online courses as challenges. (Song, Singleton, Hill, & Koh, 2004, p. 59)

To be successful in an online learning environment, learners need certain academic qualities and environmental support, and a high level of intrinsic motivation (Morris, Wu, & Finnegan, 2005; Visser, Plomp, Amirault, & Kuiper, 2002). Since motivation plays a centeral role in successful online learning, the next section explores the essential motivational attributes in online learning.

Motivation in Online Learning

Social cognitive theorists assume that personal cognition, such as belief about intelligence, confidence, anxiety, goals, and values, is one of the three components that interacts with each other in the learning process (Bandura, 1986; Pintrich & Schrauben, 1992). The personal cognition process, such as a positive belief about one's ability or self-efficacy, acts as an important mediator of motivation, which influences both expectations for future performance and actions taken. Self-motivation has a significant effect on students' learning, face-to-face or online. As online education is different from the classical learning in the classroom, online learners are required to be more responsible for their own learning (Dabbagh & Kitsantas, 2004; Schunk & Zimmerman, 1998). Personal responsibility was found to be a contextual factor that helps students matriculate successfully in the online environment (Scott-Fredericks, 1997).

Motivation affects both learning and performance and is a key element of the autonomous learning needed in an online learning environment (Schunk, Pintrich & Meece, 2008). Autonomous learning is engendered by one's level of self-regulation. Social cognitive theorists believe people set their own goals and standards and can learn to control their learning and behavior, eventually becoming self-regulated learners

(Schunk et al., 2008). Self-regulated learning refers to "learning that occurs largely from the influence of student's self-generated thoughts, feelings, strategies, and behaviors, which are oriented toward the attainment of goals" (Schunk & Zimmerman, 1998, p. viii). Zimmerman (1994, 1998) developed a self-regulation conceptual framework showing six key questions and their critical self-regulation processes (see Table 1).

Table 1

Dimensions of Self-Regulation

Learning Issues	Self-Regulation Processes
Why	Self-efficacy and self-goals
How	Strategy use or routinized performance
When	Time management
What	Self-observation, self-judgment, self-reaction
Where	Environmental structuring
With Whom	Selective help seeking

Researchers have found that effective self-regulation requires having goals and the motivation to attain them (Bandura, 1986; Pintrich, 2000; Zimmerman, 1989); and depends on students developing a sense of self-efficacy for self-regulating their learning and for performing well (Zimmerman, Bandura, & Martinez-Pons, 1992). Zimmerman (1998) developed a three-phase self-regulation model that illustrates the cyclical process

of self-regulation (see Figure 3). The model explains how various self-regulatory processes come into play during the different phases.

> The *forethought phase* precedes actual performance and refers to processes that set the stage for action. The *performance (volitional) control phase* involves processes that occur during learning and affect attention and action. During the *self-reflection phase*, which occurs after performance, people respond to their efforts. (Pintrich & Schunk, 2002, p. 179)

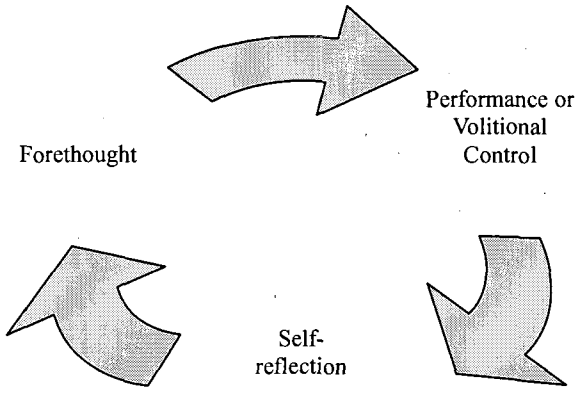

Figure 3. Self-regulation Cycle Phases.

Self-regulated learning offers an important perspective on academic learning in educational psychology (Schunk & Zimmerman, 1994). Academic self-regulation has been studied in traditional classrooms as a means of understanding how successful students adapt their cognition, motivation, and behavior to improve learning. In general, investigators have consistently found moderate to strong positive relations between students' use of self-regulated learning strategies and academic achievement (Pintrich, 1999; Pintrich & De Groot, 1990; Pintrich & Garcia, 1991). Furthermore, scholars have

suggested that self-regulated learning skills may be particularly important for students participating in online education (Bandura, 1997; Dillon & Greene, 2003; Hartley & Bendixen, 2001; Hill & Hannafin, 1997).

Online education is a form of learning in which a student must interact with the subject matter, with the instructor, and with other students. For the learner to be effective in the online environment, he or she must be self-regulated (Lee, 2004). One of the key differences between online learning and face-to-face is the removal of the traditional classroom. There is usually no direct physical interaction between instructors and learners. Thus, online learners may experience a sense of isolation. Consequently, in order to be successful learners, online learners must rely on their individual abilities to direct their learning, that is, employ self-regulated learning strategies. Effective self-regulated strategies are especially important for learners and have been found to be particularly useful in analyzing student success in online learning situations (Militiadou & Savenye, 2003; Schunk & Zimmerman, 1998).

There are many attributes of self-regulation that may be relevant to learning online including self-efficacy for learning and performance, intrinsic goal orientation, time and study environment management, and help seeking (learning assistance management) (Hara & Kling, 2000; Holmberg, 1995; Kearsley, 2000; Moore, 1998; Schrum & Hong, 2002; Wang & Newlin, 2002; Zimmerman & Martinez-Pons, 1986). To assess students' self regulation and their use of learning strategies, the most widely used measurement scale is the Motivated Strategies for Learning Questionnaire (MSLQ). The MSLQ is a self-report instrument designed to measure students' motivation and self-regulated

learning based on a social cognitive view in classroom context (Pintrich, Smith, Garcia, & McKeachie, 1993). However, the MSLQ has limitations in assessing online self-regulated learning as it was designed to ascertain self-regulatory skills in the context of the traditional classroom. As a result, based on the nature of the online learning environment, belief of Internet self-efficacy is an important element of success for online learners (Schrum & Hong, 2002) which should also be examined.

Self-efficacy for learning and performance. Bandura (1986) defined self-efficacy as individuals' judgments of their abilities to plan and carry out the necessary behaviors to achieve specific goals. Levels of self-efficacy are thought to be determined by things such as previous experience, vicarious experience, verbal persuasion, and affective state. Because self-efficacy is based on self-perceptions regarding particular behaviors, the construct is considered to be situation specific (Cassidy & Eachus, 2002; Eachus & Cassidy, 2006). That is, a person may exhibit high levels of self-efficacy with one task, but exhibit low levels of self-efficacy with another task. Bandura (1986) suggested that the perception that one has of their capabilities to perform a task will increase the likelihood that the task will be completed successfully.

Often, people's behavior can be better predicted by beliefs that people hold about their capabilities, that is, self-efficacy, rather than their actual capabilities. Thus, assessing learners' belief in their ability to regulate their learning may be just as important as assessing their level of self-regulation. A study conducted by Zhang, Li, Duan, and Wu (2001) found that self-efficacy was positively related to students' goal orientation and self-regulatory learning skills. Also, self-efficacy has been noted as

important in successful distance learning (Gibson, 1998). Learners with high self-efficacy are likely to employ adaptive self-regulatory learning strategies and study skills. Studies interested in understanding student performance in online settings have found that students who perceived higher self-efficacy report an increased use of learning strategies (Artino & Stephens, 2006); greater satisfaction with their learning experience (Lim, 2001); greater likelihood of enrolling in future online courses (Lim, 2001); and better academic performance (Bell & Akroyd, 2006; Lynch & Dembo, 2004).

Internet self-efficacy. In addition to self-efficacy, experience and comfort with technology are essential factors for success in online learning (Schrum & Hong, 2002). One of the requirements of taking an online course is being able to access the Internet. Although the computer interface is becoming increasingly user-friendly, there are still problems for inexperienced users. Many adults are unable to take advantage of the Internet due to a lack of necessary skills or erroneous beliefs about their capability to use the Internet (Eachus & Cassidy, 2006). According to Hong, Lai, and Holton (2003), learners who feel uncomfortable using computers may experience difficulty undertaking courses and may experience more frustration or anxiety with online learning courses than learners who are more comfortable with computers.

A number of scales have been developed to measure various aspects of Internet self-efficacy. The early measures of self-efficacy focused on measuring a few specific types of Internet behavior, such as creating a bookmark or correctly entering a web page address (Nahl, 1996), or evaluating searches for government information (Ren, 1999). A popular measurement of Internet self-efficacy was developed by Eastin and LaRose

(2000). The scale is an eight-item measurement of Internet self-efficacy that assesses individuals' judgments of their ability to use the Internet to achieve overall attainments, as opposed to accomplishing specific sub-tasks. A Likert-type agree-disagree scale is used to assess the participants' confidence that they could use the Internet in each of the ways specified. However, Eachus and Cassidy (2006) argued that Eastin and LaRose's scale contains only eight items and the domain of behaviors examined is very limited. As a result, Eachus and Cassidy (2006) extended the work on Internet self-efficacy and developed a 40-item Web Users Self-Efficacy scale (WUSE) reflecting four domains of Internet self-efficacy, which are: information retrieval, information provision, communication, and Internet technology. They maintained that these four domains would cover aspects of Internet self-efficacy from the simplest retrieval of a web page up to the more complex issues associated with the design and construction of whole web sites. This scale requires respondents to indicate their level of agreement/disagreement to each statement along a 5-point Likert scale.

Studies found that self-efficacy for technology skills was positively associated with online learner performance and success (Joo, Bong, & Choi, 2000; Wang & Newlin, 2002). In Lim's (2001) study which examined 235 adult web-based distance learners about their computer proficiency and self-efficacy, she reported that, like self-efficacy, computer proficiency also had a positive effect on satisfaction and seemed to give learners increased confidence in the ability to handle the academic demands of distance learning. Learners with high computer self-efficacy tended to indicate greater satisfaction in web-based learning and lead to a higher academic self-concept. It is important,

therefore, to ensure that online learners are both comfortable with and competent in using the technological tools in their learning experience.

Intrinsic goal orientation. Goal orientation is defined as a learner's general goals or reasons for engaging in learning tasks (Pintrich, Smith, Garcia & McKeachie, 1991). Two major types of goal orientation have been identified: an intrinsic goal orientation and an extrinsic goal orientation (Ames, 1984; Dweck 1986; Harter, 1981; Nicholls,1984; Pintrich & Schrauben, 1992). Intrinsic goal orientation is defined as a focus on mastery, learning, challenge, or curiosity (Pintrich & Schrauben, 1992). It indicates the degree to which a learner participates in a learning task in order to meet a personal challenge, and attain personal mastery of the task. In contrast, an extrinsic goal orientation is defined as a focus on grades, rewards, or approval from others (Pintrich & Schrauben, 1992). The differences of these goal orientations are that an extrinsic goal orientation signifies participation in a task as a means to rewards and not as a learning process.

Pintrich and Schrauben have proposed that students can approach learning with both orientations. However, other researchers (Ames & Archer, 1988; Meece, Blumenfeld, & Hoyle, 1988; Pintrich & Garcia, 1991; Wolters, Yu, & Pintrich, 1996) have shown that students who are more learning oriented not only work harder and persist longer at academic tasks but employ cognitive and metacognitive strategies more often than students who are more extrinsically oriented.

Goal orientation is a significant attribute of successful online learning and course completion (Beatty-Guenter, 2002). Closely related to the notion of goal orientation is the concept of goal setting. Research studies have found that goal setting by distance learners

contributes to performance (Curry, Haderlie, & Ku, 1999; Schrum & Hong, 2002; Whipp & Chiarelli, 2004). Learners who are goal oriented are more likely to set specific learning goals; learners with an intrinsic goal orientation are more likely to set mastery-oriented goals. Studies have shown that mastery goals are positively related to learners' attempts to self-regulate their time and effort (Pintrich et al., 1993), and to their adaptive help-seeking (Karabenick, 2004; Linnenbrink, 2005; Ryan, Pintrich, & Midgley, 2001).

Time and study environment management. Self-regulation includes one's ability to effectively manage learning time through scheduling, planning, goal-setting, and prioritizing, which is a concern in distance learning (Kearsley, 2000; Lynch & Dembo, 2004; Miltiadou & Savenye, 2003). An online course may require more time interacting with course content, with fellow students, and with an instructor than a traditional face-to-face course. Palloff and Pratt (1999) point out that interacting in a web-based course can require two to three times the amount of time investment than in a face-to-face course. Time management is not simply the amount of time spent, but rather the effective use of time. If distance learners have difficulty managing time, they are more likely to achieve less or may lead to dropping out (Palloff & Pratt, 1999; Roblyer, 1999).

According to Gibson (1998), a key construct relating to distance learners' persistence is their self-efficacy for learning at a distance and that personal perceptions of competence are related to learners' perceptions of their ability to manage time effectively. Students who use their time efficiently are more likely to learn or perform better than students who do not have good time management skills. Self-regulated learners know how to manage their time because they are aware of deadlines and how long it will take

to complete each assignment. Meanwhile, they are aware of the need to evaluate how their study time is spent and rearrange their tasks as necessary (Zimmerman & Risemberg, 1997).

Self-regulated learners are not only effectively managing their study time, but also the study environment (Zimmerman & Martinez-Pons, 1986). Because online learners do not study in a structured traditional classroom, they must be able to adjust their own physical learning environment accordingly, no matter where they are. Study environment management is concerned with controlling and avoiding possible distractions which may arise during learning. One of the benefits of online learning is time and location flexibility. Online learners generally have the option of accessing their courses via computers at home or elsewhere, not just in classrooms or during set hours. At the same time, online learners are often required to coordinate their online learning with other demands, including work, family, and other social activities and commitments (Reynolds, 2002). All of these could be distractions to learning. Online learners must therefore manage their time and environment to minimize distractions and allocate effort towards e-learning courses, and must also ensure that they have access to and are proficient at using the equipment they require in order to study effectively. These are recommended attributes to successful online learning.

Help seeking. Help seeking is another attribute that enhances online learning. The importance of help seeking has been noted in distance learning (Hara & Kling, 2000; Holmberg, 1995; Wang & Newlin, 2002). Although self-regulation emphasizes individuals' ability to manage their own learning, a key part of this is awareness of the

significant role others can play in one's learning. Distance learning research suggests that help seekers may be more likely to achieve learning outcomes (Wang & Newlin, 2002; Whipp & Chiarelli, 2004; Zariski & Styles, 2000). Autonomous distance learners are able to seek appropriate learning help from others.

Since an element of online education is social isolation from classmates and instructors, online learners need to be proactive in employing the technology, through email, chat rooms, and bulletin boards to minimize the social distance involved in their learning situation. Learners who do not employ help-seeking strategies may become frustrated with online learning courses which may negatively impact their performance (Wang & Newlin, 2002; Whipp & Chiarelli, 2004). In the online learning context, learners are required to be sufficiently motivated and self-regulated to effectively and efficiently use the technology in order to effectively interact with other learners and with instructors (Henderson & Cunningham, 1994). To be successful, online learners have to be able to determine where and how to seek help, and make decisions concerning the most appropriate sources for help. In an online learning environment, learners learn not only by working on their own, but also sharing their experiences and knowledge with others. All of these interactions form a learning community; all learners are members of the learning community (Palloff & Pratt, 2007). A sense of being in a learning community enhances learning.

Sense of Online Learning Communities

Perceptions of learning communities play a role in distance learning satisfaction. Fulford and Zhang (1993) examined learner perceptions of interaction and satisfaction in

a distance course. They found significant correlations between perceptions of personal and overall interaction within the class, perceptions of personal interaction were a moderate predictor of satisfaction, and perception of overall interaction as the critical predictor of satisfaction.

As was mentioned previously, some critics claim that online learning is not as effective as traditional classroom learning because of its lack of face-to-face interactions (Bullen 1998; Ward & Newlands, 1998). Is the physical presence of the instructor and students the essential element of learning? A review of more than two million learners over 25 years of age who studied at the Open University in the United Kingdom suggests that communication that is only one way leads to failure and massive dropout problems (Gladieux & Swail, 1999). Interaction that takes place between students and instructors is the key regardless of the learning environment, whether it is a traditional classroom or online learning. As Herring and Smaldino (2005) pointed out, "passive learning is not acceptable in the distance learning environment" (p. 2); interaction and communication are extremely important in effective online courses. *Sense of community* attracts and retains learners, increases interaction, therefore improves learning.

Paloff and Pratt (1999) revealed that the root word of community is communicare, which means "to share" (p. 25). The sharing takes place through interactions within networks. These interactions among community members are considered collaboration (Vesely, Bloom, & Sherlock, 2007). A learning community is determined by a willingness of members to share resources, accept and encourage new memberships, participate in regular communication, include systematic problem solving, and show preparedness to

share success (Moore & Brooks, 2000). To have a strong sense of community, students must do more than participate in interpersonal interaction and community membership. Members have to have a motivated and responsible sense of belonging and be willing to participate actively.

According to Ludwig-Hardman (2003), online learning communities are groups of people, connected via technology-mediated communication, who actively engage one another in collaborative, learner-centered activities to intentionally foster the creation of knowledge, while sharing a number of values and practices. Through social networking and computer-mediated communication, people work as a community to achieve a shared learning objective. Online learning communities provide a social structure in which instructors and learners work collaboratively to achieve goals and participate in a distributed experience (MacKnight, 2001; Palloff & Pratt, 1999). Learners bring different interests and experiences to the instructional setting via textual discussion, audio, video, or other Internet-supported devices, synchronously or asynchronously. At the same time, students take advantage of the diversity as they reflect on their own needs and interact with instructors and peers. Communication and interaction bring a shared responsibility for facilitating learning (Driscoll, 2005). Palloff and Pratt (1999) further suggested that although instructors and learners may have a shared responsibility for building the community, the instructor has the primary responsibility. He or she guides and facilitates interaction and provides feedback, encouraging learners to become community members.

Feelings of online isolation. Yearning for a sense of belonging, kinship, and connection to a greater purpose is a basic human need (Shaffer & Anundsen, 1993). For

students studying in an online environment, social interaction with peers and educators can often be an exercise in frustration. When face-to-face instruction does not occur, tone of voice, facial expression, and body language often cannot be transmitted in web-based delivery modes. Most online students communicate and interact with instructors and peers asynchronously in a textual medium through the means of email, threaded discussion, listserv, or chatting features. The inability to interact freely with other students, and the absence of verbal, facial, and body cues, may cause feelings of aloneness or being isolated (Palloff & Pratt, 1999). Daugherty and Funke (1998) indicated that this issue of isolation is an important criterion for student satisfaction in a web-based course. This feeling is often based on the physical separation between student and instructor and is one that educators may be able to minimize, but are unlikely to ever successfully remove (Daugherty & Funke, 1998). Galusha (1997) points out that students' desire to be part of a learning community should be taken into account when planning distance programs.

Pérez Cereijo, Young and Wilhelm (2001) also indicated that isolation can be a problem with web-based learning. Participants who expressed extreme frustration with isolation and technical problems also:

1. were extroverts ...
2. were visual learners ...
3. lived near campus
4. had some serious technical problems, and/or
5. were inexperienced computer users ... (p. 37)

Moreover, Pérez Cereijo and others (2001) are among many who indicated that for those students who are working and/or have families, the concept of online education is a

preferred option, as their other commitments may prevent them from attending on-campus classes. Online education is often chosen for its convenience and flexibility, and the resulting enhancement of the learning process that is frequently seen as a perceived outcome for the student. Curry (2001) suggested that techniques such as the incorporation of protocols and guidelines for social interaction into the learning concepts of the online environment can be utilized to minimize the feelings of aloneness that affect many students. Similarly, Conrad and Donaldson (2004) pointed out that frustration of being isolated can be minimized by utilizing methods of communication, such as *Phases of Engagement*, which connect students to each other and to the instructor. By so doing, the online environment will fulfill the human desire for social interaction.

The importance of community to learning. The concept of learning communities has been discussed for over two decades (Caverly & McDonald, 2002). Research has clearly shown that functioning in a community can enhance the learning that occurs among community members (Hargis, 2005; Powers & Mitchell, 1997). Shea, Li, and Pickett (2006) highlighted the critical role that community plays in academic success and persistence in higher education. Moreover, Yuen (2003) asserted that a learning community can help individual learners "achieve what they cannot on their own" (p. 155).

As previously discussed, members depend on each other to achieve the learning outcomes for the course. Since the learning community is the vehicle through which learning occurs online, more attention needs to be paid to its development. Palloff and Pratt (1999) pointed out that "*In distance education, attention needs to be paid to the*

developing sense of community within the group of participants in order for the learning process to be successful" (p. 29). No one likes to be the only one contributing and sharing ideas on a discussion board; learners like to be involved in interaction with other students in their learning community (McMillan & Chavi, 1986). Needless to say, interaction is a critical component of any learning environment, whether it is a school classroom, a corporate training room, or an educational website. While students may respond differently to particular learning environments, effective learning involves the active participation of the students (Jiang & Ting, 2000; Picciano, 2002). Without the support and participation of a learning community, an online course can be less satisfying and less conducive to success.

In online learning communities, researchers have highlighted the significance of identity, presence, and trust. Gunawardena and Zittle (1997) used questionnaires and analyzed email exchanges for signs of presence. They found that social presence is a strong predictor of learner satisfaction in a technology-supported conference situation. Also, in his study of three postgraduate online learning groups, McConnell (2002) emphasized the importance of developing a sense of trust. He found that those groups with a high degree of trust actively supported each other, which was demonstrated by making every effort to listen and respond quickly, sharing work, and committing themselves to the group.

When interactions among community members are directed toward the purpose for which the community was formed, it is considered collaboration. Woods and Ebersole (2003) asserted that optimal learning outcomes are "directly tied to the establishment of

social networks among participants engaged in a collaborative learning enterprise" (p. 1). Such collaboration has been shown to be very important in the development of a learning community and in achieving the desired learning outcomes for a course (Palloff & Pratt, 1999; Yuen, 2003).

Building online learning communities. Brown (2001) described a three-stage process to community building in an online class: comfort, conferment, and camaraderie. Comfort refers to making friends online; while conferment(acceptance) of community is identified as "when students were part of a long, thoughtful, threaded discussion on a subject of importance after which participants felt both personal satisfaction and kinship"; and camaraderie, identified as requiring a "long-term or intense association with others involving personal communication" (Brown, 2001, p.18). Beginning a course by posting introductions and encouraging students to look for areas of common interest is always a good way to start (Conrad & Donaldson, 2004; Palloff & Pratt, 1999). Wegerif (1998) also investigated the idea of community conferment or sense of community in his study of a course delivered via an Asynchronous Learning Network (ALN). He noted that feeling involved in the community was vital to feeling successful in the course, and gives several recommendations for course design to maximize the social aspects of learning. These included overcoming differential access to the learning environment; encouraging use of a common language/tone; structuring the exercises to move from structured to open to allow familiarization with the environment and other students; creating opportunities for student-led activities; allowing time for reflection on learning and ensuring the platform used enables structured discussion to take place. Similarly, Palloff

and Pratt (1999) suggested that, to create online learning communities, instructors should not pose closed questions and dominate the discussion; they need to be flexible and allow the process to be learner-focused.

Rovai (2002a) had also written extensively on the sense of a learning community, and proposed that four elements characterize educational communities: spirit, trust, interaction, and learning. Spirit includes aspects such as bonding and friendship that impart a feeling of belonging to the student. Trust includes being able rely on the communications made by the other students and a belief that they want to support other members of the group. Interaction involves both work related and social communications, and can be driven by the instructor or by the group itself. Finally, the learning element provides a mutual goal in the community and group members grow to feel that their educational needs are being satisfied through active participation in the community.

Rovai (2002a) studied seven asynchronous learning network (ALN) courses and seven traditional lecture-based courses using his own 'Sense of Classroom Community Index' (SCCI). The SCCI examines the four elements of learning communities (spirit, trust, interaction, and learning) defined by Rovai; it consists of ten items per element rated on a five-point Likert scale. Rovai (2002a) found no significant difference in the feelings of community experienced by students on the ALN compared with the traditional courses. In addition, Rovai (2002a) discovered significant differences in scores on individual survey items indicating that student perceptions of learning and trust were higher in the online classes, whereas student perceptions of community membership was higher in the traditional classes, as indicated by items on the subscales, between the

online and face-to-face classes he studied. Rovai suggests that online instructors should particularly work to promote feelings of community among online students while supporting and building on their perceptions of learning and trust. The findings demonstrated that online learning has the potential to fulfill the four elements identified at least as well as face-to-face courses in educational communities. These results are encouraging for the proponents of online learning communities, which are delivery systems and facilitating structures for the practice of collaborative learning (Gabelnick, MacGregor, Matthews, & Smith, 1990).

Collaborative learning in online learning communities. Collaborative learning is an umbrella term for a variety of educational approaches involving learners "working in a group of two or more to achieve a common goal, while respecting each individual's contribution to the whole" (McInnerney & Robert, 2004, p. 205). Usually, students are working in groups of two or more, mutually searching for understanding, solutions, or meanings, or creating a product. Collaborative learning is a foundation of situated learning which was discussed at the beginning of this chapter. Situated learning discussions often refer to the idea of a community of practice, and in the situative perspective, learning is conceived as increasing participation in communities of practice (Lave & Wenger, 1991). This dictates that any group of people who work together to accomplish some activity, usually involves collaboration between individuals with different roles and experience (Clancey, 1997). Collaborative learning activities vary widely, but most center on students' exploration or application of the course material, not simply the teacher's presentation or explication of it. Collaborative learning represents a

significant shift away from the typical teacher-centered or lecture-centered settings in college classrooms. In collaborative learning settings, student learning is based on students' discussion and active work with the course material; teachers shift their role from knowledge transmitters to learning process facilitators; and collaboration does not occur unless learners are granted authority and are actively engaged in their learning activities (Tu, 2004).

Researchers (Johnson & Johnson, 2000; Palloff & Pratt, 1999) argued that a sense of community needs to exist in order for collaboration to occur. Collaboration between learners via the Internet encourages the building of unique online learning communities that unite learners and teachers all over the world. These learning communities could be local or global; different in number of participants and objectives; and diverse, linguistically, culturally, and academically. However, they all share the following specific features: common interests and self-regulation, informal ties and community identification. The dominating processes within the online learning communities are collaboration through peer-to-peer communication, trust building, and information and knowledge sharing.

Furthermore, Tu (2004) indicated that simply putting learners into groups does not guarantee ideal collaborative learning, and proposed four important issues that must be taken into account when integrating online collaboration into instruction: empowering learners, building communities, continuing support, and being patient (Tu, 2004). Empowering learners refers to that online learners should be responsible for their learning, instructors guide learners through different learning processes and accommodate different

learning styles by being facilitators (Dickstein & McBride, 1998). Humans learn through rich social interaction in a community (Tu & Corry, 2002); making connection with other learners and instructors enriches the learning experience. Continuing support in intellectual, technical, social, mental, and emotional aspects is required in effective collaborative learning (Tu, 2004). The constant support is time-consuming, but it is a way to engage learners in an enriched learning experience. Being patient is an important issue to both instructor and student for the development of a community, especially in a technology-based collaborative learning environment which requires more time to develop online social interaction (Tu & McIsaac, 2002; Walther & Burgoon, 1992).

Conrad and Donaldson (2004) stated that "collaborative acquisition of knowledge is one key to the success of creating an online learning environment. Activities that require student interaction and encourage a sharing of ideas promote a deeper level of thought" (p.5). Community building efforts seem to be a promising approach to enhancing the quality of collaborative learning environments and distance courses.

Summary

The literature review presents information about the emergence of online education, adult learners' characteristics and learning approaches, the conceptual framework of this study, and the three factors that impact the online learners, namely, importance of students' online experience, motivational attributes, and the sense of learning communities. Relevant and related literature on online learning point to three central themes: students' perceptions about the quality of online learning, their motivation attributes, and their sense of community in an online environment. These three factors

have been found to promote meaningful, active, engaging, and effective online learning. Although comparison of these factors have been made between face-to-face classroom groups and distance learning groups, the way students perceive their online learning within a distance learning group is still largely unknown. More specifically, the manner in which these factors interact with each other has not yet been investigated. Educators will be better equipped to design and deliver effective instruction online by understanding students' perceptions of these three factors.

The goal of this study, therefore, is to contribute to the literature by investigating students' perceptions of online education related to the overall online learning experience, motivation for learning, and sense of learning community. The methodology that will be used in this study is described in the next chapter.

CHAPTER III

METHODOLODY

Research Approach

The purpose of this study was to investigate graduate students' perceptions of online education in relationship to the quality of learning, their own motivational influences, and the concept of membership in a learning community. Bogdan and Biklen (2003) stated that qualitative methods are more suitable than quantitative methods in discovering meanings which are not "easily handled by statistical procedures" (p. 2) "If you want to know about the process of change in a school and how the various school members experience change, qualitative methods will do a better job" (p.38). Indeed, the study was to explore students' personal views of the perception, attitudes, and beliefs about an online course, learning environment, academic achievement, motivational factors, and students' interactions with each and with their instructor. This study focused on three questions:

1. How do students enrolled in an online course perceive their learning experience?
2. How do students enrolled in an online course think about their motivation to learn in that environment?
3. How do students enrolled in an online course think about their membership in an online learning community?

Qualitative methods enabled the researcher to describe and analyze people's individual and collective social actions, beliefs, thoughts, and perceptions (McMillan &

Schumacher, 2001) in an in-depth level of a phenomenon in its natural context and from the perspective of the participants involved in the phenomenon (Gall, Gall, & Borg, 2003). Merriam (1988) states that qualitative case study "is an ideal design for understanding and interpreting observations of educational phenomena" (p. 2). She believes that what makes qualitative case studies "in *education* is their focus on questions, issues, and concerns broadly related to teaching and learning. The setting, delivery system, curriculum, student body, and theoretical orientation may very widely, but the general arena of education remains central to these studies" (p. 27). Merriam (1988) also states that quantitative data from surveys can be used to support findings from qualitative data, while qualitative case studies rely "heavily upon qualitative data obtained from interviews, observations, and documents" (p. 68). Based on the research questions and the desire to understand in greater detail the students' perceptions, a qualitative case study approach with limited quantitative data was used for this study. A survey, interviews with the participants, and observations of the learners' participation in the online course were conducted to address the research questions.

Pilot Study

Researchers (e.g., Gall et al., 2003) point out that a successful study is supported by a prior pilot study. Hence, a pilot study was conducted one month prior to the end of semester interviews. The pilot study consisted of interviews with three former students who took the same course in previous semesters. All three students are international students. One of these three doctoral students took the course four years earlier, and the

other two students took the course two years earlier. These three students were selected among the students who took this course online.

A guided conversational approach (Rubin & Rubin, 1995) was used for the interviews with occasional prompting when needed. Interviews were conducted at a site designated by the students; two were conducted at the students' homes and one was conducted over the phone because the student was living oversea. The duration of each interview ranged from 45 minutes to one hour in length. In addition, emails and phone conversations were used to answer follow-up questions resulting from the analysis of the transcribed interviews.

The results of the pilot study included themes based on the experiences students had, their sense of their motivational factors, and community membership when they were enrolled in the online course. Overall, these participants were satisfied with their online experience; were comfortable with the online delivery approaches; were happy with the convenience the online course offered; thought online discussion was more in-depth because they had more time to reflect on the questions; felt a sense of learning community; and all believed that the instructor had planned the course very well. They could not think of anything to improve the course.

Course Selection

Since the purpose of this study was to investigate graduate students' perceptions of online education, the researcher purposefully selected an online, doctoral level course. The selection of the course was made based on multiple criteria. First, the course had to

be offered completely online. Secondly, the course had to be a graduate-level course. As a result, an online doctoral level course was selected.

The title of the course selected was *Curriculum Theory and Development*, which was a 3-credit hour course offered to students who were pursuing a doctoral degree in education. This course could have been taught face-to-face or online. It was delivered online in the Fall semester of 2008. The purpose of this course was to assist advanced graduate student in viewing, analyzing, and interpreting the curriculum and instruction program of an educational institution and in developing skills for implementing change.

This online course was designed by the instructor. It used a course website, an email listserv, and a Wetpaint discussion site as tools. The course website was created by the instructor and hosted by the university. The organization of the course website was represented by the Table of Contents hyperlinks, which included Calendar, Course Description, Department Mission, Rationale, Essential Outcomes, Course Requirements, Topics, Grading Policy, Successful Learning in the Online Environment, Basic Textbook, Supplemental Textbooks, Some Helpful Online Resources, and Bibliography (see Appendix A). Two of the more important links on this site were Course Requirements and Topics. The students discussed one of the major topics of the course every two weeks. Students could click that link to obtain information for that topic, such as: introduction, objectives, readings, and the activities. The email listserv was used to deliver general course information to the group such as announcements and reminders of current activities. Besides individual assignments, students were required to post a minimum of three unassigned responses each week to the discussion comments and assignments of

classmates. They were also encouraged to post a question or anything related to the topic of focus for that week. The Wetpaint discussion site was used to carry on *classroom* discussion with each other.

Wetpaint is a free wiki website that allows users to build a virtual community. The instructor created a discussion site with Wetpaint for this course, but the site was not open to the public. Only invited members could participate and observe the work. The instructor invited all students to join the discussion site and create their personal profiles. After creating a personal profile, a student could navigate the course page and respond to the thread questions and other students' postings. Students could find current thread discussion questions on the *Home* page, and *Discussion Forum* displayed all discussion postings. Unlike the email listserv which delivered messages to the group, students could send messages to each other through the course discussion site by using the *send message* feature under *Members* profile (see Figure 4).

Participant Selection

Participants were doctoral students enrolled in *Curriculum Theory and Development* in Fall 2008. After the researcher received approval for conducting this study, which came through the University of Northern Iowa's Institutional Review Board (IRB), the instructor announced the study to the class at the beginning of the semester. A letter of invitation to participants and a survey were sent to all students enrolled in the course via the course listserv to help students make an informed decision about whether or not to participate. Students who were willing to participate in this study contacted the researcher directly. Four students completed the survey and contacted the researcher expressing their

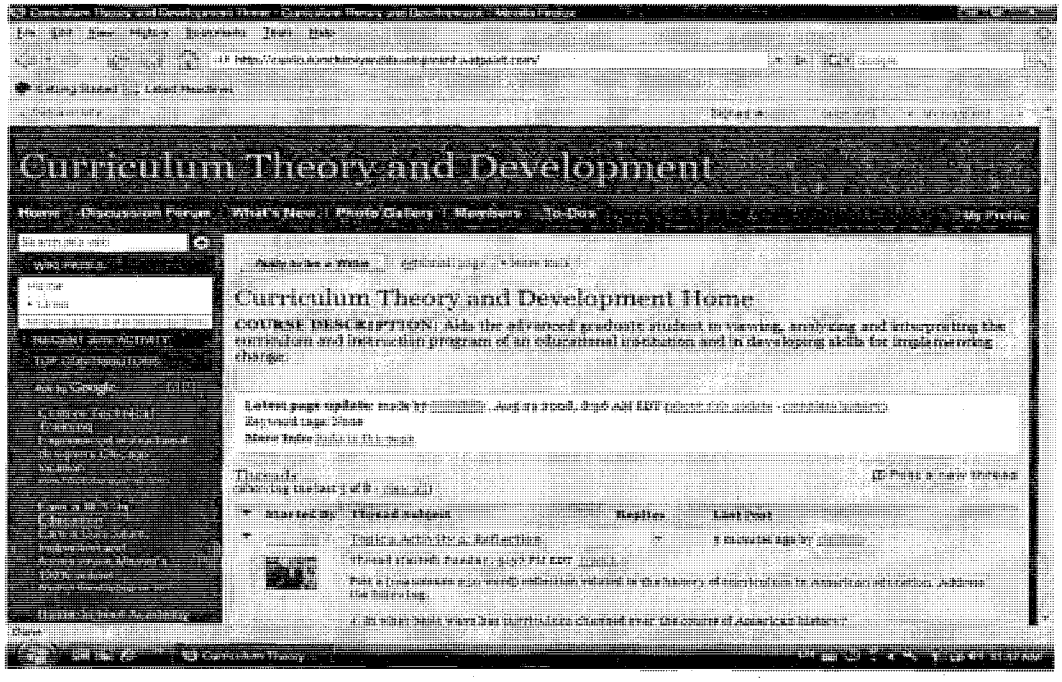

Figure 4. Wetpaint Discussion Homepage.

interest to participate in the study. Three participants taught full time, and one participant worked as a graduate assistant at the university. In addition to the students, the instructor was one of the participants of this study because his interaction with students was also observed and analyzed. The purpose of the survey was to gain general knowledge of the participants' perceptions about online education. Interviews with all participants were conducted separately and observations of participants' interactions with other students in the online course and with the instructor were also conducted. The participants' demographic data is displayed in Table 2.

Table 2

Participants Demographics

Pseudonym	Gender	Occupation	Years in The Program	Intensive Study Area
Anne	Female	College Instructor	1st year	Curriculum & Instruction
Linda	Female	Adjunct Instructor	1st year	Curriculum & Instruction
Scott	Male	Middle School Principal	1st year	Educational Leadership
Eva	Female	Graduate Assistant	1st year	Curriculum & Instruction

Protection of Participants

The researcher assured participants that all information they shared would remain confidential. Information obtained during the study which could identify participants was kept strictly confidential. Follow-up questions via e-mail were copied and saved in a Word document, the original messages were deleted afterwards. Collected data were stored in a password-protected computer and were accessible only to the researcher and the faculty advisor, and were destroyed after the data were analyzed. Interview tapes were transcribed and used for thematic analysis. Modifications of participants' personal information were made for covering their identities more after concerns raised by two of the participants.

Data Collection

The research design for this study was primarily a qualitative exploratory case study with limited quantitative data, using a number of data collection instruments to obtain richer and in-depth exploration, analysis, and interpretation (Glesne, 2006) of perceptions of students who were enrolled in an online course. This study did not seek to generalize the findings from the specific case, but to provide in-depth descriptions of these unique students' perceptions in one unique class (Myers, 2000). Students' perceptions of overall online learning experience, motivation factors, and sense of the online learning community were investigated. Data were collected from a survey, online class observations of interactions among students and the instructor, and from interviews with participants. The course was offered completely online. The researcher was added to the course listserv and invited to join the Wetpaint discussion site as a regular course member but remained as a complete observer (Junker, 1960) by not participating in any of the activities in the online course.

At the beginning of the course, the researcher introduced herself to the class in the discussion site before the instructor announced the study. A letter of invitation to participants (Appendix B) and a survey (Appendix D) were sent to all students via the course email listserv to help students make an informed decision about whether or not to participate. Students who were willing to participate were asked to contact the researcher directly. The instructor of this course was purposely not informed of who the participants were. Consent forms (Appendix C) were mailed to each of the participants to obtain their signature. A written statement for all participants stating they were guaranteed anonymity

was provided at the beginning of procedure, and at the outset of each interview. A survey, in-depth interviews and online posting interaction observation were conducted, and follow-up questions were sent to the participants via email. The goal of using these methods was to "improve understanding of social and cultural phenomena and processes rather than to produce objective facts about reality and make generalizations to given populations" (Meho, 2006, p. 1284).

To elicit the students' perceptions about the quality of the online learning experience, motivational beliefs, and sense of learning community, adapted versions of existing reliable instruments were used. The survey (Appendix D) that was used in this research was based on a combination of reliable instruments developed through the literature review. A series of guiding questions of the in-depth interview (Appendix E) administered at the end of the course were developed in correspondence to the survey questions. A weekly participation tracking form (Appendix F) was developed to observe the participates' course interaction by adapting existing online assessment rubrics (e.g., Nielsen & Vandervelde, 2008; Porto, 2006).

Survey

Survey is an appropriate type of instrument to use when the study is non-experimental, as it provides a sense of privacy for the participants (Salant & Dillman, 1994). The survey used in this study included quantitative data and open-ended questions for qualitative data gathering. The survey was developed in an effort to gain background information on participants' perceptions about the online learning experience, motivation factors, and sense of online learning community.

The survey developed for this study was based on a combination of existing validated instruments. The adapted instruments included an Online Learning Survey developed by Leonard and Guba to analyze student perceptions regarding online learning, Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich and De Groot, Eastin and LaRose's Internet Self-efficacy Measurement Scale, and Rovai's Classroom Community Scale. The Online Learning Survey was developed in 2001 by Leonard and Guba to obtain data and analyze students' beliefs and perceptions about taking online courses. The survey consisted of 43 items examining students' perceptions related to online learning in several categories including instructional methodology and student performance, technology, administrative issues, course evaluation, and a section for student demographic information. A 5-point Likert scale was used to rank the responses and open-ended questions were asked to learn more about students' beliefs on taking online courses (Leonard & Guba, 2001). The Motivated Strategies for Learning Questionnaire (MSLQ) is a self-report instrument designed to assess college students' motivational orientations and their use of different learning strategies for a college course. The MSLQ is based on a general cognitive view of motivation and learning strategies. There are essentially two sections to the MSLQ, a motivation section which consists of 31 items and a learning strategies section which consists of 50 items. The items are scored on a 7-point Likert scale from 1 (not at all true of me) to 7 (very true of me). Relatively good reliability in terms of internal consistency and reasonable predictive validity of the MSLQ were shown (Garcia & Pintrich, 1995; Pintrich & De Groot, 1990). The MSLQ was designed to ascertain self-regulation skills in the context of the

traditional classroom. As a result, based on the nature of the online learning environment, a questionnaire measuring students' belief of Internet self-efficacy was also adapted. Internet self-efficacy was developed by Eastin and LaRose in 2000. The scale consists of eight items that tap into beliefs regarding completion of general online tasks (Cronbach's $\alpha = .91$ which indicates excellent reliability for the scale). A Likert-type agree-disagree scale was used to assess the participants' confidence that they could use the Internet in each of the ways specified, where 7 corresponded to "strongly agree" and 1 to "strongly disagree." The Classroom Community Scale developed by Rovai consists of 20 items, in which 10 items are related to feelings of connectedness, and the other 10 items are related to feelings regarding the interaction within the community to construct understanding and the extent to which learning goals are being satisfied within the classroom setting. Excellent reliability for the connectedness subscale (Cornbach's $\alpha = .92$) and good reliability for the learning subscale (Cornbach's $\alpha = .80$) were indicated (Rovai, 2002b).

The survey consisted of four sections with a total of 82 items (see Table 3). Some of the items used a Likert-type scale and some were open-ended questions to allow respondents to provide in-depth answers. The first section (questions 1 to 7) asked respondents for demographic information which assisted the researcher in developing an accurate picture of the participants. The second section contained items that focused on the participants' initial perceptions toward online learning and their attitudes about the online course they were taking. Leonard and Guba's (2001) questionnaire on online teaching and students' perspectives on distance learning was adapted. The third section was comprised of questions related to motivational factors in online learning. Pintrich

and De Groot's (1990) MSLQ, and Eastin and LaRose's (2000) Internet self-efficacy measurement were adapted to access students' motivational orientations and their use of learning strategies in the online learning environment. In the fourth and final part of the survey, Rovai's (2002b) instrument of measuring classroom community was adapted and modified to assess participants' perceptions about the sense of the online learning community.

Table 3

Sections of Survey Items

Section	Survey Items
1. Demographic Information	1 - 7
2. Online Learning Experience	8 - 30
3. Motivational Factors	31 - 62
4. Sense of Learning Community	63 - 82

In-depth Audio-taped Interviewing

"Interviewing is the preferred tactic of data collection when...it will get *better* data or *more* data or data *at less cost* than other tactics!" (Dexter, 1970, p. 11). The majority of interviews were conducted in participants' offices on site because of the comfort level and ease it provided the participants. The participants' offices were comfortable and provided both the participant and the researcher a relaxing environment in which to

engage in friendly conversations about their perceptions and feelings about online learning. One participant lives two hours away from the researcher's residence, scheduled interviews had to be postponed several times due to hazardous weather conditions. Therefore, the researcher and participant agreed to conduct the interview over the phone, and the phone interview was recorded.

Tape recording and note-taking are two of the ways to record interview data (e.g., Bogdan & Biklen, 2003; Merriam, 1998). Merriam (1998) stated that this practice of recording preserved the actual views of the participants. In this study, interviews were recorded by the researcher using a personal, digital recorder. The researcher did not take notes during the interviews, because not everything could be recorded and note-taking might distract the researcher's attention from what the participants are saying. Interviews were transcribed and reviewed by the researcher. Transcriptions of all interviews were personally reviewed for accuracy and comments by the participants. Transcripts were read and re-read multiple times by the researcher for both accuracy and reflection on data analysis.

The goal of interviewing is to understand how the person being interviewed thinks; as a result, a loose interview guide is helpful (Bogdan & Biklen, 2003). A set of initial questions were useful to keep the dialogue progressing and to provide the researcher the ability to redirect conversations back to the focus of the study. Therefore, a guided conversational approach was used for the interviews. The interviews in this study were open-ended, but were guided by a series of initial questions that developed to guide the conversation with further questioning evolving from this open-ended dialogue (Appendix

D). This format allowed the researcher to prompt the participants to talk about their feelings about online education; meanwhile, the researcher was able to ask more questions based upon the participants' responses. The interviews were purposely administered at the end of the semester so that participants would have sufficient experience in the course on which to reflect and to make comments about their online learning experience. Each interview ranged between 45-60 minutes in length. Interviews were concluded when interviewees began to provide little or no additional information regarding the perceptions of online education. Additional questions were sent to the participants after analysis of the transcripts for further investigation.

Online Course Interaction Observation

Interviews are a primary source of data in qualitative research; so are observations. Observations may lead to understanding the context and record behavior as it is happening. Observers see things firsthand and use their own knowledge and expertise in interpreting what is observed rather than relying upon once-removed accounts from interviews (Merriam, 1998).

In addition to the survey and interviews, the researcher audited the course and had the opportunity to observe the participants discussions and response postings, course assignment responses, and online interaction with other students and the instructor. During the semester, the researcher was an "observer" (Merriam, 1998, p. 101) in the class. Adler and Adler (1994) described this format of observation as "observe and interact closely enough with members to establish an insider's identity without participating in those activities constituting the core of group membership" (p. 380). The

researcher observed the interaction patterns between the participants and other students, and the instructor, and took notes of discussion and response postings, and assignments. Participants' assignments were forwarded to the researcher after their final grades were submitted to avoid being identified by the instructor.

The researcher developed an online discussion tracking form which was used to gather information about participant interactions with other students and the instructor as she observed the online class interaction. The tracking form adapted the essential elements from Nielsen and Vandervelde (2008) and Porto's (2006) online activities assessment rubrics. The rubric analyzes the participants' discussion postings and assignments from different angles, from number of postings, to nature of the interaction, to quality of the discussion postings. The purpose of online class interaction observation was to validate the data collected from the survey and from the interviews.

E-mail Follow-ups

Email was used to assist data collection and data analysis in this study. Additional questions were sent to participants via email throughout the semester to help interpret, clarify, explain, elaborate, or corroborate data obtained from the survey, in-depth interviews, and class interaction observations. Due to the nature of indirect interaction in email exchanges, there is always the possibility of miscommunication and misinterpretation. Young and others (1998) pointed out that it is very important and necessary to minimize participants' confusion and eventual frustration by summarizing the participants' responses and returning them to the participants for verification. The researcher made every effort to minimize misunderstanding throughout the process. To

ensure the participants' confidentiality, responses of follow-up questions via e-mail were copied and saved in a Word document; the original messages were deleted afterwards.

Data Analysis

Qualitative analysis allows the researcher to become familiar with the phenomena being studied. This study was primarily a qualitative exploratory case study with limited quantitative data to obtain richer and in-depth exploration, analysis, and interpretation (Glesne, 2006) of perceptions of students who were enrolled in an online course. Analysis of the data of this study involved transcribing information obtained through survey, interviews, and data from online course interaction observation, to triangulate the interpretations from the survey and interview data. The purpose of data analysis is understanding communication (Merriam, 1998) and the process is meaning searching (Hatch, 2002). "Qualitative analysis should be done artfully, even playfully, but it also demands a great amount of methodological knowledge and intellectual competence" (McMillan & Schumacher, 2001, p.464). Qualitative data analysis is primarily an inductive process of organizing the data into categories and identifying patterns (relationships) among the categories (McMillan & Schumacher, 2001). The qualitative data of this study were analyzed using Bogdan and Biklen's (2003) systematical meaning searching process: "working with the data, organizing them, breaking them into manageable units, coding them, synthesizing them, and searching for patterns" (p.147). In other words, data were analyzed through examining constructs, themes, and patterns from the survey, interviews, and online course participation observations. Categories and

encoding based on recurring themes, patterns, and topics were entered into a word processing document (Bogdan & Biklen, 2003).

Survey

The data analysis process in this study began as soon as the surveys were submitted. This was done in accordance with the suggestion of qualitative researchers (e.g., Bogdan & Biklen, 2003; Merriam, 1998) who instructed that data analysis should be ongoing, taking place at the same time as data collection. The survey data was intended to gain background information on participants' perceptions about the online learning experience, motivational factors, and sense of the online learning community. Instead of using the Statistical Package for the Social Sciences (SPSS) software program to analyze the survey data collected from four participants, the researcher interpreted the data qualitatively. The researcher summarized the responses into tables and converted the survey responses into written text. The researcher first carefully read each response from each participant, then grouped the responses into categories and themes that were related to the literature review and research questions. The researcher generated category codes and labeled data that were related. The next step the researcher did was to list ideas or diagram relationships. Last, the researcher eliminated, combined, or subdivided coding categories and looked for repeating ideas and larger themes that connected codes.

Interviews

Individual interviews with participants were conducted at the end of the semester. Interview data were tape recorded and transcribed by the researcher. The transcripts were saved in Word documents. The researcher then used whole-text analysis methodology to

analyze the interview data. Whole-text analysis forced the researcher "to make judgment about the meaning of contiguous blocks of text" (Denzin & Lincoln, 2003, p.274).

Coding of data. Whole-text analysis was conducted through coding the data. Coding is the process of taking the data from its raw form and clustering commonalities along the data. Coding helped the researcher find relationships and themes and put them into categories (Hatch, 2002). Codes developed were critically examined by the researcher to provide a detailed picture of the phenomena being studied. The codes did not just come from the literature review or the research questions; they were from the participants' responses.

Analysis of participant data. Whole-text analysis was the method used to analyze the data collected. Whole-text analysis is the process of examining portions of text through assigning codes. Data were coded according to emerging subcategories, categories, and themes (Denzin & Lincoln, 2003). The research questions and theoretical framework were used to guide this study throughout the analysis stage.

Once every participant completed the interview, coding began. The researcher employed a three-tier coding scheme to assist with the organization of thoughts, data, and analysis (Strauss & Corbin, 1990). Tier one coding consisted of taking the raw data and organizing the data into broad, unrelated, topics. To accomplish this, interview transcripts were printed from word processing documents and physically cut into sections and sorted into piles according to topics. All of the related topics were put in the same pile, and coded accordingly. Throughout this process, the piles were often being changed due to

rewording of codes or reassigning codes. Through this inductive process, codes were collectively created to express the intent of the participants.

Tier two coding was emerging categories. The data was analyzed to determine categories, themes, and relationships. Individual codes were analyzed and sorted to represent categories and further formed themes. This process continued throughout the coding phase. Tier three coding was finished by contrasting and comparing the categories to the theoretical framework and the research questions. The theoretical framework used for this study was social cognitive learning as a foundation, expanded with self-regulated learning and situated learning. Again, the research questions of this study were:

1. How do students enrolled in an online course perceive their learning experience?
2. How do students enrolled in an online course think about their motivation to learn in that environment?
3. How do students enrolled in an online course think about their membership in an online learning community?

Guided by the research questions, coherent themes emerged, and the themes were carefully evaluated. The re-correlation was to make sure the themes were appropriately aligned with the research questions.

Online Course Interaction Observation

The purposes of the online course interaction observations were to validate the participants' responses from the survey and interviews based upon their participation in

the course through their discussion, response postings, and assignments; and to determine pattern for class interaction. The researcher observed participants' discussion postings, and used a Weekly Participation Tracking Form as a tool to analyze their participation (Appendix F). The researcher synthesized the data weekly. *What*, *When*, and *How* of their interaction were examined, follow-up questions were sent to participants for *Why*.

Validity and Reliability

Patton (2002) states that validity and reliability are two factors qualitative researchers should be concerned about while designing a study, analyzing results, and judging the quality of the study. Validity and reliability of this study were shown through the techniques used in this study: (a) the use of multiple methods (triangulation) that included interview, survey, and online interaction observation during data collection and data analysis; (b) providing detailed descriptions of the participants, and their beliefs and perceptions of online learning; (c) conducting a pilot study to test interview protocols, and therefore led to modification of the interview protocols; (d) participant verification of data collected and emerging findings for accuracy and comments; and (e) peer debriefing. Throughout the study, multiple peers provided helpful feedback on analysis and interpretations that added value to this study's validity and reliability (Eisenhardt, 1989; Lincoln & Guba, 1985; Mitchell, 1993; Robson, 1993; Yin, 1994).

Summary

This research study was to investigate graduate students' perceptions of online education regarding their online experience, motivation, and sense of the learning community. The research approach used for this study was qualitative exploratory case

study with limited quantitative data. This study did not seek to generalize the findings from the specific case, but to uncover the graduate students' perceptions and beliefs of online learning experiences in one specific class. The researcher believes that this study will give readers insight into understanding how learners perceive the online learning environment that may assist course designers to identify ways in developing effective online learning experiences. This chapter discussed the methodology used, data collection, and data analysis methods. The next chapter will present findings of the survey and findings of interviews with participants.

CHAPTER IV

RESULTS

This study investigated graduate students' perceptions of online education. More specifically, this study explored how a group of graduate students perceived their online experiences, motivation attributes, and their sense of membership in a learning community in a specific course. To understand the participants' perceptions and beliefs, it is vital to understand the participants. Thus, this chapter begins with personal contextual information which gives a rich description of each participant and provides insight to the personalities that may have influenced the participants' perceptions of online learning.

The next section of this chapter presents two sources of findings of the research: survey data and interview data. For the findings from the survey, the data were analyzed using the preset themes developed as the survey was developed. For the findings from the interviews, themes inductively were established in the analysis of the interview transcriptions. Findings from the survey and interviews are reported simultaneously. The analysis was guided by the social cognitive learning framework and expanded by concepts from self-regulated learning and situated learning. Findings from the follow-up questions and online course interaction observations are included to triangulate the interpretations from the survey and interview data.

Personal Context of Participants

The personal background information of participants was gathered from the survey, the personal introduction in the discussion postings, and through interviews. Hayes (2006) indicated that gaining background information provided a better perspective of

participants' perceptions and internal beliefs regarding education and online learning. The data shows that the participants had some common perceptions regarding online learning, while each experienced the online course differently.

Anne

Anne is a busy wife and mother of three daughters. She is busy running to her children's events and likes to find time to garden in the summer. She admitted that family is always the first priority for her. Anne is currently a full-time instructor at a midwestern university and a doctoral student. She is majoring in Curriculum and Instruction, and this was her first semester in her doctoral program. The reason that she took this online course was because it was required for her doctoral program, and it was the only format in which the course was available.

She has a master's degree in reading and language arts from a midwestern university. Her first job was as a school teacher for 18 years. Then, she taught, explored, and develop curriculum at an experimental school. During the days at that school, she realized that it was important to develop a strong classroom community based on mutual respect between teachers and students; she questioned herself on whether she was teaching her students tricks to get to the right answer, or was she enabling them to construct a true understanding of concepts. She, as a result, began to look at curriculum differently, more as big ideas rather than isolated bits of knowledge. Now, she is an instructor in a department of education at a midwestern public university.

Busy is the word that describes Anne's life. At the beginning of the interview, she told the researcher: "On top of the 32 papers I haven't graded, I am writing a grant." It

was an early morning on a day that the university just re-opened after a shut down due to severe weather. During the interview, phone calls from family members and from colleagues showed how busy Anne was.

Communicating with Anne is very easy. The interview with her was scheduled in early morning in her office. However, on the day of the interview, it had to be postponed due to the severe weather. The researcher sent an email to her to see if she could give a short block of time for the make-up interview. She responded within 30 minutes and was willing to arrange time for the interview on the same day. Anne was kind and friendly. She erased the researcher's anxiety as the interview began: "Nervous with me? No! We are just like friends." From the interview observation and email responses from Anne, it was not hard to find that she is passionate about teaching and learning. She was serious about every response she gave to the interview questions; she paused and thought hard. This suggests that she was trying to provide thoughtful insight to the questions.

Linda

Linda just received her master's degree in Educational Psychology. She is a part-time adjunct in department of education, teaching two sections of elementary curriculum. She also works part time in the international student teaching department. Her teaching experience goes beyond the United States. Linda and her husband spent 11 years overseas teaching 2nd, 5th and 6th graders at International Schools in Egypt, Saudi Arabia, and Indonesia.

While waiting in the main office for Linda's interview, the researcher noticed that Linda was busy meeting with her colleagues. She dressed casually and neatly, and a smile

was always on her face. Throughout the interview, her voice was calm and clear, and she was always considerate and understanding. She was the last one who decided to participate in this study. She said: "Sorry, I am a little bit late. But I think that every one needs help; I may need other's help in my research some day." This is her first class in the doctoral program. However, she has not declared her intensive study area yet; she believes it would probably be Curriculum and Instruction. She took this online course because she thought it was convenient. Linda said that she knew the professor, and that she "accidentally signed up for it by just mentioning to the professor I was considering it." She indicated that this was her first online course, and she is not much of a computer person as well. From the course, she hopes to gain a better understanding of how curriculum is developed and the role teachers play in using the curriculum to meet the needs of all students.

Linda has two young children who have unique challenges. She said that to people who don't know her children, that sounds a bit daunting. But she believes that they are fantastic kids and adorable, most of the time. No wonder her children take a lot of her time. She mentioned several times in the interview that "Family is always my priority."

Scott

Scott is the only male among the participants. He obtained a bachelor's degree in English education from one of Iowa's universities. Six years later, he graduated with a master's degree in administration from a university in Wisconsin. Also, he recently completed a two-year cohort program to obtain his superintendency certification. Scott just began his doctoral journey, and this was his first online course. His intensive study

area is Educational Leadership, so this online course is not a required course in his program. He took this course because he is "interested in learning more about curriculum theory, development, and implementation as a support for my work duties." Scott hoped this course would reaffirm what he had learned on the job so far and challenge him to think better and deeper about the work yet to do.

Scott is starting his third year as a middle school principal and K-12 curriculum director for a school district in central Iowa. Prior to that, Scott was the associate middle school principal for a middle school in another Iowa city. He began his teaching career as the middle school computer applications teacher for both middle schools there, and then taught for five years in another middle school as an eighth grade language arts teacher.

Scott is happily married with three young children. When he talked about his educational journey, he asked, "Is now a good time to mention I have an amazingly supportive wife?" He enjoys reading, writing, playing with the family, and athletics.

From the email responses, interview conversation, and discussion postings, it is not hard to tell that Scott is a straightforward person. His responses were quick, straight forward, and always to the point. Scott is the only participant the researcher did not interview face-to-face. Because Scott lives a 2-hour drive away from the researcher's residence, he offered to conduct the interview at a place where he attended a face-to-face course, and the location is close to the researcher's residence. However, severe weather made travel hazardous on that day; he was not able to attend the last session of the class. After that, the interview had to be postponed several times due to the weather conditions. The researcher suggested conducting the interview over the phone. Scott responded

within 20 minutes almost all the time; this time was no exception. He responded to the email request quickly and he agreed. The interview was conducted while he was at home on winter break. There was no background noise on his side and no distractions during the interview. Scott spoke gently, slowly, and clearly. The researcher felt that Scott was trying to make sure that his voice was recorded clearly. The interview went smoothly.

Eva

Eva was the first participant to be interviewed. She just completed her second master's degree in Instructional Technology, which she worked on part-time for the last four years. Eva had a variety of work experiences. Her previous work experience includes serving as the business administrator for a church and school in a midwestern state, and teaching economics at a 4-year liberal arts college. This semester, she returned to the classroom full-time in Curriculum and Instruction as a doctoral student and graduate assistant where she will be working with department faculty on instructional design and technology projects. She had worked with the instructor in the past semesters with another graduate class which is where the use of the Wetpaint discussion site came from in this online course. She has a strong, previous relationship with the instructor. This online course was required in her program of study and only offered as an online course. This was the first online course she has taken in the doctoral program, but she has taken two online courses when she was doing her master's. So, this course was her 3rd online course.

On the day of interview, the interview had to be rescheduled due to the possible severe weather conditions that could make travel hazardous. But when the weather

became a little better, she made the trip to her office, and the interview was conducted as planned. She said, "The weather won't be any better. I came for the interview. Otherwise, I would not be available until next month. So, I think I'd better come." At the end of the interview, she said, "Let me know if you have any questions. You know how to find me." It was not difficult to conclude that Eva has a kind and caring personality. Meanwhile, Eva is an energetic and expressive woman. Her speech was a little fast and a bit loud. With a nervous start to the interview, talking with Eva quickly became comfortable as she enjoyed talking about education, and sharing her experience and knowledge in teaching and learning. She is very interested in adult learning theory, especially best practices for instructional strategies with adults in e-learning environments. This is her starting point for developing a dissertation topic. One topic that she would like to explore is how curriculum development has been impacted by e-learning technologies. No wonder, Eva is very familiar with integrating technology into education. She responded to the researcher's questions quickly and thoughtfully throughout the semester; she forwarded her email interaction messages with the instructor and classmates promptly.

Findings

Findings of this study involved information obtained through survey and interviews, and data from online course interaction observations, to triangulate the interpretations from the survey and interview data. Data and interpretations were sent back to the participants for feedback and verification to increase validity of the study (Foreman, 1948; Guba & Lincoln, 1981).

Survey

The survey was conducted at the beginning of the course to learn about participants' general perceptions of online education based upon their experiences with the online course they were taking. The survey was sectioned into four parts. Part one included questions that gathered demographic information of the participants. Part two of the survey included questions asking about the participants' overall experience in this online course, which was related to research question number one. Part three of the survey consisted of answers to research question number two which was about how participants perceive their motivation to learn in the online environment. The last part of the survey, part four, was aligned to research question number three asking about participants' sense of an online learning community.

Interviews

The interviews were purposely administered at the end of the semester so that participants would have sufficient experience in the course to reflect upon and to make comments about their online learning experience. Each interview ranged 45-60 minutes in length. To understand how the participants perceived their online learning, a guided conversational approach was used for the interviews. A series of initial questions that the researcher developed guided the open-ended conversations (Appendix D).

The findings of this study were directly related to the three research questions of the study; and analyzed through the lens of social cognitive learning as a foundation, and expanded by the concepts from self-regulated learning and situated learning. For the results of this study, each question is addressed separately, and findings from the survey

and interviews are reported simultaneously. In addition, findings from the follow-up questions and online course interaction observations are included to triangulate the interpretations from the survey and interview data. Again, the three research questions are:

1. How do students enrolled in an online course perceive their learning experience?
2. How do students enrolled in an online course think about their motivation to learn in that environment?
3. How do students enrolled in an online course think about their membership in an online learning community?

Research Question 1

How do students enrolled in an online course perceive their learning experience? During this analysis, the focus was on the environmental factors as illustrated by Bandura's (1986) social cognitive theory. While searching to answer this question, the themes that emerged included: (a) reasons for taking this online course, (b) students' perceptions of instructional method of this course and their performance in this course, (c) students' comfort level of technology used, and (d) students' evaluation of this course.

Reasons for Taking Online Course

Anne, Linda, Scott, and Eva are doctoral students, but in different intensive study areas. Question 26 of the survey, which was conducted at the beginning of the semester, was an open-ended question that asked about why they decided to take this online course. There was a variety of reasons provided. Some responses, such as Anne's and Eva's,

indicated that it was a required part of the doctoral program. Scott said he took the course as an elective. On the other hand, Linda has not declared her intensive study area of her doctoral study, so her reason for taking this course was different from the others. She enrolled in this course because of its convenience. Here is a selection of the participants' responses:

> Anne: It was required for my program and it was the only format in which it was available.
>
> Linda: [It was] convenient and I knew the professor.
>
> Scott: I am interested in learning more about curriculum theory, development, and implementation as a support for my work duties.
>
> Eva: The online courses that I have taken have only been offered as online courses. And some of the courses are required courses or electives courses in my program of study.

Instructional Method and Student Performance

This theme reveals participants' perceptions of their performance and the instructional features used in this course. Three sub-themes emerged when analyzing the results: (a) time required for this course, (b) effectiveness of the online course, and (c) interactions with the instructor and students.

Time spent on the course. Results from the survey conducted at the beginning of the semester indicated that the number of hours participants would devote to this online course ranged from 5 to 10 hours per week (see Table 4), with an average of 7.8 hours. The results from interviews conducted at the end of the course and online course interaction observations throughout the semester support the survey findings. There was no fixed number of hours that they spent on this online course; the amount of time varied,

and this primarily was related to their busy family and work life. Anne indicated that she spent more time on this course before her workload got very heavy; but towards the end of the semester, Anne said, "I would devote a good portion of one day and then part of another to it, in addition to all the reading." Linda said the amount of time she spent on this course varied from week to week, spending 4, 8, and sometimes 10 hours. Some weeks, when she had more time, she spent an average of about 8 hours. In other weeks, when she had much more going on, she spent about 4 hours total doing only the textbook reading, but not the other additional readings, such as the online articles. Eva indicated that she spent 7 to 9 hours on readings alone in addition to the time she devoted to reflection and writing postings. The results showed that she spent more time than what she reported in the survey at beginning of the course. Scott reported that he spent 5 hours on course readings not including time he spent reading other class members' postings and reflection on those postings. Scott said, "Sometime on Saturday afternoon, I would go back and read everybody's posts more in-depth. It wasn't a requirement of the class." He further pointed out that he spent "very similar to what I had for another [face-to-face] class," but the need of going back and forth to check other class members' postings online took time.

The interview data showed that the four participants did not all agree that they spent more time on this online course compared to their face-to-face ones. Eva and Anne believed that they spent more time, while Linda and Scott thought they spent a similar amount of time on this course as their face-to-face courses.

Table 4

Number of Hours per Week Participants Would Devote to the Online Course

	Anne	Linda	Scott	Eva
8. Taking a course online required me to devote weekly hours to it.				
8.1 From these weekly hours, I devoted ____ hours reading the course material and my assignments.	4	3	5	5
8.2 From these weekly hours, I spent ____ hours following the professor's instruction.	3	2	1/2	2
8.3 From these weekly hours, I spent ____ hours interacting with the professor.	1/2	0	1/4	1/2
8.4 From these weekly hours, I spent ____ hours interacting with my peers from class.	1	0	2	2 1/2
Total hours per week	8 1/2	5	7 3/4	10

Students' perceptions of effectiveness of the online course. The participants were asked questions comparing their performance in this course to the same course if it were offered in a face-to-face setting and to share their perceptions about the instructional features of this course.

At the beginning of the course, the survey data indicated that even though the four participants would enjoy the online course (question 9), not all of them indicated that they would be interested in taking another online course if given a choice (see Table 5). Question 10 of the survey asked the participants to rate their willingness to take another online course in the future. Anne said she might not take another online course. Of the three participants who indicated interest in taking another online course, Eva showed the strongest desire.

Table 5

Participants' Perceptions of Effectiveness of the Online Course (Items 9 & 10)

	1	2	3	4	5	6
9. I enjoyed this online course.			L	A/S	E	
10. I would like to take another online course.		A		L/S	E	

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

The end-of-semester interviews showed that the participants' perceptions did not change after experiencing a semester-long online course. Each participant ended up holding similar feelings as he or she did at the beginning of the course. Linda enjoyed the convenience of the online courses, and said, "Yes, I would [take another online course]; it

is convenient and allows you to work at your own pace. It also has the advantage of giving opportunities for people to explore areas they are interested in." Scott said he would take more online courses and indicated that in addition to convenience of saving time on travel, "the curriculum is a key component to the success of online classes." Eva expressed no reservation about taking another course. She said, "Yes, I look forward to other online courses." On the other hand, Anne still indicated that if she had a choice between online or face-to-face, she would rather take it face-to-face in order to have the chance to talk with classmates and the instructor. She believed that the face-to-face human interaction was not replicated in online settings. But she further clarified that she did not mean to "shut down to it" as she would like to compare this online experience to future ones.

Responses to the beginning-of-semester survey question 11 indicated that Anne, Linda, and Scott believed that if this course had been offered in a face-to-face mode it would have covered more material. Eva held a neutral thought on the coverage of teaching material in this online course (see Table 6). Question 13 of the survey asked the participants to compare the challenges of online courses and face-to-face courses. Eva and Linda did not think an online course would be more challenging than a face-to-face one, Scott did agree that an online course would be more challenging, while Anne was neutral.

Later in the middle of the semester, in follow-up responses, Scott indicated that a text-based discussion online course like this one was more challenging because asynchronous communication might cause misunderstanding. He explained that "there is

so much interpretation of the text. Many have stated the difficulty in reading emails, there should never be sarcasm, passion, anger, sadness, or other emotions because it is difficult to convey through text and it is difficulty to not bring in one's biases while reading."

Table 6

Participants' Perceptions of Effectiveness of the Online Course (Items 11 & 13)

	1	2	3	4	5	6
11. I believe that if this course had been offered in a face-to-face mode it would have covered more material.			E	L/S	A	
13. I believe that having a course online is more challenging than having a course via a face-to-face mode.		E/L	A	S		

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

Linda and Eva, on the other hand, appreciated what asynchronous communication offers, such as allowing more time for reflection on course materials. Linda stated in her follow-up responses that "I think in a face-to-face course you need to be ready to respond to questions quickly, therefore you must have deeper comprehension of the material. In an online course, you have time to investigate your answers and think before you speak." Eva echoed Linda's view about online courses allowing more reflection time for the development of depth in discussion that is not always possible in a face-to-face course.

She also pointed out the factor that made her describe online courses as not being as challenging as face-to-face ones by saying "There is more flexibility with the schedule of an online course.... I find the flexibility of 24/7 with the online course a key feature." Eva still maintained that "there are a number of features of face-to-face classes that are difficult to replicate in the online environment," such as interaction outside the prescribed discussion postings. Anne held a neutral thought regarding the challenges of the face-to-face and online delivery modes. She thought that they were both challenging but in different ways, making it hard to compare. She said:

> The face-to-face is challenging in that it allows immediate feedback from the professor and peers in class discussion. Students can seek immediate clarification from other student responses and stay focused on the important issues. The online is challenging for technical reasons: finding the correct place to post a response; staying current with other postings; following a thread and not being able to follow them all. Often, because of different schedules, I am unable to get in on the discussion of peers until late into the week when they are through discussing, and other times when I have time to discuss in the early part of the week, they are unavailable. It is also more challenging to put things into written form than to participate in verbal discussion.

Participants' perceptions changed with time and experiences. At the end of the online course, all of the participants found online courses more challenging. Besides the challenges they mentioned, they realized that online learning is open-ended and managing time was a big challenge. Scott gave an example of how he managed his time, "I really tried hard to have my stuff done early in the week. So when other things get busy, I wasn't waiting till Friday when assignments were due." Overall, the major challenges the participants pointed out for a text-based online discussion setting included: (a) the need to be self-motivated, (b) requiring strong time management skills, (c) lack of personal interaction, (d) lack of immediate feedback from class members, and (e)

asynchronous text-based communication may cause misinterpretation of meaning or misunderstanding.

On survey item 14, Anne, Linda, and Scott reported that they would participate less in the online course than they did in a face-to-face class, while Eva stated that she would participate more in online courses (see Table 7). The factors that would have an impact on participants' participation in this online course compared to face-to-face were asked in question 15 in the survey (see Table 7). All participants disagreed that they "felt more comfortable with this medium due to the fact that you were faceless." Most reported "disagree" in reference to "felt more comfortable writing than talking." Three out of four participants agreed or strongly agreed that they "had time to think about how you wanted to express your opinion about a particular matter."

Table 7

Participants' Perceptions of Effectiveness of the Online Course (Items 14 & 15)

	1	2	3	4	5	6
14. I participated more in the online course than I usually do in a face-to-face class.		A/L/S			E	
15. The following reasons had an impact on your answer to question 14:						
15.1 Your personality		E	A	S	L	
15.2 You felt anonymous	E		L	A/S		
15.3 You felt more freedom to express your ideas		A/L		E/S		
15.4 You had time to think about how you wanted to express your opinion about a particular matter.		A		S	E/L	
15.5 You felt more comfortable writing than talking		A/E/L	S			
15.6 You felt more comfortable with this medium due to the fact that you were faceless.		A/E/L/ S				

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

Anne valued the immediate feedback in face-to-face discussion in her follow-up response in the middle of semester. She complained that some participants in the online

course had never responded to any of her postings. The delay in communication would affect her participation in this course. Scott had similar thoughts. He indicated that with an asynchronous online course, people would be able to come and go as they please; they did not have to be fully engaged in the context of the course; course members did not have to read all the messages to be able to make an intelligent response; they could pick the last one and add to it, or even start a new thread and avoid the entire online conversation; a face-to-face setting forced learners to stay engaged in the discourse. At the beginning of the semester, Scott thought that he would participate more in a face-to-face course, but he adjusted his perceptions at the end of the semester. He said his overall engagement in this online course was probably about the same as the face-to-face graduate courses he was taking. He actually had the highest number of posts on the discussion forum among the participants (see Table 8).

Table 8

Number of Posts Participants Posted on the Wetpaint Discussion Forum

	Anne	Eva	Linda	Scott
Number of Posts	74	76	62	131

Linda had different reasons for participating less in an online course. She stated in the interview that "I feel more responsible for what I post, it's out there for everyone to read and analyze over and over again. Discussions [in face-to-face] are more

spontaneous." In contrast, Eva claimed that she participated more because: "The online communication tools allow for more flexibility for interaction.... The fact that I have time in the online course to reflect before responding to questions means that I can post well-developed responses that include depth, breadth, as well as make connections to other threads or resources."

When the participants were asked in the survey (question 17), at the beginning of the semester, to think about the interesting parts of the online course, they all agreed that the content was interesting (see Table 9), based on their one-week experience with the online course. But for the rest, such as the Web format of the course, the interaction with classmates and the professor through email and wiki discussion website, and the experience of using the electronic mailing list, the participants had different views. Anne did not like any of them. In the interview, at the end of the course, she claimed that "The content is so interesting to me and so important. I wish so much it was a face-to-face class." Linda, Scott, and Eva had different perceptions and reported more positive perceptions regarding the technological platform used in this course, even at the beginning of the course. Among these three, Eva's response showed that she favored the online design the most. Interestingly though, none of the participants thought that "the experience of using the electronic mailing list" was interesting. Linda, Scott, and even Eva were *neutral* on this item.

Table 9

Participants' Perceptions of Effectiveness of the Online Course (Item 17)

	1	2	3	4	5	6
17. The interesting parts of this online course are:						
17.1 The content				S	A/E/ L	
17.2 The Web format		A		E/L/S		
17.3 The interaction with classmates through e-mail/wiki		A	L	S	E	
17.4 The interaction with the professor through e-mail/wiki		A		L/S	E	
17.5 The experience of using the electronic mailing list		A	E/L/ S			

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

In terms of instructional support, the findings from the survey indicated that all participants were satisfied with the instructional features of this course (see Table 10). They believed that the instructor's instructions at the beginning of the course would provide them with what they needed in order to be able to *attend* the online course. The participants also thought that the instructional features would be well integrated with the text and the additional readings. Also, they agreed that the learning material would be

comprehensive, and would not be theoretical. Findings from interviews at the end of the semester support what the participants reported in the survey at the beginning of the semester. Here is a collection of participants' opinions about the instructional features:

> Anne: I think he [the instructor] does a wonderful job setting the stages for the reading. He has a very nice way of laying things out and everything flows very well, everything makes sense, and one thing builds on the next.
>
> Eva: The class was totally asynchronous and we had weekly discussion postings, and then additional writings.... Most of the time, it [the direction] was clear. There were few things in the very beginning of the first week or so in the class that people had questions on... he was able to clarify those question.... It was a good class.
>
> Linda: Overall it was good. I liked the questions we had.... I liked the assignments.... I liked the activities, I think that was fun. And the website was very easy to use.
>
> Scott: I really liked the class and the format. I think the directions were very clear and detailed.... I was really happy and impressed with the design of the course. I think it was very thoughtfully and very carefully planned out and implemented.

Table 10

Participants' Perceptions of Effectiveness of the Online Course (Items 16, 18, 19, & 20)

	1	2	3	4	5	6
16. At the beginning of your course, you received all the instructions you needed in order to be able to "attend" the online course?				S	A/E/L	
18. The instructional feature is well integrated with the text and the readings.			A	S	E/L	
19. The instructional feature is too long and it required too much reading.		E/L/S	A			
20. The learning material was too theoretical.		A/E/L/ S				

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

Interaction with the instructor and students. When the participants were asked to give their thoughts about interactions in the course, on survey question 12 (see Table 11), Scott and Anne indicated that they would have interacted more with the instructor if the course had been in a face-to-face mode. Linda's response indicated that she would have similar interaction in both delivery modes. Eva did not think that she would have interacted more with the instructor in a face-to-face setting than in the online learning

environment. With the exception of Eva, the other 3 participants believed that they would interact more with their classmates in a face-to-face setting (survey question 24).

Table 11

Participants' Perceptions of Interaction Patterns in the Online Course

	1	2	3	4	5	6
12. I believe that if this course had been in the face-to-face mode I would have interacted more with the professor.		E		S	A	L
24. I believe that the online course gave me more opportunity to interact with my classmates than if I had taken the same course face-to-face.		A/L/S			E	

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

Interaction was mentioned frequently by the participants in all the interviews at the end of the course. Participants reported that the way the instructor interacted with them helped their learning. Given the course delivery interface used in the online course, course work interaction (discussion) between the instructor and students, or student and student usually took place on the Wetpaint discussion forum. Email and questions through Wetpaint messaging were the main approaches that participants communicated with the instructor regarding individual concerns or feedback. The instructor announced

weekly discussion topics through email listserv and posted questions related to the topic for the week on the Wetpaint discussion site. The instructor provided his thoughts on the issues that students were discussing from time to time. In addition to the weekly emails sent by the instructor to the whole class, the instructor also gave individual feedback about individual learning performance to students via emails. At the end of every email massage, the instructor mentioned that he welcomed any questions or comments. Table 12 shows the number and type of interactions among students and the instructor. Participants said they usually used email to contact the instructor whenever they had questions, and all indicated that the instructor was very good at replying promptly to their emails. The frequency that Scott interacted with the instructor online was the highest across the four participants. Eva was the second highest. She had worked with the instructor in past semesters; she has a strong, previous relationship with the instructor. Sometimes it was more convenient to interact with the instructor face-to-face. During the interviews, Eva and Scott indicated that their interaction with the instructor in this online course was at a similar level as in other face-to-face courses they were taking. All participants believed that the weekly individual feedback was especially useful. The feedback kept them informed on how well they were doing, and provided an understanding of how much time and preparation they needed to put in to maintain quality. Eva commented:

> I found that was very helpful, in which he would highlight some of the really key things that we had said in our weekly postings and had provided some feedback on how he was assessing our discussion, and giving class rubric.

Table 12

Interaction through Email and Online Discussion

	Anne	Eva	Linda	Scott
Emails:				
Instructor → Student (to all)	44	44	44	44
Instructor → Student (individual feedback)	16	13	16	15
Student → Instructor (assignments)	4	5	3	6
Student → Instructor (personal)	8	18	1	19
Student → Student	5	3	3	3
Total Number of Emails	77	83	67	87
Number of Online Discussion Posts	74	76	62	131

Even though the instructor was easy to reach, not everyone felt comfortable with communicating with the instructor in an asynchronous form. Anne and Linda mentioned that the asynchronous text-based communication restricted their interactions with the instructor because it requires the instructor to devote a lot of time to review and respond when everything was in writing. Although they had lots of questions they wanted to ask, they did not. Linda told the researcher in the interview that she knew that the instructor welcomed questions, but she seldom asked him questions. She only asked him once during the semester. She explained, "I didn't really know how to ask him.... I could have

emailed him. Yes, I was supposed to, but I thought he was very busy. Everybody was writing a lot, and he was having a hard time keeping up with the reading, anything. He had a lot going on. So, I guess I didn't feel like I should take his time outside of that." As a result, she re-read to make sure that she understood the course materials and requirements. Or she exchanged opinions with classmates who she knew personally.

Beyond the discussion posts, there were few recorded text-based interactions among students throughout the semester. The interactions through emails included participants' feedback on assignments to other assigned study partners. Among the four participants, Scott expressed the highest level of satisfaction of interacting with other class members in this online course. He stated that he had constantly interacted with several students in the class. The interactions were detailed and there was good dialogue back and forth. He believed that they "did a nice job of replying quickly and appropriately." On the other hand, even though Eva indicated on the survey that she would interact more with peer students in an online learning environment, she admitted at the end of the semester in the interview that there was "not so much asking other students questions." Anne, Eva, and Linda felt more comfortable interacting with peers face-to-face, because they would have more cues to which to respond. The online text-based environment lacked the non-verbal body language and vocal tone, so participants reacted to posted texts only. The lack of face-to-face interaction affects one's ability to fully gauge the position a student has on an issue. Anne added that asynchronous text-based interaction might create misinterpretation of what was written, and the lack of immediate feedback or even no feedback increased her frustration with asynchronous text-based interaction. Anne, Eva,

and Linda worked at the university where the course was offered, they had the chance to meet and discuss course-related matters with class members face-to-face. Scott did not have that face-to-face interaction because he lives two hours away from the university, and none of the students in this online class were in his other face-to-face courses.

Technology Comfort

With web-based courses becoming increasingly more popular, technology will likely continue to be at the heart of most distance learning environments. Without technology, online instructions cannot be delivered. A course website, an email listserv, and a Wetpaint discussion site were used as tools to deliver this online course. In the survey conducted at the beginning of the semester, a Likert-type question (question 21) and an open-ended question (question 27) were used to seek participants' opinions on technological problems they had encountered (see Table 13). None of the participants experienced technological difficulties in this online course. At the time the participants filled out the survey, they all thought that the technology used in this course was not complicated and did not overpower the subject matter.

Table 13

Participants' Perceptions of Technological Difficulties

	1	2	3	4	5	6
21. The technology used in the course overpowered the subject matter.	E	A/L/S				

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

At the end of the semester, all participants reported that they were a little confused at the beginning of the semester about the interface used in this course. The interface consisted of three parts: an email listserv, a course website, and a Wetpaint discussion site. Participants noted that going back and forth among these three sites was a little inconvenient at the beginning of the semester, but they soon got used to it. The instructor was able to clarify their concerns in a timely manner. So, they all thought that the technology used in this course was very easy and not a problem. Scott stated:

> The direction of where to post the assignment and how to post it, that was clear. If we did have questions, it was very easy to email the professor and usually had the response on the same day, so pretty quick turn around for help. The website was pretty easy to use. It wasn't a very complex website. Everything was pretty straight forward.

Course Evaluation

Participants evaluated their online learning experiences through different perspectives. They compared their course expectations with what the online course

actually provided them, compared the opportunity to interact with classmates and learning opportunity in an online learning context and a face-to-face mode, and outlined advantages and disadvantages of online education. To learn about their ratings of this online course, three Likert-type scale questions (questions 22, 23, and 25) and three open-ended questions (questions 28, 29, and 30) were asked of participants at the beginning of the course. The survey findings indicated that most of the participants thought that they would be satisfied with the online course, and the online would meet their expectations. However, they did not agree with the statement that the online course would give them a better opportunity compared to a face-to-face course (see Table 14). In response to the open-ended questions, one participant, Anne, reported she would not be satisfied with the online learning experience; the other three participants said that they would be satisfied with their online experiences. Participants indicated that convenience and flexibility would be the major advantages of online courses. The disadvantages of online courses they noted included lack of face-to-face interaction and lack of immediate feedback.

Table 14

Participants' Evaluation of the Online Course

	1	2	3	4	5	6
22. So far, I am satisfied with my online learning course experience.			A	S	E/L	
23. The online course met my expectations about an online course.				A/L/S	E	
25. I believe that the online course gave me a better learning opportunity than if I had taken the same course face-to-face.		A/L/S			E	

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

At the end of the course, interview findings corroborate survey responses. All four participants agreed that this course met their expectations of an online course. They considered flexibility and convenience as the major advantages of online education. They pointed out that online education is accessible to anyone regardless of location and time constraints, and it allowed them more time to reflect on discussions. They had a much better sense and deeper understanding of the course materials. Anne commented that she had learned a lot in the class, but had concerns about the depth of learning. She doubted if learning online is as deep and long-lasting as a face-to-face experience. She believed that when students discuss issues in several different ways face-to-face, they learn more

deeply, and the content is more meaningful to the learner, the more permanent the learning becomes. Anne's concerns reflect her dissatisfaction with online learning and underscore the main disadvantages of an online setting that all participants pointed out: lack of personal interaction and immediate feedback.

Participants stated that personal interaction, immediate feedback from class members, and body language of others were the key features of face-to-face courses. The participants felt that the absence of these features in learning weaken the power of online education. Anne claimed that "the communication lost in the absence of the ability to read intonation and body language and instant clarification is frustrating. We are on different streams of thought at different times." She provided the following example of how text-based communication takes time and might lead to misunderstanding:

> There was one time where I was misunderstood in a response and I believe it was because they could not see and hear my intonation and body language and they took it another way. This wastes time and energy in regaining an emotional balance. Face to face interactions enable you to make wiser choices in wording and immediate clarification that online postings do not. Once a posting is misunderstood, days can go by with another student possibly resenting the posting before they read the clarification. Many times, they may not ever read the clarification and the resentment stays.

On the contrary, Eva considered minimal personal interaction in an online learning environment enhances learning. She believed that the online courses put all members of the course on an equal footing, and the nature of the medium forces course members to look more closely at what is being said. She admitted that tone of voice and body language cues were missing in the online learning environment, but in some cases the lack of face-to-face interaction was not a bad thing. Eva stated:

> The nature of the face-to-face course itself influences the degree to which the verbal and nonverbal cues are important in my learning, especially if the face-to-face course is instructor centered rather than student centered. In thinking about my face-to-face courses this semester they are instructor-centered and the interactions among students are minimal.

Similarly, Scott echoed Eva's thoughts about asynchronous learning. He argued that it might not be fair to expect an online course to be able to function exactly the same way that a face-to-face course would. He used the popular Facebook as an example, "You can kind of post and then go away, and someone when they get on can post and go away." He believed that more and more people are getting used to learning and communicating in an asynchronous environment without having to be physically present.

Summary of First Research Question

Research question one examined how students enrolled in an online course perceive their learning experience. This online course was a required course for the participants' program of study, with the exception of Scott. All participants stated that they enjoyed the online learning experiences and this course met their expectations. Linda, Scott, and Eva said they would consider taking another online course. The participants agreed that online education provided advantages, such as flexibility, convenience, and more reflection time on learning materials. The disadvantages of online learning they mentioned included lack of face-to-face interaction and personal connection, and lack of immediate feedback. Unlike the other three participants, Anne stated that she would not take another online course if she had the choice between online and face-to-face. Anne indicated that personal interaction and immediate feedback, from the instructor and class members, played a major role in her learning and were not possible in an online course. Among the

four participants, Eva and Scott had the highest level of satisfaction with their online learning experience.

Research Question 2

How do students enrolled in an online course think about their motivation to learn in that environment? The analysis of this research question included data from 32 survey items and interview questions that gathered data on participants' perceptions of their self-regulatory attributes in online learning. Participants were asked questions about their motivational orientations and their use of learning strategies.

For the analysis of the findings from these questions, the focus was on learners' personal factors as illustrated by Bandura's (1986) social cognitive theory and self-regulated learning. Since online learning is different from a face-to-face setting, online learners need to be more independent and more responsible for their own learning. Five themes were emerged: (a) self-efficacy for learning and performance, (b) Internet self-efficacy, (c) intrinsic goal orientation, (d) time and study environment management, and (e) help seeking.

Self-efficacy for Learning and Performance

Bandura defined self-efficacy as individuals' judgments of their abilities to plan and carry out the necessary behaviors to achieve specific goals (1986). He further suggested that the perception that one has the capabilities to perform a task increases the likelihood for successful task completion. Items 32, 33, 34, 35, 37, 38, 41, and 42 of the survey assessed participants' beliefs about their ability to do well in this course, namely their confidence in mastering the basic concepts and complex material presented in this online

course, how well they would do on the assignments, and the grades that they would expect to get. Table 15 shows that that lines up by the participants. For the total of 8 survey questions per participant, 7 responses (21.9%) ranked "4" of the 7-point scale which was the middle of scale, 17 (53.1%) reported "5," and 8 (25%) reported "7" indicating the highest level of confidence. Overall, the responses showed that participants' level of self-efficacy for learning performance ranged from middle to high.

The survey responses indicate that Anne's rating of her self-efficacy level for learning and performance was the lowest, Linda and Scott's rating was a little higher, and Eva had the highest rating. Anne had mild feelings toward her ability of doing well on every single item. Linda and Scott rated one point higher than Anne, and Eva's response showed that she had the highest level of self-efficacy about her learning and performance in this course.

This was Eva's third online course experience. She told the researcher in the interview that she personally liked online learning because of its convenience, flexibility, and the opportunity to think, step back, and draw connections between different sources, such as readings, prior knowledge, what other students said. Eva had been successful in the pervious online courses and given her background in educational technology, she came to the course with high level of confidence about doing well.

Table 15

Participants' Perceptions of Self-efficacy for Learning and Performance

	1	2	3	4	5	6	7
32. I believe I will receive an excellent grade in this class.				A	L/S		E
33. I'm certain I can understand the most difficult material presented in the readings for this course.				A	L/S		E
34. I'm confident I can learn the basic concepts taught in this course.					A/L/S		E
35. I'm confident I can understand the most complex material presented by the instructor in this course.				A	L/S		E
37. I'm confident I can do an excellent job on the assignments and tests in this course.				A	L/S		E
38. I expect to do well in this class.				A	L/S		E
41. I'm certain I can master the skills being taught in this class.				A	L/S		E
42. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.				A	L/S		E

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1 = Not at all true of me, 7 = Very true of me

Unlike Eva, the other participants' level of self-efficacy grew throughout the semester as their knowledge increased, as they received supportive feedback from the

instructor that assured their performance, and as they got used to the new learning environment. The commonality that Anne, Linda, and Scott had was that they all had concerns of being successful in a new learning environment. Their worries were different. Anne was nervous because it was her first doctoral class, and she had not been in classes for 15 years, so she thought "it was going to be something big." Scott was concerned that his prior knowledge about curriculum theory was not enough even though he currently serves as a principal and curriculum director. The instructor's and other class members' feedback and comments helped him build his confidence in the course. As time went on, the participants understood that "you get out of if what you put into it. You have to be responsible for your learning," as Linda said. They all ended up with a relatively higher level of self-efficacy for their learning and performance.

Internet Self-efficacy

One of the requirements of taking an online course is being able to access the Internet. Experience and comfort with technology is positively associated with online learner performance and success. To assess their level of Internet self-efficacy, participants were asked questions about their ability to handle the academic demands of distance learning, and about their comfort level with the technology interface used in the course. Table 16 presents findings from the survey conducted at the beginning of the course. For the total of 8 survey questions per participant, 8 responses (25%) ranked "7" which indicating the highest level of confidence on Internet self-efficacy, 3 (9.4%) ranked "6," 13 (40.6%) ranked "5," 6 (18.8%) ranked "4" which was the middle of the 7-point scale, and 2 responses (6.3%) rated "3." Most of the responses (75%) were in rating 5-7

of the scale indicating relatively high level of Internet self-efficacy. The 2 responses rating "3" indicated that participants would be less likely to turn to an online discussion group when needing help.

Table 16

Participants' Perceptions of Internet Self-efficacy

	1	2	3	4	5	6	7
I feel confident…							
55. Understanding terms/words relating to Internet hardware.				L	A/S		E
56. Understanding terms/words relating to Internet software.				L	A/S		E
57. Describing functions of Internet hardware.				L	A/S		E
58. Trouble shooting Internet problems.				L	A/S		E
59. Explaining why a task will not run on the Internet.				L	A/S		E
60. Using the Internet to gather data.					S	A/L	E
61. Learning advanced skills within a specific Internet program.				L	S	A	E
62. Turning to an online discussion group when help is needed.			A/L		S		E

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1 = Not at all true of me, 7 = Very true of me

Questions 55 and 56 of the survey asked the participants about their ability to understand terms related to Internet hardware and software; Linda felt she would be between not confident and very confident; Anne and Scott felt a little higher in confidence than Linda; Eva believed that she would be very confident about her understanding of the terms. When participants were asked about their confidence about trouble shooting Internet problems and learning advanced skills within a specific Internet program (questions 57, 58, 59, and 61), again, Linda was in the middle; Anne and Scott felt a little more confident; Eva was very confident. On question 60, all participants showed that they would be confident using the Internet to gather data. However, in question 62, Anne and Linda reported that they would be less likely to seek help; Eva indicated that she would most likely look for help, followed by Scott. To sum up, compared to the other three participants, Eva had the highest level of Internet self-efficacy, followed by Anne, Scott, and Linda.

In the interviews at the end of the semester, all participants reported that the technology interface used in this course (an email listserv, a class website, and a Wetpaint discussion site) was easy to use, but they needed some time to get used to it as this was the first online course for most of them. They felt a little confused at the beginning about how to post their discussion posts, but the problems were solved soon with the instructor's help.

Anne also reported that she could not access the Wetpaint site to read other class members' posts and post her thoughts while working in her office, because she did not have the bookmark of Wetpaint discussion website on her office computer. She

complained, "If you don't have that URL, you are lost. There is no way you're going to find it." Soon she realized that it would be due to "lack of organization on my part." Further, she expressed her frustration about the setting of the Wetpaint site. On the Wetpaint site, members used their chosen usernames, and had an option of uploading their pictures. Some of the class members had pictures, some did not. The size of pictures was small, around one inch by one inch. Anne's concern about technology goes beyond the interface itself; she wanted to make more personal and emotional connections with the class members through technology in the online setting, but she could not. She stated:

> What really bugs me was not having the people's names, and then people who had the tiny tiny picture on there, or had no picture at all. I tried to get a beat on what everybody was like, what their interests are because that was important to me, and I couldn't, because they didn't either have a picture that I could see or no picture at all, and then no name underneath there.

Intrinsic Goal Orientation

Participants' intrinsic goal orientation reflects the degree to which they participated in a learning task in order to meet a personal challenge and attain personal mastery of the task. Four survey questions were asked to assess participants' perceptions of their intrinsic goal orientation at the beginning of the semester (see Table 17). Ratings of the responses indicated that participants perceived that they would have a high level of intrinsic goal orientation in the online learning environment. Three responses (18.8%) rated "7" on the 7-point scale, 3 (18.8%) rated "6," 8 responses (50%) rated "5," 1 response (6.3%) rated "4" which was in the middle of the scale, and 1 response (6.3%) rated "3" which was below the medium. Most of the responses ranged from 5 to 7 on the scale, indicating relatively high level of intrinsic goal orientation.

Table 17

Participants' Perceptions of Intrinsic Goal Orientation

	1	2	3	4	5	6	7
31. In a class like this, I prefer course material that really challenges me so I can learn new things.					L/S	A	E
36. In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.					A/S	L	E
39. The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.			A		L/S		E
40. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.				L	A/S	E	

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1 = Not at all true of me, 7 = Very true of me

Item 31 of the survey reported that all four participants would prefer course material that would challenge them to learn new things. Linda and Scott rated 5 which was slightly higher than in the middle of the 7-point scale; Anne rated one point higher than them; Eva thought it was "very true" for her. When the participants were asked on item 39 if the most satisfying aspect of the course would be trying to understand the content as thoroughly as possible, Anne rated 3 which was one point lower than the median. Linda

and Scott rated 5 which was slightly above than the median. Eva rated 7 which was the highest rating. Linda chose 4 which was at the median for the item asking if she would choose course assignments from which she could learn even if they do not guarantee a good grade when she had the opportunity. Anne and Scott rated this item one point higher than Linda, and Eva rated it 6 which was one point higher than Anne and Scott. Across the four participants, Eva's responses indicated that she would have the highest level of intrinsic goal orientation in the context of online learning.

Data from interviews at the end of the semester and observations throughout the semester also indicated that all four participants were intrinsically goal oriented in varying degrees. Their responses reflected some of the characteristics of adult learners which include being self-directed, self-motivated, and goal and relevancy-oriented. They all expressed that what one puts into the class is what one gets out of it. The participants also brought in their expectations, their experiences, and their willingness to learn to the class, and they asked practical questions and welcomed practical responses.

Intrinsic goal-oriented learners define what should be learned, or what is relevant to their needs for themselves. Participants set their own expectations when they came to the course. Although their goals were slightly different, they all wanted to learn about curriculum. Anne said:

> I taught in schools for 25 years, so I put curriculum to work..... I was on lots of curriculum design teams, but I never knew the history behind it because I never had the luxury of time to go back and look at it. So, this is very interesting to me to realize why things were the ways they were, and why this part is so frustrating as a teacher and why this is so distracting.... Everything is kind of coming together for me.

Eva wanted to learn about K-12 contexts that different curriculum theories address, how curriculum can be developed, how it can be evaluated, and its evaluation components. Scott had similar goals for the course as Eva, and planned to start his doctoral dissertation on leadership in curriculum. Linda stated that she liked the history of curriculum. This course was an eye-opening experience to her to think about the motivation behind certain curriculum.

Intrinsic goal-oriented adult learners are self-motivated. They learn for themselves, not focusing on grades or rewards. Anne expressed her love to learn, "I am enjoying the class. I don't take a course for the grade, I take it to learn. And I am learning, so I am happy." Also, a self-motivated learner does not learn for approval from others. Eva stated, "I would expect there would be some demand that pushes me as a learner to delve deeper." In an online learning environment, students take more responsibility for their learning, even though no one is checking them. Scott told the researcher, "One week I got behind with the reading and then I just tried very much for that next week to catch up with the reading. There wasn't something that was required; I was still able to do my posts and answer my questions, but I did go back and make sure I read it, just to make sure I was on track and had the information I needed for the subsequent week."

The number of postings participants posted on the Wetpaint discussion site may reflect each participant's level of intrinsic goal orientation, although the quantity certainly is not the only indicator. Scott made 131 posts, Eva 76 posts, Anne 74 posts, and Linda 62 postings. Due to a family emergency, Eva missed one week of course work. Compared to the other participants, the researcher had a feeling that Linda's level of intrinsic goal

orientation was lower than other participants. She said, "I always finished that textbook reading, but I didn't always get the extra articles that he [the instructor] put up there and always get through all of those." She added that she would do a better job when she had more time.

Linda's relatively low participation rate, which was 12 or 14 lower out of 70 posts, might be due to her busy schedule. She indicated that there were things more important than herself. Her family is always her top priority. She has two young children who have unique challenges, and her husband is trying to finish his master's degree. Taking care of her family takes a lot of her time. She is new as an adjunct instructor and she rates her students as her second priority. She put herself as third place. She mentioned two times during the interview, "I am not a good mother." Linda concluded that "maybe later I can be a more serious student."

Time and Study Environment Management

Time management skills in distance learning concerns one's ability to effectively manage learning time through scheduling, planning, goal-setting, and prioritizing. Study environment management refers to controlling and avoiding possible distractions which may arise during learning. Effective management of time and the environment to minimize distractions is required for successful online learning. At the beginning of the semester, eight survey questions were designed to learn about participants' perceptions of their ability to manage time and study environment in an online learning setting (see Table 18).

Table 18

Participants' Perceptions of Time and Study Environment Management

	1	2	3	4	5	6	7
43. I usually study in a place where I can concentrate on my course work.				L	S	A	E
45. I make good use of my study time for this course.			L		S	A	E
46. I find it hard to stick to a study schedule. (REVERSED)					*L*	*A/S*	*E*
48. I have a regular place set aside for studying.			L		S	A	E
50. I make sure that I keep up with the weekly readings and assignments for this course.					L/S	A	E
51. I "attend" this class regularly.					L/S	A	E
53. I often find that I don't spend very much time on this course because of other activities. (REVERSED)				L		*A/S*	*E*
54. I rarely find time to review my notes or readings before an exam. (REVERSED)				L	*S*		*E*

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1 = Not at all true of me, 7 = Very true of me

Three items (items 46, 53, and 54) marked as "reversed" were reverse coded items and must be reversed before scale construction as the original questionnaire developer instructed (Pintrich,1991). The researcher reversed the negatively worded items and the

ratings of the responses to these three items. The reversed responses are in italics (neutral responses did not need to be reversed and are in regular font). Anne did not respond to item 54, so there were 31 responses to these 8 items. Eight responses (25%) rated "7" which indicated the highest level of time and study environment management skills, 9 (28.1%) rated "6," 9 (28.1%) rated "5," 3 (9.4%) rated "4" which was the median of the 7-point scale, and 2 rated (6.3%) rated "3" which was below the median. The overall rating ranged from 5 to 7, indicating that participants had a rather high level of confidence in applying good time and study environment management skills.

According to the responses, Linda had two responses which fell below the median, showing that she would have the least confidence in effectively managing her study time and study environment. Eva reported that she would be effectively managing her study time and study environment. Anne and Scott's responses were similar; Anne was one point lower than Eva, and Scott was one point lower than Anne. They said they would handle the time and study environment issues well.

On question 50, participants were asked if they would make sure that they keep up with the weekly readings and assignments for this course. Their ratings were relatively high: Linda and Scott chose 5, Anne chose 6, and Eva rated 7 which indicated that it was "very true" of her. They further said that they would *attend* the class regularly (question 51), such as posting their own postings, reading other class members' postings, and making comments on other postings. All participants thought that they would stick to a study schedule (item 46), Eva had the highest level of confidence that she would stick to a schedule, followed by Anne and Scott, and then Linda. However, Linda reported that

she did not think that she would make good use of her study time for this course (item 45). She rated 3 for this question which was slightly lower than the median. Furthermore, she reported that she would not really have a regular place set aside for studying (item 48). Again, she rated 3 for item 48. When she was asked if she would usually study in a place where she would concentrate on her course work, she rated 4 which was in the middle of the scale between "not at all true" and "very true." Scott was one point higher than her; Anne was one point higher than Scott; and Eva rated it 7 meaning "very true" of her.

Interview findings supported the results from the survey. All participants reported that they had a busy life. They had too many responsibilities, such as family, work, social commitments, and course work. They commented that they had to be very organized in order to do well in the online environment. All four participants had jobs when they took this course. Anne, Eva, and Scott were taking two other face-to-face courses in addition to this online course. Everybody was on a very tight schedule. Thus, time management skill was important, "more important for online classes," as Eva pointed out. Also Linda stated, "It's very easy to not do what you need to do when it is an online class," appropriately using time and finding a place to study can be challenging to online adult learners, as they need to "utilize every minute of the day," as Anne said. Besides that, Anne also sought support from her family:

> I am working full time, and I am taking three classes this semester. So, it is hard. Once I get my course schedule, I take it home to family, and there had been a few classes that I have had to miss out on family things or I get home late. And my family was ok with it.

On the Wetpaint discussion site, every post has a time stamp that shows what time the post was posted. The time stamps revealed that most participants' posts were posted

late evenings. Participants who have children, like Anne, Linda, and Scott started working on their course work after their children went to bed. With the exception of Scott, the other three participants usually posted their posts toward the end of the week.

Scott and Eva seemed to have strict schedules for this course. They allocated time for this course and the other two face-to-face courses, and adhered to their schedules. Scott said that he had to stick with his study schedule very well because, as he said, "I was pretty packed with different works. So, I had to be very tight with my time and made sure I scheduled it appropriately." When participants were not able to follow their study schedule due to social commitments, family events, attending conferences, or some other events, they had to make up what they had missed. There was a big demand on their time, so they stayed up late or put off something in other classes in order to be current with the others.

Linda stated that she had a hard time adhering to the study schedule at the beginning of the class. Her time demands included caring for her two young children, attending to her husband who is doing his master's, and teaching two classes that she had never taught before. Linda realized that she had to do something more creative to manage her time. Linda said that she learned to "set aside certain time every week where I was going to really focus on to do what I needed to do." Otherwise, being behind all week would drive her crazy. Since then, she managed her time better.

Most participants reported that they usually studied at home, except Anne who did her reading at the office and posted her postings at home. She mentioned that she needed to have a quiet place to read, and there was always noise at home. With the exception of

Eva, the other three participants all stated that their physical learning environment was very distracting since they all have young children. What they could do was to start focusing on their studies after their children went to bed.

Help Seeking

Although self-regulation emphasizes individuals' ability to manage their own learning, a key part of this is awareness of the significant role others can play in one's learning. Autonomous distance learners are able to seek appropriate learning help from others. Three survey questions were designed to assess participants' perceptions on help seeking (see Table 19). Question 44 marked as *reversed* was a reverse-coded item and must be reversed before scale construction as the original questionnaire developer instructed (Pintrich,1991). The researcher reversed the negatively worded item and the ratings of the responses to the item. The reversed responses are in italics (neutral responses did not need to be reversed, and are in regular font). One response (8.3%) ranked "1" which meant "not at all true," 2 (16.7%) ranked "2" which were below the median, 2 (16.7%) ranked "3" that were slightly below the median, 2 (16.7%) ranked "4" which was at the median, 2 (16.7%) ranked "5," and 3 (25%) ranked "6." Responses indicated that participants showed less interest in searching for help as they preferred to work on their own.

Table 19

Participants' Perceptions of Help Seeking

	1	2	3	4	5	6	7
44. Even if I have trouble learning the material in this class, I try to do the work on my own, without help from anyone. (REVERSED)	*E*		*S*	A	*L*		
49. When I can't understand the material in this course, I ask another student in this class for help.		A/E	S			L	
52. I try to identify students in this class whom I can ask for help if necessary.				S	A	L/E	

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1 = Not at all true of me, 7 = Very true of me

What would the participants do when they had trouble learning the material? Would they try to do the work on their own or find help from others (survey item 44)? Eva reported that she would work on her own and not seek help from anyone. Scott said that he would find some help, while Anne held a neutral opinion. Among the four participants, Linda indicated that she was the one who would most likely seek help from others. The responses echoed the question that asked them if they would ask another student in this class for help if they could not understand the material (question 49); Anne and Eva showed the least interest in asking for help, followed by Scott. Linda rated 6 for this question which indicated that she would ask another student in the course for help. Even

though Eva indicated that she would not ask for help, she would still like to try to identify students in this class whom she could ask for help if necessary (item 52), Linda agreed with her, and so did Anne. Scott showed the least interest to identify students for help.

Findings from interviews at the end of the course support what was found from the survey. There was limited documented personal interaction between the participants and other students. Seeking help via technology was not often happening among students in this online learning environment. When participants had questions, they emailed the instructor, discussed with other students face-to-face, or figured it out by themselves. Scott reported that he usually emailed the instructor about any questions, or concerns he had, but there was no evidence that showed that he sought help from other students. Whenever he had email conversations with other students, they were in the context of paired activities assigned by the instructor. Eva found it very easy to ask the instructor questions and sometimes emailed him. At other times, she talked to the instructor face-to-face because they worked on the same campus. Also, Eva had worked with the instructor in past semester in another graduate class. They had chances to meet giving her chances to ask questions face-to-face. Like Eva, Anne and Linda work in the same building, so they were able to meet other students face-to-face and discuss course-related issues. Eva told the researcher that, "It was much easier for us to pop in each other's office for a coffee break to talk about things." Moreover, she prefers to learn on her own. The most interaction that she had in an informal setting online was when she was paired with another student to talk about their research question for a paper. Eva explained:

> If I do not know the students in an online course I am not likely to ask for help. Once I get to know students in a course I would be more likely to contact them

> if I needed clarification or assistance on an assignment. For example, one of the students in the course has her office down the hall from mine and now that I know her we frequently compare notes and understanding on assignments in our courses since we are often in some of the same courses. Developing that relationship takes time and until I feel comfortable I will typically try to work through an assignment without any help.

Why didn't they ask for help via online? Anne and Linda mentioned that they did have lots of questions that they did not ask because they did not feel comfortable asking when there was no personal connection. Linda stated that she did not feel she could ask anyone to clarify questions for her online. As a result, she directed her questions to her classmates whom she was able to meet face-to-face. She added that she would have felt more comfortable asking for others' opinions if she had developed a relationship with someone in the course.

Summary of Second Research Question

The second research question looked at how students, enrolled in an online course, think about their motivation to learn in that environment. All participants were confident that they did well in this online course. They did not have a high sense of self-efficacy for learning and performance at the beginning of the course, but their confidence gradually grew throughout the semester as their knowledge of curriculum increased, and they received supportive feedback from the instructor and class members. Regarding the level of Internet self-efficacy, all participants felt that they did not have problems with the technology used in this course due to the instructor's help in promptly addressing students' concerns. However, the design of the interface lacked the flexibility that could have fostered more emotional bonding among students. All participants were intrinsically goal oriented, to varying degrees. They all had a notion that they needed to be responsible

for their own learning. Linda seemed to have the lowest level of intrinsic goal orientation among the four participants. Most of the participants found no problem on managing their study time and study environments. Linda realized that she needed to use her study time effectively and choose a regular place when studying. After an initial adjustment of her time management, she felt more comfortable with the course. However, responses for the attribute of help seeking, in an online environment, indicated that most of them preferred working on their own and asked for help through face-to-face mode when they had questions instead of through online. Among the four participants, Linda showed the highest interest in asking for help, but she did it face-to-face.

Research Question 3

How do students enrolled in an online course think about their membership in an online learning community? The focus of this question was on the learners' behavior as illustrated by Bandura's social cognitive theory and expanded by views from situated learning. Social cognitive theory recognized that a learner can learn by observing others (Bandura, 1986). The new behaviors are the products of learning. In an online environment, learning through observation is achieved by sharing knowledge and participating in a learning community, which is also known as situated learning (Clancey, 1997; Lave & Wenger, 1991). To explore the participants' sense of an online learning community in adapting to a new learning environment and modifying their learning behaviors, they were asked survey and interview questions that were related to feelings of connectedness, frequency, and nature of interactions within the community. This was to further construct an understanding of the extent to which learning goals were being

satisfied within the online class setting. Two themes emerged while analyzing the data: feelings of connectedness and perceptions of learning.

Feelings of Connectedness

At the beginning of the course, participants were asked 10 questions that addressed their feelings of connectedness, cohesion, spirit, trust, and interdependence among class members (see Table 20). Negatively worded items (items 67, 71, and 79) were reverse-coded items and must be reversed before scale construction as the original questionnaire developer instructed (Pintrich, 1991). The researcher reversed the negatively worded items and ratings of the responses to these three items. The reversed responses are in italics (neutral responses did not need to be reversed, and are in regular font). Anne did not respond to item 79 which asked if she would feel uncertain about others in this course, so there were only 39 responses to these 10 items. One response (2.6%) strongly disagreed, 10 (25.6%) disagreed, 9 (23.1%) were neutral, 13 (33.3%) agreed, and 6 (15.4%) strongly agreed. Overall, around 50% of the responses were "agree" or "strongly agree" to having feelings of connectedness. The responses indicate that participants would hold positive feelings of connectedness and trust in this course. They would feel some degree of connectedness in this online learning community, but the connectedness would not be strong. The survey responses indicated that across the four participants, Anne would have the lowest degree of bonding in this course.

Table 20

Participants' Feelings of Connectedness

	1	2	3	4	5	6
63. I feel that students in this course care about each other		A	S		E/L	
65. I feel connected to others in this course		A/S		E/L		
67. I do not feel a spirit of community		*A*	S	*E/L*		
69. I feel that this course is like a family	A	L	E/S			
71. I feel isolated in this course		*A*	S	*L*	*E*	
73. I trust others in this course			A	E/L	S	
75. I feel that I can rely on others in this course		S	A	E	L	
77. I feel that members of this course depend on me		A/E/S		L		
79. I feel uncertain about others in this course				*E/L/ S*		
81. I feel confident that others will support me			A/S	E	L	

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

Would the participants feel that students in this course care about each other? According to question 63, Anne disagreed with the statement, Scott held a neutral

opinion, Linda and Eva strongly felt that students would care about each other. Anne and Scott did not feel they would connect to others (question 65), while Linda and Eva held an opposite opinion. Furthermore, Linda and Eva would feel a spirit of community in this course (question 67), Scott's attitude was neutral, and Anne reported that she would not feel a spirit of community.

When the participants were asked whether this course would have a family-like feeling (question 69), they said that they would not feel that way. Anne and Linda strongly disagreed or disagreed that this course would be like a family; Scott and Eva reported a neutral response. Would they feel isolated in this course? Eva and Linda disagreed with the question, Scott's opinion was neutral, and Anne agreed that she would feel isolated, as reported in question 71. According to question 73, Scott reported that he would build his trust with others in the course because of the way the class members would act. Linda and Eva's responses showed that they would not have as strong a feeling of trust as Scott, but they did agree that they would trust others in the course. Anne reported that her feelings of trust in this online course as being neutral.

Did they feel that they could rely on others in this course (question 75)? Scott did not think so; Anne was neutral; Linda and Eva thought they could. But Anne, Scott, and Eva did not think that members of this course would depend on them, while Linda reported that she would have a feeling that class members would depend on her. The participants responded positively to question 81 which asked about their confidence that others would support them if they had questions. Eva and Linda felt confident, and Anne and Scott felt neutral.

The results from interviews indicated that after a semester of online learning, participants' sense of connectedness had had some adjustments. Scott had the highest level of feelings of connectedness, followed by Eva, then Linda; Anne did not feel connected. Participants perceived their connection with other students in the online course differently. Eva explained her interaction in the class, "There were some people in the course that I grew to know very well and others [whom I didn't] interact [with], I don't really feel connected with at all." More or less, they felt comfortable interacting with class members in formal discussions. However, they all realized that personal interaction was difficult to replicate in an online learning environment. Human interaction builds emotional bonding among class members, and emotional bonding creates feelings of connectedness in a learning community. Feelings of connectedness, in turn, enhance interaction and learning. Scott affirmed this by saying, "Throughout the course, different responses that I received from people with the posts, just kind of adding to my overall success."

Participants reported feeling comfortable sharing their thoughts with the rest of the class. However, this comfort did not come automatically; it grew throughout the semester. Linda said that it took her time to get used to the learning environment, to become comfortable with the new way of interaction, and to be comfortable challenging other classmates' opinions. Scott and Eva thought it was a natural growth, whether online or face-to-face. Scott commented that it was "in much the same way of face-to-face class you probably don't put everything you want to say out there in first week, but kind of grow, you feel more comfortable and more secure subsequently." He further stated that,

"For the most part throughout the course, I felt safe to share my opinions. We really were professional to each other online. I think just the willingness to share more and be more open."

Trusting relationship. In a face-to-face setting, hand shaking, making jokes, or just questioning are ways of gaining trust, for example. The online setting does not have that kind of environment for informal social interaction. Participants pointed out during interviews that establishing trust was the most difficult part of an online course. Without trust, learners do not feel connected and consequently are not going to be open to others' constructive criticism. Participants gained trusting connections with other class members while interacting directly with them, and it happened in small groups for all of them. Linda preferred to build trust in community, at the very beginning of the course, within small groups. Eva's statement echoed Linda's thoughts, "I think the most interaction that I had in an informal setting was when I was paired with another student to talk about our research questions for a paper." Eva pointed out that:

> The Wetpaint software didn't really provide you that opportunity [for social interaction], because it wasn't an open discussion question for everybody, was more a directive questions. So, there wasn't, unless you sent an email to an individual. There wasn't that kind of informal interaction between people in the class.

Linda interacted and felt connected with her assigned activity partner who had similar interests. The feeling of connection that developed made her feel comfortable and encouraged her to share more with her activity partner. She even wanted to meet her personally. She said:

> I didn't know [her] previously. I found that we had some common interests through our research topics. So, I felt more comfortable, when talking to her, because we had kind of a bond through our interests and what our past experiences had been. So, it

> was nice to learn more about her.... I would like to meet her face-to-face now. I have never met her, so I would like to meet her."

Similarly, Scott developed his trusting relationship through paired activities. He said, "There were a couple of people that we had interacted with, pretty detailed." On the other hand, Anne did not feel connected to anyone through the online mode. She did know some students personally, so she turned to face-to-face interaction. She had a bad experience building trusting relationship online. Her research paper partner emailed her to make sure she would not use any part of her paper because she was going to publish it. However, when Anne emailed her back, her partner did not respond to her. Anne described the conversation as "odd" and she felt hurt. She further explained that her feeling of disconnection in the online learning environment was due largely to the lack of human connection. She compared face-to-face courses to online courses in terms of human interaction:

> When I look at my face-to-face doc courses, I feel more connected, much more so, with other students then you almost get to be like a family towards the end. I don't feel that way, with the online class.... The other one [class] I had face-to-face, you almost get kind of close because you get into these really involved deep discussions and you see how passionate the other people are, and the strong argumentation for it, and you can see the emotion and eyes, you can see them step back and never thought about it in that way. It is exciting. Students should be in that kind of environment. You can see some of that discourse going on in an online course, but it is not passionate."

Anne could not remember other members of the course except those who had met her face-to-face. She believed that visual cues such as facial expressions help develop feelings of connection. However, the technology used in this course did not provide that opportunity. Pictures of students were small, if any, and the students used usernames instead of their names. The lack of visual presence made connections among students

even harder. Anne wanted to know more about her fellow students. She believed that learning is a social process. Linda also had similar comments and suggested that it would be helpful to develop a connection among class members by referring to each other by first name instead of usernames.

Perceptions of Learning

Learning is the ultimate goal in both face-to-face and online courses. Participants were asked questions in the survey and end-of-semester interviews concerning learning community issues related to feelings of shared values and beliefs among community members, as they constructed their understanding of their educational goals and expectations.

In the 10 survey questions that assessed participants' perceptions of learning, Anne did not respond to question 72 which asked if she would feel "reluctant to speak openly," so there was a total of 39 responses to the 10 questions. Table 21 summarizes the participants' perceptions of learning, at the beginning of the course. Items 66, 70, 72, 74, 76, 80, and 82 were negatively worded. Negatively worded items were reverse coded items and must be reversed before scale construction as the original questionnaire developer instructed (Pintrich, 1991). The researcher reversed the negatively worded items and ratings of the responses to these three items. The reversed responses are in italics (neutral responses did not need to be reversed, and are in regular font). One response (2.6%) disagreed, 7 (17.9%) were neutral, 23 (60%) agreed, and 8 responses (20.5%) strongly agreed. Over 80% of the responses were "agree" or "strongly agree" that they would have a feeling of learning. The survey responses showed that across the

Table 21

Participants' Perceptions of Learning

	1	2	3	4	5	6
64. I feel that I am encouraged to ask questions				A/L/S	E	
66. I feel that it is hard to get help when I have a question			A/L	*S*	*E*	
68. I feel that I receive timely feedback				A/L/S	E	
70. I feel uneasy exposing gaps in my understanding		*S*	A/L	*E*		
72. I feel reluctant to speak openly				*L/S*	*E*	
74. I feel that this course results in only modest learning			A	*E/L/S*		
76. I feel that other students do not help me learn			A	*E/L/S*		
78. I feel that I am given ample opportunities to learn				L/S	A/E	
80. I feel that my education needs are not being met			A	*L/S*	*E*	
82. I feel that this course does not promote a desire to learn				*A/L/S*	*E*	

NOTE. A= Anne, E= Eva, L= Linda, S= Scott

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree, 6= Don't Know

four participants, Eva would have the highest level of perceptions of learning, while Anne would experience the least perceptions of learning.

According to question 64, all participants reported that they felt that they would be encouraged to ask questions, feel they would receive timely feedback (question 68), and would be given ample opportunities to learn (question 78).

When asked in question 66 if it would be hard to get help when they had a question, Eva and Scott disagreed, and Anne and Linda reported neutral. Would they feel uneasy exposing gaps in their understanding (question 70)? Scott reported that he would feel some difficulties, Anne and Linda held a neutral opinion, and Eva would have no problem with exposing gaps in understanding. In question 72, Eva, Linda, and Scott reported that they would feel enthusiastic to speak openly about their learning. Would they feel this course resulted in only modest learning (question 74)? Linda, Scott, and Eva reported that they disagreed with the statement, while Anne reported a neutral opinion. Most of the participants agreed that they would feel that the other students would help them learn in question 76 except Anne, who reported neutral. In question 80, Eva, Linda, and Scott thought that their education needs would be met, Anne had a neutral thought. According to question 82, all participants reported that this course would stimulate their desire to learn.

Interview results support the survey findings, but some of the participants' perceptions of learning in an online environment had changed slightly after experiencing a semester-long online learning. Scott became more enthusiastic about online learning at the end of the semester, and Linda felt more confident about learning in an online

environment. All participants reported that their learning expectations had been met. Except for Anne, the participants felt a learning community existed in this online course. They also mentioned that support from the instructor and/or other students helped their learning.

Learning goals being met. All participants said they learned a lot, and their learning goals had been achieved. They were satisfied with learning the course content, but in different degrees. They thought people came together around a common purpose and common focus to try to understand curriculum theory and development. At the end of the semester, they had a deeper understanding of curriculum theory than they did when they came into the class. Scott said what he learned from this course gave him a good foundation for his doctoral dissertation. Eva explained how she learned:

> Learning is coming in part from your reacting to the readings and then the discussion postings that were online. I very much appreciate being able to read, reflect, and write, and reflect before I post. For me as learner, that online discussion is much more productive for me than in a face-to-face course.

Anne was on the opposite side of Eva's thoughts. Anne indicated that she did learn, but she felt she learned mostly on her own. She did not feel that she emotionally bonded with the class as she usually does in face-to-face courses. She also asserted that online learning is not as deep and long-lasting as face-to-face because an online setting does not have human interaction. She believed that synchronous discussions back and forth brings more meaning to what is being discussed and makes it easier to store into one's long term memory. In that case, learning is more effective. Linda had some thoughts that were similar to Anne. She thought that there was no discussion back and forth online. Although she stated that there was a learning community, she commented that, "we were

missing each other sometimes" due to the nature of asynchronous communication, "people put what they thought; and then someone else might put what they thought, and then that's done." So, "people didn't go back and check to see if they needed to respond to anything if they already responded to that question. They might not go back and read what other people had written since then." Anne and Linda's concerns pointed out the importance of support by others in the learning process.

Interaction enhances learning. All participants agreed that the instructor was very supportive. He designed activities that made complex concepts and ideas easier to understand. Also, the instructor gave reminders weekly, provided individual feedback, and responded to questions in a timely manner; as Anne commented, the instructor's "heart is in the right place, he knows his stuff." However, not all the participants were positive about support they received from class members via online. Eva felt there was a learning community in the online course. She was looking forward to learning from other people's posts, and liked being challenged in thoughts. She said:

> There were a couple of people you could always count on having some really interesting perspectives that I hadn't thought about each week. And I looked forward to reading their postings, just because they had a perspective that was different from mine that challenged some of the ideas that I had about things.... Everybody was adding to the contributor in the class, but I found that there were some people that I really looked forward to reading their postings.... I think, I got to get myself engaged. Otherwise, I am going to miss the conversation all together.

Scott concurred with Eva. Scott thought that being able to hear and clarify back and forth among class members generate learning, whether online or face-to-face. He believed that in a learning community, learning occurs by sharing and supporting each other. Scott said:

> I think that was accountability there to know that I had to respond. In my other face-to-face classes, for example, there was a lot of conversation. Several weeks one of my classmates never spoke during the class. I try kind of reflect on that, personally. I just thought, well, you might be able to listen and learn a lot that way but we are not gaining anything from you.

Linda was interested in reading what other people wrote, because she believed that two brains are always better than one, so she was open to other people's experiences and view points. Linda said, "the more chance you have to hear what other people think and believe, the better chance you have to understand something at a deeper level."

On the other hand, Anne did not experience a sense of a learning community, because she thought there was no human interaction in the online environment. She thought the content was exciting; the questions the instructor asked were exciting. Delays in an asynchronous mode and getting a few or no answers from her peers made her feel lost in the course. She concluded, "You can't duplicate human interaction." As a result, she sought support from the class members she knew face-to-face, which she stated as her learning preference.

Being passionate about online communication does not mean that the participants did not value human interaction. In fact, they did believe that human interaction was an important factor in learning. However, as Scott pointed out, it is not fair to expect an online course to be able to function exactly the same way that a face-to-face course would. Scott stated that "If you are trying to do something in a different way, you have to do a lot more of elaboration."

Summary of Third Research Question

Research question three explored how students enrolled in an online course think about their membership in an online learning community. Among the four participants, Linda's responses indicated that she had the greatest feeling of connectedness, followed by Eva. Scott held neutral feelings of the connectedness. Anne felt the least connected with the class. After a semester of online learning, the participants' perceptions had changed somewhat. Scott and Eva felt most connected with others, followed by Linda, then Anne. Overall, the participants did not have strong feelings that they were connected to each other, even though they knew that they were supported. On the other hand, they were more positive about perceptions of learning in this online community. Most of them believed that within the community, they felt comfortable in the learning community. In there, they could share thoughts and opinions, and their learning expectations had been met. The responses showed that Scott and Eva had the strongest perceptions of learning, followed by Linda. Anne held moderate perceptions of learning in this online community due to the lack of human interaction.

Summary

In conclusion, this study provideed information to online course designers and instructors about how a group of learners perceive online learning in a specific course and how their perceptions could be changed by developing a well-designed online learning environment. This study described how a unique group of online learners perceived their online learning experiences in a specific online course, the motivational attributes that impact their learning in the online learning environment, and their sense of membership

in an online learning community. The study provided information about what participants' perceptions of what they liked, what they did not like, how they learned, and what helped them learn. The findings showed that the participants were satisfied with their online learning, but they pointed out that human interaction and personal connection were hard to replicate in online settings. It was also found that the participants were self-regulated learners. They understood that in an online environment, they needed to be self-motivated, to be more independent, and be more responsible for their learning while sharing thoughts. They had achieved their learning goals in this online setting. However, they did not have a strong sense of connectedness with the online community which could have enhanced their learning experience. The need for human interaction was a recurring theme in all the findings of the study.

CHAPTER V

DISCUSSIONS

This chapter presents a discussion of the findings, implications for practice, and recommendations for further research. The purpose of this study was to investigate a group of graduate-level students' perceptions of online education in a specific course. Specifically, the study sought to answer the following questions:

1. How do students enrolled in an online course perceive their learning experience?
2. How do students enrolled in an online course think about their motivation to learn in that environment?
3. How do students enrolled in an online course think about their membership in an online learning community?

Four participants from a graduate-level online course were selected for this study. Three participants were female: Anne, Eva, and Linda; and one male: Scott. Eva had taken two online courses before, while for the other three participants, this was their first online course. A qualitative exploratory case study approach, with limited quantitative data was used in this study. A survey, interviews with individual participants, and observations of participants' online interaction in the online course were conducted to gain an in-depth understanding about a group of students' perceptions of online learning. This study did not seek to generalize the findings from the specific case, but to provide comprehensive descriptions of these unique students' perceptions in one unique class.

Discussion

To help understand participants' perceptions of online learning, Bandura's social cognitive theory was used as the conceptual framework for this study. Social cognitive theory explains student learning in terms of a three-way, dynamic, reciprocal model, in which environmental influences, personal factors, and behavior continually interact (Bandura, 1986). The three focal points of the research questions of this study (learners' online experience, personal motivational attributes, and membership of online learning community) were drawn from and correspond to each of the main interactive elements of Bandura's theory. Learners gain experiences from what online learning environments provide to them; their personal motivational attributes drive their learning; and their willingness to contribute and share knowledge in online learning communities influence their participation. Through the lens of Bandura's social cognitive theory, in the context of online learning, the students' online learning experience (environmental influences), motivational attributes (personal factors), and a sense of membership in a learning community (behavior) are interlinked and continually interact. Since online learning requires learners to be more self-regulated, adaptive, and collaborative in the new learning environment to be successful, self-regulated and situated learning were also used as part of this study's conceptual framework. A discussion of the findings of each research question is provided next.

Research Question 1

The first question explored students perceptions of their overall learning experiences in an online learning environment. The question centered on the environmental factors as

illustrated by Bandura's (1986) social cognitive theory. The online learning environment included: (a) the reasons of taking the online course, (b) students' perceptions of instructional method and their performance in the online course, (c) students' comfort level of technology used, and (d) students' evaluation of the course.

Reasons for taking the online course. The reasons that participants enrolled in the online course were varied. Three participants reported that it was a required course in the doctoral program of study. One participant said that it was not required by his program of study, but he was interested in learning curriculum theory, development, and implementation, to use it as support of his work duties. The four participants are in different intensive study areas, and this course is not required by every study area. The responses of the participants align with the literature which indicates that some adult learners enroll in online courses to get credit courses, practical knowledge, and to improve their general knowledge (Holder, 2007).

Instructional method and student performance. The findings showed that the average amount of time the participants spent on the online course was about 8 hours per week with individual time ranging from 5 to 10 hours. There was not a fixed number of hours for every week, and the amount of time they devoted to the course varied from week to week. It is suggested that in a face-to-face setting, for every hour spent in the classroom, students should spend 2 to 3 hours in outside preparation work (SWBTS, 2009), which means that students enrolled in a 3-credit-hour course will have to spend 6 to 9 hours studying outside the classroom. Two participants reported that they spent a similar amount of time on both the online course and their face-to-face courses. The other two

participants said that they spent more time on the online course. According to the findings, it seems that the amount of time the participants spent was roughly equivalent to the amount of time spent on a face-to-face course. Besides readings and individual assignments, students need to log on to check in several times a week to see what has been posted, reflect on the postings and respond to them. The only way is to log online more often or risk the possibility of getting overwhelmed by the amount of posts. Students may not realize how much time they spend on the come-and-go process which Scott did not consider class time. Online classes take about the same amount of time, but it is all outside the classroom (SWBTS, 2009). The big difference is that time spent on a face-to-face course is usually in a scheduled block of time, whereas in an online setting, time is accumulated, piece by piece, at the learners' pacing. In an online course, students can get behind and feel overwhelmed quickly. Thus, developing a personal schedule for completing course work, and pacing oneself is a key to online learning success. Time management in online learning is discussed in research question two.

The findings showed that all participants enjoyed their online learning experience, they thought instructional directions were clear, learning materials were appropriate, and the course websites were easy to use. However, not every participant indicated that they would consider taking more online courses due to the lack of personal communication in the online setting. Participants agreed that convenience is the major motivation for enrolling in online courses (Leonard & Guba, 2001). They appreciated the opportunities that online learning offers which include the flexibility, convenience, and the ability to work in any place where an Internet connection is available and do so at their own pace.

Participants who held more positive perceptions of online learning valued the benefit an online course provides, namely, asynchronous text-based discussion that stimulates more reflection time for development of in-depth discussion that is not always possible in a face-to-face course. Meyer (2003) pointed out that constructing knowledge does take more time, and online discussions give the time necessary to construct higher-order thinking. Therefore, the participants in this study contributed more in the online learning environment compared to their other 3-hour face-to-face courses. One of the participants, Anne, who did not favor online learning, reported communication anxiety in relation to the lack of personal interaction, delayed responses in an asynchronous environment, and the possibility of causing misinterpretation of meaning. These drawbacks were also perceived by the other three participants as challenges of online learning.

Interaction enhances learning. Bandura (1977) believed that social learning occurs through consequences as well as the observations of other's behaviors. The better the model being observed, the better the behaviors. The findings showed that the participants thought the instructor was very supportive, and the weekly reminder and individual feedback from the instructor was helpful in their online learning. Vygotsky (1978) believed that by experiencing the successful completion of challenging tasks, learners gain confidence and motivation to embark on more complex challenges. Participants pointed out that the instructor's confirmation of their work motivated them to sustain the quality of the next learning task. With the exception of the assigned discussion, the participants tended to communicate with the instructor but not with each other. Their informal interactions with other students through online were minimal. Eva and Scott

reported that they had a similar amount of communication with the instructor, as in face-to-face courses. Linda and Anne did not feel comfortable interacting with the instructor via the Internet, because they thought the instructor was very busy and text-based communication took more time to review and respond. As a result, they turned to class members who they knew personally for informal interactions. Scott reported that he did not know and had never met any class members face-to-face; the other three participants' informal interactions with class members were mostly face-to-face.

Technology comfort. The participants reported that the technology interface used in the online course was easy to handle. The instructor was able to clarify any issue that was confusing to the students and gave detailed instructions in a timely manner. The interface of this online course consisted of three components: an email listserv, a course website, and Wetpaint discussion site. The participants felt inconvenienced by having to check three different places. They preferred a single interface that included all three. The findings suggest that technology used in an online course should be "easy to use and logical in structure" (Palloff & Pratt, 1999, p.59), and sensitive to the fact that online learners are developing a relationship not only with each other but also with technology itself.

Course evaluation. The findings revealed that all the participants' learning goals had been met. Students agreed that they had a better grasp and deeper understanding of the course materials. Most of the participants believed that they were more productive in an online setting due to the extended time that asynchronous text-based discussion could offer for higher-order thinking. Anne, who was less satisfied with online learning,

admitted that her academic expectation of this online course was achieved, but was questioning the level of depth of online learning. She asserted that in face-to-face discussion, issues and points can be stated in several different ways at the same time which brings more meaning into discussions making learning more long term. To that end, Anne's satisfaction with the course was lower than the other participants due to the communication anxiety such as lack of personal interaction, delayed feedback, and misinterpretation of posts. The communication anxiety made her hesitate about taking another online course. On the other hand, Scott stated that online learning has its benefits and drawbacks, and pointed out that it is not fair to require asynchronous learning to function exactly like face-to-face settings. He believed that people need time to accept the asynchronous nature and have a better understanding of the nature of the delivery mode. However, this does not mean that participants who favored online learning did not value informal interaction with each other. They did. They valued personal interaction.

In summary, it can be concluded that most of the participants had positive perceptions toward online delivery. They were satisfied with the learning experiences in the online environment in terms of the content, instruction, support from the instructor, and teaching and learning tools (Hannafin et al., 1999). However, most of their critique of the online learning experience was about the lack of informal personal communication and loss of visual cues. The different levels of satisfaction toward online learning may be caused by students' readiness and their learning styles (Palloff & Pratt, 1999). Eva and Scott had higher levels of satisfaction with online learning. Eva had taken online courses before and had a background in educational technology. Scott boasted that he was good

at technology applications. They seemed more open to the nature of asynchronous communication. Researchers believe that students' perceptions of a learning environment are positively related to their subsequent learning behaviors (Ben-Ari & Eliassy, 2003; Fraser & Fisher, 1983; Konings et al., 2005). Judged by their high level of participation in the online course, Scott and Eva seemed more emotionally and technologically ready for online learning than the other two participants. For most of the participants, this was their first online course; most of their past educational experiences were in traditional face-to-face settings. They had no idea how an online course would function. Some participants might have expected the online course to function similarly to a face-to-face course. When the course design and features did not meet their preset expectations, they were not comfortable with the new learning delivery approach and learning environment. The findings show that the participants' perceptions of online learning did not change significantly over the course of the semester. Transition from face-to-face learning to online learning became an issue that influenced participants' satisfactions of online learning.

Research Question 2

The second question investigated the participants' perceived motivational attributes to learn in the online environment. This question focused on the learners' personal factors as illustrated by Bandura's (1986) social cognitive theory. As an online learning environment is different from a face-to-face setting, learners need to be more independent and more responsible for their own learning, and therefore, self-regulated learning is emphasized. Self-regulated learning uses the social cognitive theory as framework and

refers to individual learners' attempts to monitor and control their own learning including their thoughts, emotions, behaviors, and social contextual surroundings (Pintrich & De Groot, 1990; Zimmerman, 2000).

Howell and others (2003) believed that successful non-traditional distance learners are more likely self-directed, self-motivated, goal and relevancy-oriented, and less dependent on instructors. The findings of this study support the literature. Overall, participants were self-motivated and self-directed learners. They understood that they needed to be more responsible for their learning in the online environment. They realized that effective time management and study environment skills were important in successful online learning. Also, the findings showed that the participants tended to learn on their own and were less likely to ask for help from other students. There were five themes that emerged which included, (a) self-efficacy for learning and performance, (b) Internet self-efficacy, (c) intrinsic goal orientation, (d) time and study environment management, and (e) help seeking.

Self-efficacy for learning and performance. Participants' confidence about succeeding in this online course was relatively high. Eva, in addition to her background and interests in educational technology, had taken three online courses, had been successful in her online learning experience, and brought her prior experience of online learning into the class. As she stated, Eva was comfortable with online learning. She had stronger views and more positive experiences with online learning than the other students in the course, and she perceived the highest level of self-efficacy for learning and performance. The participants stated that their level of self-efficacy grew throughout the

semester. At the beginning of the semester, they all had different concerns about their ability to do well in the new learning environment. As they got more familiar with the technology interface, mastery of the course material, feedback from the instructor and class members, and being comfort interacting with each other, their self-efficacy for learning and performance grew. The findings indicated that Eva and Scott had a higher level of self-efficacy than Anne and Linda. The literature points out that students with a higher perceived self-efficacy report greater satisfaction with their learning experience and are more likely to enroll in future online courses (Bell & Akroyd, 2006; Lim, 2001; Lynch & Dembo, 2004). In the previous section, the findings showed that Anne indicated that she favored a face-to-face setting, because she believed that an online learning environment lacked of formal and informal synchronous interaction and visual cues. The findings support the literature review.

Internet self-efficacy. The participants reported that the technology interface used in this course, which included an email listserv, a class website, and a Wetpaint discussion site, were easy to use but needed some time to get used to it as this was the first online course for most of them. Research showed that although the technology interface may become increasingly user-friendly, there are still problems for inexperienced users (Eachus & Cassidy, 2006). Students encountering difficulties at the beginning of a course is to be expected and is a common phenomenon (Palloff & Pratt, 2007). At the beginning of this course, the participants had questions about the course interface system, and this was manifested in feeling confused about where their discussion posts should be posted. They reported that their concerns were addressed quickly with the instructor's

clarification. However, checking different sites from time to time was somewhat annoying to them. They thought this three-way-combined course interface system was inconvenient, and they preferred to go to one site that had all the information they needed.

Moreover, the participants, especially Anne and Linda, complained that the sites used in this course did not provide visually appealing opportunities that could have allowed them to establish their social presence. Palloff and Pratt (2007) believed that it is difficult for people to relate only to words on a screen; visual images help. This helps construct learner relationships and contributes to community building among the learners.

The findings showed that Eva and Scott were more comfortable with online learning than Anne and Linda. Hong and others (2003) stated that learners who feel uncomfortable with using course management systems may experience more frustrations or anxiety with online courses. The findings of this study supported the literature in that the course management system used should be:

- Functional (posting course materials and creating discussion forums should be easy)
- Simple to operate for both faculty and participants
- User-friendly, visually appealing, and easy to navigate. (Palloff & Pratt, 2007, p.97)

Intrinsic goal orientation. Social cognitive theory emphasizes goal setting as a key motivational factor (Bandura, 1997). Intrinsically goal-oriented learners define what should be learned or what is relevant to their needs for themselves. Since there are no bells that begin and end classes, students must have a strong desire to learn and achieve knowledge and skills via online courses. Making a commitment to learn in this manner is

a very personal decision and requires a strong commitment to actively participate in order to achieve academic success. The findings indicated that the participants came to the course with their own learning goals. Anne was interested in learning about the history of curriculum design and "why things were the ways they were." Eva wanted to learn about the K-12 context that different curriculum theories addressed and also wanted to know how curriculum is developed and evaluated. Linda wanted to know more about the motivation behind certain curriculum, and Scott wanted to learn about curriculum theories in leadership as a support for his work duties.

Self-set goals often motivate learners better than assigned goals. The results showed that the participants were self-motivated in this course, because they stated that their learning was not for grades or rewards, but for learning sake. Under an intrinsic goal orientation, learners are more likely to see a strong link between effort and outcome and therefore make more effort toward attributions of success (Schunk, Pintrich, & Meece, 2008). The findings supported the literature. The participants understood that in this online course, what one puts into the class is what one gets out of it. The number of postings participants posted on the Wetpaint discussion site reflected each participant's level of intrinsic goal orientation, although the quantity certainly cannot be the only indicator. Scott made 131 posts, Eva 76 posts, Anne 74 posts, and Linda 62 posts. Linda seemed to have the lowest level of intrinsic goals compared to the other three participants. But the findings revealed that her social commitments as a new adjunct instructor, as a wife, and as a mother of two young children having unique challenges limited her participation in the online course.

Time and study environment management. Students must be able to organize and plan their own best time and environment in which to learn. There is no one best time or environment for everyone, and the key to learning is to commit time and effort to time management and choosing the environment. All the participants reported that they were busy and their learning environments were distracting. One challenge facing these online learners was the amount of self-discipline required to devote adequate time to class when it did not have regularly-scheduled times to meet synchronously online or in person. A key difference between face-to-face and online learning is the independence and ability to participate in the online class at a time and environment convenient to the student. This also presents a potential problem in the form of procrastination which could cause a student to fall behind. Participants found that establishing their own schedules for class time helped them devote enough time for class participation. In order to study in a minimally distracting study environment, most participants reported that they studied at home, late at night, after their children went to bed and/or on weekends. So, they mostly posted their thoughts and opinions on the Wetpaint discussion site late at night and towards the end of the week.

The participants pointed out that they had to be good at time and study environment skills to succeed in any learning settings, especially in an online environment. Linda, who had difficulty sticking to her study schedule at the beginning of the class, realized that she had to set aside a certain amount of time to focus and do what she needed to do. After setting specific times to read, complete written assignments, and post dialogue to other students, she felt she was doing well with her coursework, and felt more confident in her

online learning. The findings showed that the participants were willing to develop effective time and study environment management skills. The findings supported the literature stating that intrinsic goals are positively related to learners' attempts to self-regulate their time and effort, as the results from the previous section showed that the participants were intrinsically goal-oriented (Pintrich et al., 1993).

Help seeking. Studies have also shown that intrinsic goals are positively related to learners' adaptive help-seeking (Karabenick, 2004; Linnenbrink, 2005; Ryan et al., 2001). Moreover, distance learning research suggests that help seekers may be more likely to achieve their objectives because they are able to seek appropriate learning help from others (Wang & Newlin, 2002; Whipp & Chiarelli, 2004; Zariski & Styles, 2000). However, opposing findings were found in this study. In the previous sections, the findings indicated that the participants in this study were intrinsically goal oriented and shared the common characteristics of adult learners, including being self-directed, self-motivated, and goal and relevancy-oriented. They reported that they did not have much interaction with each other and only asked for help from other course members through the course interface systems. There was limited documented personal interaction between participants and other students. Seeking help via technology seemed not to happen often among students in this online learning environment. Eva had worked with the instructor in another graduate course; she had a well-established prior relationship with the instructor. She and Scott reported that they would contact the instructor first when they had questions about the course. Eva further explained that she preferred studying on her own. Anne and Linda mentioned that they had lots of questions for which they did not

seek help online because they did not feel comfortable asking anybody when there was no personal connection. Even though the participants seldom sought help from other class members online, Anne, Eva, and Linda discussed course materials with their classmates when they met face-to-face. The findings suggest that online course designers and instructors will need to elaborate more on building social connections initially rather than emphasizing course materials.

It can be concluded that the participants were self-motivated and self-regulated learners in this online course, to varying degrees. Researchers point out that motivation is a key element to autonomous learning, which is needed in an online learning environment, and is engendered by one's level of self-regulation (Schunk et al., 2008). During the online course, participants developed a greater sense of self-efficacy, set their learning goals, and learned to manage their time and study environment, which are crucial elements of self-regulated learning. They relied on their individual abilities to direct their learning (Militiadou & Savenye, 2003; Schunk & Zimmerman, 1998). The results, however, did not show that interaction and help seeking were occurring in the course interface systems. Most of the participants reported that they interacted face-to-face. This suggested that more effort should be put on student relationship building when choosing online delivery systems and designing and facilitating online courses.

Research Question 3

The third question explored the participants' perceived membership in a learning community while online. The focus of this question was on the learners' behavioral influences in learning as illustrated by Bandura's (1986) social cognitive theory. Social

cognitive theory recognized that a learner can learn by observing others, not just by doing an activity himself or herself. Learners also observe the consequences of those behaviors, which help them to decide whether to perform those behaviors themselves. The new behaviors are the products of learning. In an online learning environment, learning through observation is achieved by sharing knowledge and experience via textual communication. In other words, learning by observation occurs by participating in a learning community, which is in line with the situated learning perspective which views learning as increasing participation in communities and through collaboration with other individuals (Clancey, 1997; Lave & Wenger, 1991). Situated learning was used to help understand the learners' behavioral influences in social cognitive theory.

Bell and Winn (2000) believed that communication is critical to distributed cognition; knowledge is useless unless it is shared. If all learners share their cognition with each other, the overall group cognition is enriched and everyone stands to benefit. Research has found that the key to successful online learning is the formation of an effective learning community (Picciano, 2002; Richardson & Swan, 2003; Rovai & Barnum, 2003). An online learning community cannot be created by one person. Even though the instructor is responsible for facilitating the process, participants are responsible in making community happen (Palloff & Pratt, 2007). Forming a learning community entails learners' feelings of connectedness and their perceptions of learning, which are two themes that emerged in the findings of this study. The findings of this study showed that the participants had positive feelings towards learning, and their

learning goals had been fulfilled. However, they did not have strong feelings that they were connected to each other.

Feelings of connectedness. The findings showed that the participants did not feel much connection to each other online; they had personal interaction with class members offline rather than interacting via the course interface systems, whenever they had the chance. How participants make more human connections while continuing the learning process is still a concern in online learning (Palloff & Pratt, 2007). Studies noted that social presence, known as a feeling of community, and connection among learners, contributed positively to learning outcomes and learner satisfaction with online courses (Picciano, 2002; Tu & Corry, 2002).

Anne, who was the least satisfied with her online experience, claimed that there was no trusting relationship in the online course because online settings did not provide an environment for informal social interaction. She said she missed the type of social contact in which she was able to see her instructor and classmates, hear what they said, and engage in verbal conversation with them. She was also frustrated with the lack of visual cues in the technology used. She felt lost and isolated. Palloff and Pratt (2007) pointed out that "[a]s we attempt to build an online community, human issues will emerge, whether we expect them to or not" (p.45). The researchers further suggested that online educators need to acknowledge and recognize psychological and spiritual issues when they emerge, as they are core issues in the formation of a community. The findings of this study suggest that the issue of isolation is an important criterion for student satisfaction in a web-based course (Daugherty & Funke, 1998). It is important for online educators to

utilize technological features to create a sense of presence and reduce social distance while building an online community.

The participants also reported that besides the Wetpaint discussion posts, most of their web-based interactions with class members were when they were paired with another student. Linda gained trust and friendship with her assigned activity partner through sharing their interests and experiences, and she wanted to meet her study partner face-to-face at the end of the semester. The findings confirmed that posting introductions and encouraging students to look for common interests is always an appropriate way to start an online course (Conrad & Donaldson, 2004; Palloff & Pratt, 2007). The findings also pointed out that group size plays a role in creating personal connection online. Palloff and Pratt (2007) suggested that a large group can be broken into small groups or teams; small grouping promotes an environment in which collaborative work is possible.

Perceptions of learning. The participants reported that their learning goals for this course were met. They appreciated that the online learning environment allowed more time to construct their own knowledge through a process of personally accommodating information into previously existing cognitive structures, also known as student-to-content interaction (Moore & Kearsley, 2005). They admitted that being able to reflect more on course materials and discussions, and making connections to prior knowledge helped them generate deeper levels of knowledge. Collaborative learning and reflective practice, which are necessary for transformative learning to occur, are two of the key elements in an online learning community (Palloff & Pratt, 2003). Online classes are developed from a collaborative framework. When working in small groups in an

online course, students' ability to create knowledge and meaning is enhanced (Palloff & Pratt, 2005). In other words, collaboration supports the creation of the learning community and the learning community supports the ability to collaborate. Student-to-student and student-to-instructor interaction are the hallmark of online learning in a collaborative learning community.

The participants agreed that the instructor had a positive impact and was a great asset to their learning. The participants also indicated that the instructor asked open-ended questions designed to stimulate critical thinking about the topic being discussed, he made thoughtful comments on student posts to stimulate further discussion, and he also gave supportive feedback to encourage learners' participation in the course. These are characteristics of an effective online instructor, as stated by Palloff and Pratt (2007). Scott said that he could not think of anything that the instructor could have done differently. Rovai and Barnum (2003) noted that interaction between the instructor and students, along with interactive course activities help increase the perception of learning online. The findings of this study showed that Scott and Eva interacted with the instructor more than Linda and Anne, and Scott and Eva indicated higher satisfaction of learning in this course. The findings support the literature.

In an online learning community, a range of student-to-student communication is encouraged more than teacher-to-student interaction (Bell & Winn, 2000). Learning communities encourage student-to-student interactions to share resources and support and enrich each others' learning. The findings of this study showed that the participants had different opinions concerning the learning community in their online course. In the online

learning setting, it is an imagined community rather than a physical one. There are barriers to perceiving a positive sense of a learning community online, such as technology competence and physical presence. There are also other attributes that may influence an individual's sense of learning community, such as personality and learning style. Eva and Scott felt there was a learning community, that class members shared their knowledge and experiences, and supported each other's learning. Linda and Anne, especially Anne, did not experience a feeling of an online learning community, due to the lack of human interaction. They stated that their learning was primarily on their own. Again, the findings verified that social interaction is a critical element of the online community and is critical to effective collaborative work.

It can be concluded that forming a sense of a learning community is essential in online learning. Online courses need to offer environments that promote interactions among learners and between learners and instructors, in collaborative learning communities (Palloff & Pratt, 2007). Technology can be designed to facilitate learning communities through the creation of small team activities that enhance students' learning experience (Conrad & Donaldson, 2004; Palloff & Pratt, 2007).

Overlapping Concerns across Three Research Questions

The findings of the study suggested that the concerns of the participants across the three research questions included the need for social connection and the use of technology to enhance a connection in online learning. The social cognitive theory explains that effective learning occurs when personal motivational factors, environment influences, and learning behaviors continually interact (Bandura, 1986). There is

evidence in this study that shows that the lack of social connection may: decrease participants' levels of satisfaction in their online learning experiences; have an impact on their desire to ask for help from other class members; result in a weak sense of being connected in a learning community; and make learners doubt the quality of online learning. Some participants also stated that the course interface systems did not provide the opportunities for them to build social connections with others.

The literature pointed out that collaborative learning increases learner control and motivation, enhances learning outcomes, and creates opportunities to increase social connectedness and networking among learners which all lead to higher satisfaction (Anderson, 2006; Rourke & Anderson, 2002). Palloff and Pratt (2007) asserted that in the context of online learning environment, "it is the relationships and interactions among people through which knowledge is primarily generated" (p. 15). The findings of this study showed that the incapacity for participants to discover and communicate with each other in real-time and to be able to determine when learners are available to communicate had been a major constraint for collaboration for some of the participants in the online context. The richness of face-to-face interaction, with the implicit advantages of body language and shared context, will likely not be totally replicated at a distance. However, use of technology features that can find, organize, and schedule access to both material and human resources will significantly enhance this capacity.

Implications for Practice

The findings of this study confirmed that participants who had higher levels of satisfaction with online learning had strong self-regulatory skills, felt more connected to others, and participated more in the class. Based on the findings of this study, there are three considerations that instructional designers and instructors need to reflect on for effective delivery of online programs. Student readiness in online learning, the use of effective technology to build learning communities, and the use of appropriate activities to engage learner to form learning communities are key elements for designing and delivering effective online courses for graduate-level students.

Student Readiness

Learners come with different attitudes, beliefs, learning styles, preferences, and experiences. All of these have an impact on their learning. The findings of this study revealed that the participants' perceptions about online learning and the online environment varied. They had typical adult-learner characteristics: self-motivated, self-directed, and goal and relevancy-oriented (Brookfield, 1996; Howell et al., 2003; Knowles, 1978). Some of them reported that they had basic computer skills, and some of them had advanced computer skills. Learners had integrated technology into their daily lives, such as using word processing, emailing, and doing research online; however, studying in an online environment was a new learning arena.

In an online learning environment, unless using video or audio synchronous features, students cannot meet their instructors and classmates in real time, cannot see the facial expressions and body language, and cannot hear the tones in voices of their classmates,

which are helpful to establishing a sense of presence and connection. In other words, students in online learning environments experience "a whole new set of physical, emotional, and psychological issues along with the educational issues" (Palloff & Pratt, 2007, p. 6). Palloff and Pratt (2007) further pointed out that many of the issues, for instance, not being able to see, hear, and touch the people who are communicating, relates to the development of social presence. Research found a correlation among presence, student learning, and satisfaction with online courses (Richardson & Swan, 2003). Palloff and Pratt (2007) pointed out that it is unrealistic to expect that all students will do well in an online environment; it should not be considered a failure but simply not a good fit, or they are not ready for this environment. Instructors need to make the transition and establish presence from a face-to-face classroom to an online environment where interactions among learners are expected to strengthen student readiness in online learning.

Building Learning Communities via Technology

The participants claimed that they missed the interaction that took place in their other face-to-face courses where they could see, hear, and discuss with others. The technology interface used in this course did not support the expressed need for human contact and emotional bonding. Palloff and Pratt (2005) indicated that technology comfort, including hardware and software, contributes to a sense of psychological assurance and leads to a greater likelihood of participation. Learners are different in their attitudes, beliefs, learning styles, and preferences. Palloff and Pratt (2007) also argued that learners are developing a relationship not only with each other but also with the

technology itself. An effective online course should use a variety of technological features to accommodate and match learners' differences in learning styles and preferences in order to provide opportunities to feel engaged in a learning community and establish feelings of a connection with others.

Using Kolb's (1985) Learning Style as a framework, Olsen (2007) suggested technological features that could be integrated into online courses. She suggested that for learners who learn by doing and getting involved in new experiences, features such as multimedia, listservs, chats, simulators, and role-playing activities are appropriate for engaging these learners. Images or live virtual classrooms are useful for learners who are logical order and inductive reasoning oriented. For learners who prefer to deal with people rather than things, streaming media, audio, and video are suitable. For learners good at generating ideas, collaborative instructional activities should be provided (Olsen).

It is not the purpose of this section to discuss various forms of technology available and their uses in online learning; it is to remind online instructors to be aware of the role technology plays in the delivery of a course and to take advantage of what technology can provide. More importantly, technology is a vehicle which delivers an online course, provides a platform to learners to establish connections and communication, and helps students to achieve their learning goals. The type of technology used should be based on particular circumstances; it is not the fancier the better or the newer the better. In any case, technology packages used in online courses should be functional; simple to operate; and user-friendly, visually appealing, and easy to navigate (Palloff & Pratt, 2007).

Engaging Online Learners

This study found that some of the participants did not experience a sense of learning community or had weak perceptions of the learning community in this course due to the lack of verbal and physical communication cues in the online environment. Conrad and Donaldson (2004) suggested that activities that promote engaged learning help solve the issues. They further stated that engaged learning encourages learners to actively participate in the learning situation and hence gain the most knowledge from being a member of an online learning community (Conrad & Donaldson). One of the participants of this study did not think that what she learned online would be long-lasting. Conrad and Donaldson (2004) argued that activities could be memory cues that trigger long-term memory. However, online practitioners should not "assume that learners know how to interact online and how to become more responsible for their online learning" (p. x). It is the instructors' responsibility to guide learners in the development of necessary skills to engage with the content and fellow students online.

Instructors and students are equal partners in building an online learning community. The success of a course depends on participation by all members. An online setting is a student-centered learning environment where the role of an instructor shifts from an initiator to a facilitator of knowledge generation and interaction (Conrad & Donaldson, 2004). Kearsley (2000) stated that "the most important role of the instructor in online classes is to ensure a high degree of interactivity and participation. This means designing and conducting learning activities that result in engagement with the subject matter and with fellow students" (p. 78).

Palloff and Pratt (2007) suggested that an effective online course should begin with activities that focus on establishing human-to-human contact before interaction with course content starts. An initial face-to-face meeting can be helpful to orient students to the online environment and technology in use. Icebreaker activities are suggested (Conrad & Donaldson, 2004). It was also found that when working in small groups in an online course, the ability to create knowledge and meaning is enhanced (Palloff & Pratt, 2005).

The development of students being engaged learners takes time. The Phases of Engagement by Conrad and Donaldson (2004) is a four-phase framework that guides instructors and students to go through an effective learning process from introductory of community-building, to working together. During Phase 1, introductory activities are used to establish an appropriate climate for engagement, such as icebreakers and individual introductions. In Phase 2, students are paired in working dyads, and the learners are oriented more toward academic exchanges; activities such as peer review is suggested. In Phase 3, peer partners are combined into collaborative teams and given activities such as content discussions and role playing. In Phase 4, activities are led by individuals and teams, such as learner-facilitated discussions (Conrad & Donaldson). There are many models that promote active online interaction and collaboration (i.e., Garrison, Anderson, & Archer, 2000; Palloff & Pratt, 2007); this is just an example of engaging learners in online learning communities. The key is to choose the most appropriate technology to plan and conduct activities that will promote successful online learning for students with different learning preferences.

Recommendations for Further Research

This study was aimed at understanding graduate-level students' perceptions of online education in terms of the online learning experiences perceived, their own motivational attributes, and their sense of membership in a learning community, through the lens of Bandura's social cognitive theory. Several recommendations for additional research emerge from the results of this study:

1. This study attempted to investigate students' perceptions in a total online environment. Participants' being able to interact personally was not expected. An interesting extension to this study would be to see what the differences are of students' interaction patterns and their sense of community if the learning environment is purely online, and students do not have the opportunity to interact face-to-face.

2. This study focused on doctoral level students. More research is needed to broaden our understanding of all levels of adult learners and their experiences, attitudes, belief, and perceptions of online learning.

3. Another possible extension to this study could be to replicate the study with a graduate program that was offered completely online and recruit more participants to the study, such as conduct surveys and interview all students in the program.

4. Today, distance education is found in every country of the world. The Internet makes online education available in any country. An online course can enroll students from different countries. This study was limited to participants in Iowa, and the majority of participants were women. Based on the fact of globalization of online education, cultural issues and language considerations should be taken into account when designing

and delivering online courses. Studying a heterogeneous group (i.e., non-Iowa based students, balanced-mix of genders, or a mixture of ethnic groups) and their perceptions, beliefs, and attitudes regarding online learning could be another recommendation of extended study. Diversity is one of the main advantages of online learning. Learners may come from different cultural, educational, and national backgrounds. The content, organization, delivery, and assessment of the course will require more effort and scrutiny to make sure that they match the learners' attitudes, beliefs, learning styles, and preferences.

5. This study could be extended to use a focus group approach after individual interviews to gather additional data on students' attitudes and perceptions of online learning. A focus group approach encourages participants' involvement and disclosure in a nurturing environment. People's attitudes and perceptions are developed through interaction with other people. During a group discussion, individuals may shift due to the influence of other comments. Alternately, opinions may be held with certainty.

6. Further research will be needed to investigate instructors and their experiences with online education. Not every learner is ready for online learning; not every instructor is ready to teach online. Research that focuses on instructional designer should observe how their online courses are designed and implemented. Research would also be beneficial if it identified institutions or programs that provide online faculty training and development.

7. Another recommendation would be to study the *Phases of Engagement* to explore how an online learning community is formed through scaffolding activities and in what ways the online community contributed to deeper learning.

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APPENDIX A

SYLLABUS

210:352 Curriculum Theory and Development
FALL 2008
August 25 - December 19, 2008

This course will be taught fully online.

TOPIC SECTIONS: 1 2 3 4 5 6 7 8

Dr. XXX XXXXX
xxx.xxx@xxx.edu
OFFICE: SEC 000
University of xxxxxxxx

xxx-xxx-xxxx Office
xxx-xxx-xxxx Home
xxx-xxx-xxxx Fax

The Americans with Disabilities Act of 1990 (ADA) provides protection from illegal discrimination for qualified individuals with disabilities. Students requesting instructional accommodations due to disabilities must arrange for such accommodations through the Office of Disability Services. The Office of Disability Services is located in Student Services Center 213, and the phone number is 319/273-2676.

TABLE OF CONTENTS

APPENDIX B

INVITATION TO PARTICIPANT

Dear Doctoral Students,

My name is Hou Chun Kuong, and I am a doctoral candidate in the Curriculum & Instruction intensive area. For my dissertation, I am interested in learning more about online learning, namely, students' experiences as online learners. As an online student in Dr. Nielsen's class this fall, I would like to ask for your participation in this study. The information from this study would be useful to educators who offer courses online. The following information is provided to help you make an informed decision about whether or not to participate.

Nowadays, more and more learners, like yourself, are entering the online learning avenues because of its flexibility and convenience as learners are able to take courses based on their schedules at anytime and from anywhere. Perception is a predictor of successes in online learning. Understanding these learners' perceptions of online learning in relation to learning experience, motivation factors, and sense of learning community is essential when designing effective courses which are most appropriate for them. Unfortunately, there is not much information available to online educators that describing perceptions in these three specific areas. How do students enrolled in an online course perceive their learning experience? How do students enrolled in an online course think about their motivation to learn in that environment? How do students enrolled in an online course think about their membership in an online learning community? Questions like these need to be answered in order for online educators to develop and deliver effective online courses.

Although your input is essential to the success of this project, participation is completely anonymous and voluntary; you will contact the researcher directly; the instructor will not be informed of your participation. You are free to withdraw from participation at any time or choose not to participate at all, you will not be penalized doing so. The researcher will conduct an online survey and a face-to-face interview with you; the online survey will be posted on "MyUNIverse" in beginning of the course. It will take approximately 30 minutes to complete the survey online. The interview will be conducted at the end of the course. If you complete the survey, it means that you have read the information contained in this letter and agree to participate in this research study. The face-to-face interview will be conducted in a place where is convenient for both of us, will be audio-taped and will take 30 to 45 minutes. Additionally, the researcher will observe your discussion and response postings, assignments, and online interaction with other students and the instructor, follow-up questions will be sent to you via email.

Information obtained during the study which could identify you will be kept strictly confidential. Follow-up questions via e-mail will be copied and saved in a Word

document, the original messages will be deleted afterwards. Collected data will be stored in a password protected computer and will be accessible only to the researcher and the faculty advisor, and will be destroyed after the data is analyzed. The summarized findings with no identifying information will be used in the researcher's dissertation and may be published in an academic journal or presented at a scholarly conference. The results of the study will be available upon request to all participants at the conclusion of the study.

If you have questions about the study or desire information in the future regarding your participation, you can contact Hou Chun Kuong at 319-222-5952 or by email at kuonghc@uni.edu or the faculty advisor, Dr. Radhi Al-Mabuk at the Department of Educational Psychology and Foundations, University of Northern Iowa at 319-273-2609 or by email at radhi.al-mabuk@uni.edu, for answers to questions about rights of research participants and the participants review process. You can also contact the office of the IRB Administrator, University of Northern Iowa, at 319-273-6148, for answers to questions about the rights of research participants and the participant review process.

Sincerely,

Hou Chun Kuong
kuonghc@uni.edu
University of Northern Iowa

APPENDIX C

CONSENT FORM

UNIVERSITY OF NORTHERN IOWA
HUMAN PARTICIPANTS REVIEW
INFORMED CONSENT

Project Title: An Exploratory Case Study of Students' Perceptions of Online Graduate Education

Name of Investigator(s): Hou Chun Kuong

You are invited to participate in a research project conducted through the University of Northern Iowa. The University requires that you give your signed agreement to participate in this project. The following information is provided to help you made an informed decision about whether or not to participate.

Nowadays, more and more learners, like yourself, are entering the online learning avenues because of its flexibility and convenience as learners are able to take courses based on their schedules at anytime and from anywhere. Perception is a predictor of successes in online learning. Understanding these learners' perceptions of online learning in relation to learning experience, motivation factors, and sense of learning community is essential when designing effective courses which are most appropriate for them. Unfortunately, there is not much information available to online educators that describing perceptions in these three specific areas. How do students enrolled in an online course perceive their learning experience? How do students enrolled in an online course think about their motivation to learn in that environment? How do students enrolled in an online course think about their membership in an online learning community? Questions like these need to be answered in order for online educators to develop and deliver effective online courses.

Although your input is essential to the success of this project, participation is completely anonymous and voluntary; you will contact the researcher directly; the instructor will not be informed of your participation. You are free to withdraw from participation at any time or choose not to participate at all, and doing so, you will not be penalized. The researcher will conduct an online survey and a face-to-face interview with you; the online survey will be posted on "MyUNIverse" in beginning of the course. It will take approximately 30 minutes to complete the survey online. The interview will be conducted at the end of the course. If you complete the survey, it means that you have read the information contained in this letter and agree to participate in this research study. The face-to-face interview will be conducted in a place that is convenient to both the interviewee and the researcher, will be audio-taped, and will take 30 to 45 minutes. Additionally, the researcher will observe your discussion and response postings, assignments, and online interaction with other students and the instructor, follow-up questions will be sent to you via email.

Information obtained during the study which could identify you will be kept strictly confidential. Follow-up questions via e-mail will be copied and saved in a Word document, the original messages will be deleted afterwards. Collected data will be stored in a password-protected computer and will be accessible only to the researcher and the faculty advisor, and will be destroyed after the data is analyzed. The summarized findings with no identifying information will be used in the researcher's dissertation and may be published in an academic journal or presented at a scholarly conference. The results of the study will be available upon request to all participants at the conclusion of the study.

If you have questions about the study or desire information in the future regarding your participation, you can contact Hou Chun Kuong at 319-222-5952 or by email at kuonghc@uni.edu or the faculty advisor, Dr. Radhi Al-Mabuk at the Department of Educational Psychology and Foundations, University of Northern Iowa at 319-273-2609 or by email at radhi.al-mabuk@uni.edu, for answers to questions about rights of research participants and the participants review process. You can also contact the office of the IRB Administrator, University of Northern Iowa, at 319-273-6148, for answers to questions about the rights of research participants and the participant review process.

Agreement:

I am fully aware of the nature and extent of my participation in this project as stated above and the possible risks arising from it. I hereby agree to participate in this project. I acknowledge that I have received a copy of this consent statement. I am 18 years of age or older.

_____ _____

(Signature of participant) **(Date)**

_____

(Printed name of participant)

_____ _____

(Signature of investigator) **(Date)**

_____ _____

(Signature of instructor/advisor) **(Date)**

[NOTE THAT ONE COPY OF THE ENTIRE CONSENT DOCUMENT (NOT JUST THE AGREEMENT STATEMENT) MUST BE RETURNED TO THE PI AND ANOTHER PROVIDED TO THE PARTICIPANT. SIGNED CONSENT FORMS MUST BE MAINTAINED FOR INSPECTION FOR AT LEAST 3 YEARS]

APPENDIX D

SURVEY

AN EXPLORATORY CASE STUDY OF STUDENTS' PERCEPTIONS
OF ONLINE GRADUATE EDUCATION

Hou Chun Kuong

This instrument is designed to assess your experiences in online learning. The following questions are focused on your perceptions with regard to the quality of learning, your own motivational influences, and the concept of membership in a learning community. Your responses will be held in strict confidence and your identity will not be revealed to anyone other than the researcher. Please complete this survey by **September 8, 2008**. It should take you approximately 30 minutes to complete. By completing the attached survey, you agree to participate in this research study. Please address your email to Hou Chun Kuong at kuonghc@uni.edu and NOT the class listserv. The researcher will contact you for further discussion.

1. Age:

2. Gender:

3. Geographic location (e.g. Cedar Falls, Waterloo, or others):

4. Occupation:

5. What is your marital status? How many kids do you have?

6. Your Major / Program:

7. Number of years in program:

8. Taking a course online required me to devote weekly hours to it.
   - 8.1 From these weekly hours, I would devote ____ hours reading the course material and my assignments.
   - 8.2 From these weekly hours, I would spend ____ hours following the professor's instruction.
   - 8.3 From these weekly hours, I would spend ____ hours interacting with the professor.
   - 8.4 From these weekly hours, I would spend ____ hours interacting with my peers from class.

Please read each of the statements and respond by checking the appropriate box according to how you generally feel about the statement. **(Strongly Disagree 1, Disagree 2, Neutral 3, Agree 4, Strongly Agree 5, Don't Know 6)**

		Strongly Disagree 1	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**	**Don't Know 6**
9.	I enjoyed this online course.	☐	☐	☐	☐	☐	☐
10.	I would like to take another online course.	☐	☐	☐	☐	☐	☐
11.	I believe that if this course had been offered in a face-to-face mode it would have covered more material.	☐	☐	☐	☐	☐	☐
12.	I believe that if this course had been in the face-to-face mode I would have interacted more with the professor.	☐	☐	☐	☐	☐	☐

		Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5	Don't Know 6
13.	I believe that having a course online is more challenging than having a course via a face-to-face mode.	☐	☐	☐	☐	☐	☐
14.	I participated more in the online course than I usually do in a face-to-face class.	☐	☐	☐	☐	☐	☐
15.	The following reasons had an impact on your answer to question 14:						
	15.1 Your personality	☐	☐	☐	☐	☐	☐
	15.2 You felt anonymous	☐	☐	☐	☐	☐	☐
	15.3 You felt more freedom to express your ideas	☐	☐	☐	☐	☐	☐
	15.4 You had time to think about how you wanted to express your opinion about a particular matter.	☐	☐	☐	☐	☐	☐
	15.5 You felt more comfortable writing than talking	☐	☐	☐	☐	☐	☐
	15.6 You felt more comfortable with this medium due to the fact that you were faceless.	☐	☐	☐	☐	☐	☐
	15.7 Other: _____						
16.	At the beginning of your course, you received all the instructions you needed in order to be able to "attend" the online course?	☐	☐	☐	☐	☐	☐
17.	The interesting parts of this online course are:						
	17.1 The content	☐	☐	☐	☐	☐	☐
	17.2 The Web format	☐	☐	☐	☐	☐	☐
	17.3 The interaction with classmates through e-mail/wiki	☐	☐	☐	☐	☐	☐
	17.4 The interaction with the professor through e-mail/wiki	☐	☐	☐	☐	☐	☐
	17.5 The experience of using the electronic mailing list	☐	☐	☐	☐	☐	☐
18.	The instructional feature is well integrated with the text and the readings.	☐	☐	☐	☐	☐	☐
19.	The instructional feature is too long and it required too much reading.	☐	☐	☐	☐	☐	☐
20.	The learning material was too theoretical.	☐	☐	☐	☐	☐	☐
21.	The technology used in the course overpowered the subject matter.	☐	☐	☐	☐	☐	☐

		Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5	Don't Know 6
22.	So far, I am satisfied with my online learning course experience.	☐	☐	☐	☐	☐	☐
23.	The online course met my expectations about an online course.	☐	☐	☐	☐	☐	☐
24.	I believe that the online course gave me more opportunity to interact with my classmates than if I had taken the same course face-to-face.	☐	☐	☐	☐	☐	☐
25.	I believe that the online course gave me a better learning opportunity than if I had taken the same course face-to-face.	☐	☐	☐	☐	☐	☐

26. Why did you choose to take this online learning course?

27. I experienced some technological difficulties such as (if you did not experience any technological difficulties, please skip to question 28):

28. I am satisfied with the online course experience I had. Why?

29. In your opinion, what are the advantages of being able to receive a whole class via courses online?

30. In your opinion, what are the disadvantages of being able to receive a whole class via courses online?

Please rate the following items based on your behavior in this class. Your rating should be on a 7-point scale where **1= not at all true of me** to **7=very true of me**.

		Not at all true of me 1	**2**	**3**	**4**	**5**	**6**	**Very true of me 7**
31.	In a class like this, I prefer course material that really challenges me so I can learn new things.	☐	☐	☐	☐	☐	☐	☐
32.	I believe I will receive an excellent grade in this class.	☐	☐	☐	☐	☐	☐	☐
33.	I'm certain I can understand the most difficult material presented in the readings for this course.	☐	☐	☐	☐	☐	☐	☐
34.	I'm confident I can learn the basic concepts taught in this course.	☐	☐	☐	☐	☐	☐	☐
35.	I'm confident I can understand the most complex material presented by the instructor in this course.	☐	☐	☐	☐	☐	☐	☐
36.	In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.	☐	☐	☐	☐	☐	☐	☐
37.	I'm confident I can do an excellent job on the assignments and tests in this course.	☐	☐	☐	☐	☐	☐	☐
38.	I expect to do well in this class.	☐	☐	☐	☐	☐	☐	☐
39.	The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.	☐	☐	☐	☐	☐	☐	☐
40.	When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.	☐	☐	☐	☐	☐	☐	☐
41.	I'm certain I can master the skills being taught in this class.	☐	☐	☐	☐	☐	☐	☐
42.	Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.	☐	☐	☐	☐	☐	☐	☐
43.	I usually study in a place where I can concentrate on my course work.	☐	☐	☐	☐	☐	☐	☐
44.	Even if I have trouble learning the material in this class, I try to do the work on my own, without help from anyone. (REVERSED)	☐	☐	☐	☐	☐	☐	☐
45.	I make good use of my study time for this course.	☐	☐	☐	☐	☐	☐	☐

		Not at all true of me 1	2	3	4	5	6	Very true of me 7
46.	I find it hard to stick to a study schedule. (REVERSED)	☐	☐	☐	☐	☐	☐	☐
47.	I ask the instructor to clarify concepts I don't understand well.	☐	☐	☐	☐	☐	☐	☐
48.	I have a regular place set aside for studying.	☐	☐	☐	☐	☐	☐	☐
49.	When I can't understand the material in this course, I ask another student in this class for help.	☐	☐	☐	☐	☐	☐	☐
50.	I make sure that I keep up with the weekly readings and assignments for this course.	☐	☐	☐	☐	☐	☐	☐
51.	I "attend" this class regularly.	☐	☐	☐	☐	☐	☐	☐
52.	I try to identify students in this class whom I can ask for help if necessary.	☐	☐	☐	☐	☐	☐	☐
53.	I often find that I don't spend very much time on this course because of other activities. (REVERSED)	☐	☐	☐	☐	☐	☐	☐
54.	I rarely find time to review my notes or readings before an exam. (REVERSED)	☐	☐	☐	☐	☐	☐	☐
I feel confident…								
55.	Understanding terms/words relating to Internet hardware.	☐	☐	☐	☐	☐	☐	☐
56.	Understanding terms/words relating to Internet software.	☐	☐	☐	☐	☐	☐	☐
57.	Describing functions of Internet hardware.	☐	☐	☐	☐	☐	☐	☐
58.	Trouble shooting Internet problems.	☐	☐	☐	☐	☐	☐	☐
59.	Explaining why a task will not run on the Internet.	☐	☐	☐	☐	☐	☐	☐
60.	Using the Internet to gather data.	☐	☐	☐	☐	☐	☐	☐
61.	Learning advanced skills within a specific Internet program.	☐	☐	☐	☐	☐	☐	☐
62.	Turning to an online discussion group when help is needed.	☐	☐	☐	☐	☐	☐	☐

How would you rate your sense of community in this course with the following? Read each of the statements and respond by checking the appropriate box according to how you generally feel about the statement. **(Strongly disagree 1, Disagree 2, Neutral 3, Agree 4, strongly agree 5, Don't know 6)**

		Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5	Don't Know 6
63.	I feel that students in this course care about each other	☐	☐	☐	☐	☐	☐
64.	I feel that I am encouraged to ask questions	☐	☐	☐	☐	☐	☐
65.	I feel connected to others in this course	☐	☐	☐	☐	☐	☐
66.	I feel that it is hard to get help when I have a question	☐	☐	☐	☐	☐	☐
67.	I do not feel a spirit of community	☐	☐	☐	☐	☐	☐
68.	I feel that I receive timely feedback	☐	☐	☐	☐	☐	☐
69.	I feel that this course is like a family	☐	☐	☐	☐	☐	☐
70.	I feel uneasy exposing gaps in my understanding	☐	☐	☐	☐	☐	☐
71.	I feel isolated in this course	☐	☐	☐	☐	☐	☐
72.	I feel reluctant to speak openly	☐	☐	☐	☐	☐	☐
73.	I trust others in this course	☐	☐	☐	☐	☐	☐
74.	I feel that this course results in only modest learning	☐	☐	☐	☐	☐	☐
75.	I feel that I can rely on others in this course	☐	☐	☐	☐	☐	☐
76.	I feel that other students do not help me learn	☐	☐	☐	☐	☐	☐
77.	I feel that members of this course depend on me	☐	☐	☐	☐	☐	☐
78.	I feel that I am given ample opportunities to learn	☐	☐	☐	☐	☐	☐
79.	I feel that uncertain about others in this course	☐	☐	☐	☐	☐	☐
80.	I feel that my education needs are not being met	☐	☐	☐	☐	☐	☐

		Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5	Don't Know 6
81.	I feel confident that others will support me	☐	☐	☐	☐	☐	☐
82.	I feel that this course does not promote a desire to learn	☐	☐	☐	☐	☐	☐

Please send this survey back to Hou Chun Kuong at kuonghc@uni.edu
NOT the class listserv. I will contact you for further discussion.
Thank you for your participation!

APPENDIX E

INTERVIEW PROTOCOL

1. Please tell me your overall experience about this course? Are there differences from what you had expected? How and why?
2. Are you satisfied with your online learning course experience?
3. Compared to other face-to-face courses you have taken; do you think this course was more challenging? Why and how?
4. Did this course meet your expectations about an online course? Why and How?
5. What were the biggest problems taking this course? What was most frustrating taking this class?
6. How much time did you spend working on this course weekly? How did you arrange your study hours?
7. Did you interact with the instructor more in this course, compared to face-to-face courses you have taken? Why?
8. Did you experience technological difficulties? What were they? How did you solve them?
9. To what degree would you rate your confidence of doing well in this course? How and why?
10. Where did you usually study? Why?
11. When you had questions about the course, how did you solve the problem?
12. How did you feel the sense of a community of learning in this course?
13. Is there anything else you want to tell me about this course?
14. Is there anything else I should know?

APPENDIX F

WEEKLY PARTICIPATION TRACKING FORM

Observation Guide

The course observation is to validate the participants' responses to both the surveys and interviews based upon their participations in the course. The researcher will observe participants' discussion postings daily and fill out the following observation form for each participant. The researcher will synthesize the data weekly.

Participant: _____ Week: _____

Date & Time	**With whom**	***Nature of Interaction**	**Notes**

*Nature of Interaction (e.g. question, comment, expressed thoughts & feelings)

Total # of posting: _____

Interaction Pattern:

APPENDIX G

SAMPLE OF CODING OF INTERVIEWS

Responses	Initial Codes	Category	Themes	Research Question
I really liked the class and the format. I think the directions were very clear and detailed..... I was really happy and impressed with the design of the course. I think it was very thoughtfully and very carefully planned out and implemented.	Course design	Instructional support	Effectiveness	1
I found that was very helpful, in which he would highlight some of the really key things that we had said in our weekly postings and had provided some feedback on how he was assessing our discussion, and giving class rubric.	Instructor support	Interaction Learning support	Interaction with the instructor	1 & 3
It was my first doctoral class and I had not been in classes for 15 years, so it was going to be something big.	Anxiety	Concerns	Self-efficacy	2
I am enjoying the class. I don't take a course for the grade, I take it to learn.	Intrinsic motivation	Motivation	Intrinsic goal orientation	2

(table continues)

Responses	Initial Codes	Category	Themes	Research Question
I found that we had some common interests through our research topics. So, I felt more comfortable, when talking to her, because we had kind of a bond through our interests and what our past experiences had been.	Interaction with peers	Connection	Feelings of connectedness	3
Learning is coming in part from your reacting to the readings and then the discussion postings that were online. I very much appreciate being able to read, reflect, and write, and reflect before I post.	Learning Advantage	Learning goals	Effectiveness Perceptions of learning	1 & 3