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Students' Learning Experiences and Perceptions of Online Course Content and Interactions

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Abstract

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MBA, University of Nigeria

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

The recent economic downturn has increased demand for higher education. Because most postsecondary schools offer online courses, it is necessary to assess the effectiveness of those offerings and provide information that will assist colleges and universities in meeting citizens' educational needs. This qualitative case study was used to examine the learning experiences and perceptions of students in online courses at a university in the western United States. Moore's transactional distance learning theory was used to assess interactions among students, instructors, and course content. Purposive sampling was used to select 18 students from 3 university departments to participate in the study. Research questions focused on how participants perceived their learning experiences in online courses and how they described interactions with instructors and other students. Data collection was multimodal. The interviews were conducted in face-to-face format, electronic mail, and Skype. The questionnaires were completed by electronic mail. Field notes were collected during the interviews. Interview transcripts, field notes, and questionnaire data were coded against the 4 interaction factors identified from Moore's theory. Results showed that participants rated interaction with course material as most important, followed by interaction with the instructor. Next in importance was the character of the learner, followed by student-student interaction. This study contributes to social change by informing the efforts of postsecondary faculty and administrators to review and modify online course content. Doing so will ensure that the university is able to meet students' needs by generating timely, positive, and constructive, feedback; establishing a social communication network to foster student-student interaction; and creating a more student-friendly content material delivery method.

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My special thanks go to the 18 participants in this study for their openness in revealing their perceptions and experiences in the online learning environment. I owe a lot of gratitude to all of you because without your participation this study would not have been possible. I appreciate all the time you sacrificed to be present for our marathon interviews; your patience, generosity, and candor during the interviews are especially appreciated.

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Section 1: The Problem

Introduction

Advances in technology since the 1990s have given rise to an increased use of web-based tools in distance education. Today, many institutions of higher learning offer online instruction with integrated web-based instructional tools (Rodriguez, Ooms, & Montanez, 2008). According to the Babson Survey Research Group report, Allen and Seaman (2013) stated that "when this report series began in 2002, less than one-half of all higher education institutions reported online education was critical to their long-term strategy. That number is now close to seventy percent" (p. 4). Tracing the increase in national postsecondary online education enrollment figures, the U.S. Department of Education stated that the total number of student enrolled in online education rose from 4.28 million in 2007 to 5.44 million in 2012 (National Center for Education Statistics, 2011, 2014).

With the proliferation of online courses in colleges and universities, Song, Singleton, Hill, and Koh (2004) posed several questions for academic leaders to ask: What do students think about online learning? What makes students successful in online education? What can be done to improve greater access for students in online environments? Song et al. argued that answers to these questions would help shape the future of online education. Rodriguez et al. (2008) concurred, arguing that sustaining enrollment in higher education will depend on the learning experiences and perceptions of students in an online environment, a sentiment also echoed by Dobbs, Waid, and del Carmen (2009) and Motargy and Boghikian-Whitby (2010). Other researchers have

called for further investigation in this area (Allen & Seaman, 2008; Glass & Sue, 2008; Greener, 2008; Powell, 2007).

I responded to that call by examining the learning experiences and perceptions of students in three online departments at a public university in the western United States, hereafter referred to by the pseudonym UWS. This qualitative study was based on Moore's transactional distance theory. Purposive sampling was used to select 18 students representing two age groups: 18 to 31 years and 32 years and above. Each of the participants was individually interviewed regarding their online learning experiences.

Definition of the Problem

The economic downturn in the United States has resulted in high rates of unemployment and has made the job market highly competitive (Kahn, 2009). Online courses offer a flexible way to improve academic skills and employment prospects. Such courses lend themselves to continuing education and provide the convenience of studying from remote locations. Many online programs also offer career-specific certificates and degrees, often cost less than traditional programs, and enable students to juggle academic work with other engagements.

Just as the job market has become more competitive, so too has the educational marketplace. Allen and Seaman (2010) noted the challenge of maintaining or increasing enrollment in the face of budgetary cutbacks in US institutions. The beginning of the millennium saw many postsecondary institutions invest both financial and human resources in online education (Ficklen & Muscara, 2001; Hernandez-Ramos, 2005). This development was spurred by technological advances in the country, but as Keengwe,

Onchwari, and Wachira (2008) observed, that technological sophistication alone does not guarantee pedagogical effectiveness. Keengwe et al. (2008) argued that administrators must not only integrate technology into instruction, but must also maximize the benefits of instructional tools and minimize their negative effects.

Although online education represents a different form of course delivery, it is subject to the same need for monitoring and assessment as traditional forms of instruction (Greener, 2008). At any institution, argued Armstrong (2011), educators "should not only be concerned with the number of degrees awarded but also the quality of student learning obtained in achieving those degrees" (p. 223). To that end, Warschauer (2007) called for more research on how students perceive the use of technology in their education, which will help faculty adjust pedagogy to increase student learning and satisfaction. Affirming the dearth of research studies in this area, Kearns (2012) attested that "very few studies have reported on the types and distribution of assessments that are used by instructors to contribute to students' overall grades in an online course" (p. 3).

The current study was designed to address that gap. It was conducted at an urban, regionally accredited public university (UWS) that was established 50 years ago and offers traditional classroom instruction as well as online courses in nursing, business administration, and environmental resource management. According to the dean of student affairs, the purpose of the online program is to provide opportunities for students to access courses at their own pace and convenience.

Rationale

Evidence of the Problem at the Local Level

According to Gubernick and Ebeling (1997), 762 or 15% of U.S. institutions of higher learning offered distance education courses in 1996. By the fall of 2000-2001, 56% of all colleges and universities granting 2- and 4-year degree programs offered online courses (National Center for Educational Statistics, 2003). In 2002, over 1,000 students were enrolled in an online program known as Making Virtual Classroom a Reality at the University of Illinois (Santovec, 2003). A Sloan Consortium report, based on 2,500 U.S. colleges and universities, showed a steady increase in student enrollment in online courses, from 1.6 million in 2002 to 6.1 million in 2010 and from 6.1 million in 2010 to 7.1 million in 2012 (see Table 1).

Table 1

Enrollment in Degree-Granting Postsecondary Institutions, 2002-2012

	Total enrollment	Annual growth rate total enrollment	Students taking at least one online course	Online enrollment increase over previous year	Annual online enrollment growth rate	Online enrollment as percentage of total enrollment
Fall 2002	16,611,710	NA	1,602,970	NA	NA	9.6%
Fall 2003	16,911,481	1.8%	1,971,397	368,427	23.0%	11.7%
Fall 2004	17,272,043	2.1%	2,329,783	358,386	18.2%	13.5%
Fall 2005	17,487,481	1.2%	3,180,050	850,267	36.5%	18.2%
Fall 2006	17,758,872	1.6%	3,488,381	308,331	9.7%	19.6%
Fall 2007	18,248,133	2.8%	3,938,111	449,730	12.9%	21.6%
Fall 2008	19,102,811	4.7%	4,606,353	668,242	16.9%	24.1%
Fall 2009	19,524,750	2.2%	5,579,022	972,669	21.1%	28.6%
Fall 2010	19,641,140	0.6%	6,142,280	563,258	10.1%	31.3%
Fall 2011	20, 994, 113	-0.1%	6,714,792	572,512	9.3%	32.0%
Fall 2012	21, 253, 086	1.2%	7,126,549	411,757	6.1%	33.5%

Note. Adapted from Allen, I. and Seaman, J, 2014, Grade Change: Tracking Online Education in the United States. Sloan Consortium and Babson Survey Research Group, p. 33. Retrieved from: http://www.onlinelearningsurvey.com/reports/gradechange.pdf

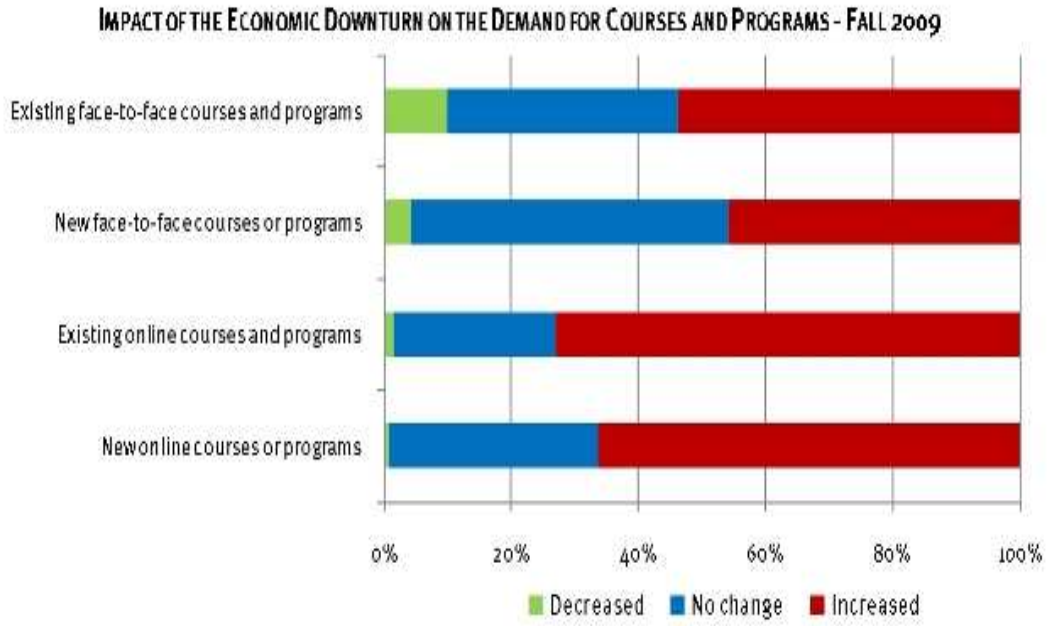


Figure 1. Impact of economic downturn on course demand, Fall 2009.

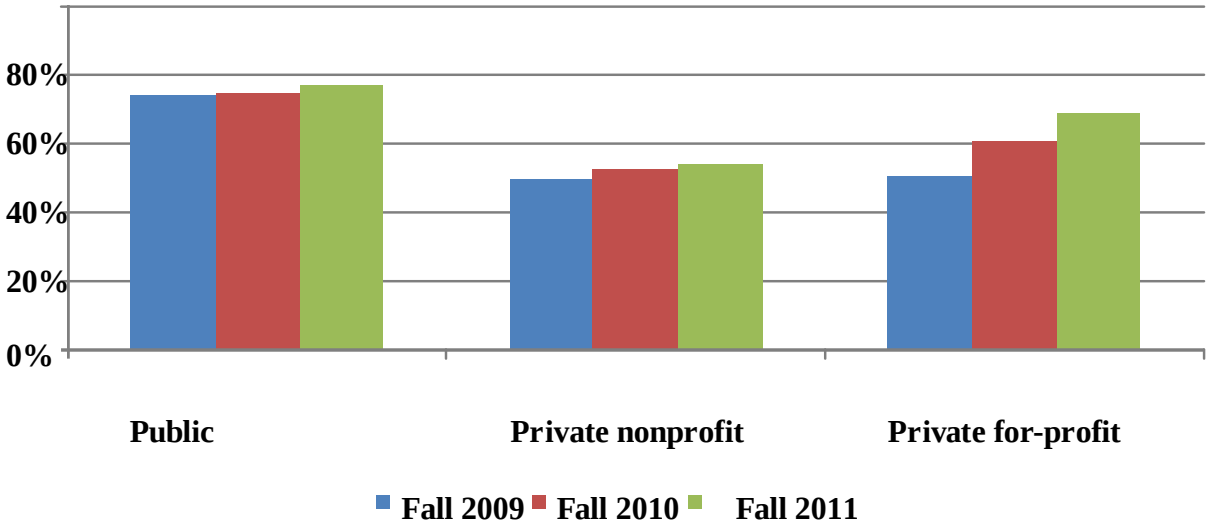
Note. Adapted from "Sloan Consortium, Class Differences: Online Education in the United States," by Allen, I. E. & Seaman, J. (2010), p. 8.The Sloan Consortium. Retrieved from: http://hilo.hawaii.edu/uhh/teaching/documents/SloanConsortiumOnlineEducation in theUS-2009.pdf

In a survey conducted by Allen and Seaman (2010), more than 50% of the institutions offering online and face-to-face courses stated that they experienced increased enrollment in both types of courses. A breakdown shows that there was a greater increase in enrollment in public institutions than in private colleges and universities. According to the report, the economic downturn resulted in more than 85% of the student enrollment in online courses

A majority of public institutions surveyed indicated that online learning has become an important part of their long-term educational strategy (see Figure 2). "Sixty-three percent of all reporting institutions noted that online learning was a critical part of

their institution's long term strategy and strategic plan" (Allen & Seaman, 2010, p. 2). Supporting this assertion, Picciano, Allen, and Seaman (2010) reported that "the majority of institutions of all sizes believe that online education is critical to their long term strategy" (p. 24).

Figure 2. Online Education is Critical to the Long-term Strategy of my Institution, Percent Agreeing – Fall 2009 and Fall 2010.



Note. Adapted from "Sloan Consortium, Going the distance: Online Education in the United States 2011," by Allen, I. E. & Seaman, J. (2011), p. 8. The Sloan Consortium. Retrieved from: http://www.onlinelearningsurvey.com/reports/goingthedistance.pdf

The site for the current study was an urban, regionally accredited, public university. UWS was established in 1965 and has been approved by the U.S. Department of Education and the Accrediting Council for Public Colleges and Schools (ACIPS) to offer both traditional classroom and online courses in various disciplines. UWS joined a national trend in 1975 by offering online courses in nursing, business administration, and environmental resource management. The school's stated mission is to encourage,

support, motivate, and provide opportunities for adult students to access quality education at their own pace in order to achieve professional success.

According to the vice president for academic affairs, UWS has not yet carried out research on its online program. An extensive literature review revealed little research about how students assess their online course experience, both in terms of course content and delivery as well as student-student and instructor-student interaction. Kirk stated that the needs of online students can be deduced from their perceptions and experiences (as cited in Tsayang, 2011), but those perceptions and experiences have been inadequately studied. Assenting to this view, Dunston and Albalawi (2014) stated that "although many institutions are offering an increasing number of online courses and programs, there is a limited body of knowledge on requirements for online course delivery that leads to high levels of student satisfaction and learning" (p. 1).

Evidence of the Problem From the Professional Literature

A 2009 Sloan Consortium report validated the assertion by other researchers that online courses enable college and university administrators to reach a greater number of students, offering learners the convenience of self-paced learning (Hill, 2002; Hofmann, 2002; Rourke, 2001). According to Beqiri, Chase, and Bishka (2009), online education, as an alternative form of course delivery, enables students to pursue both professional and educational goals with greater ease than is provided by traditional instruction. This flexibility, coupled with an economic recession, has resulted in a significant growth in online course enrollment, where the majority of students are working professionals (Bocchi, Eastman, & Swift, 2004).

Song et al. (2004) claimed that the viability of distance education depends on students' experience with online learning, a view shared by DiSlavio (2008), who argued that users' perceptions of online courses would shape the future of distance education. O'Malley and McGraw (1999) stated that the proliferation of online courses has created a need to analyze how this method of content delivery affects students' perceptions of their learning. Roach and Lemasters (2008) concurred, arguing that the satisfaction of students in an online learning environment is important and requires further study. The current study was designed to answer this call for more information on how students assess the distance learning experience.

The 2011 National Online Learners Priorities Report by Noel-Levitz stated that the colleges and universities should pay particular attention to their students' perceptions of online courses in order to offer courses that will meet students' expectations. The report further stated that more studies need to be conducted to assist college and university administrators to meet students' needs in the online program. Supporting the need for more studies in examining students' perception in online courses, Kuo, Walker, Belland, and Schroder (2013) stated that "among the attitudinal constructs, student satisfaction, referring to student perceptions of learning experiences and perceived value of a course, may be particularly worthy of investigation" (p. 17).

Based on the literature review, the gap in knowledge regarding examining the experiences and perceptions of students in online course programs still exists. This study was conducted to fill this gap in knowledge and contribute to a current understanding of students' experiences and perceptions of students in online courses.

Definitions

Attrition: The number of students who drop out of a course before the scheduled completion time (Lodico, Spaulding, & Voegtle, 2010). The attrition rate is a common means of assessing how successful a given course is.

Interpretivism: A view based on the belief that reality is socially constructed (Glesne, 2011).

Learning experience: The meaning constructed and evaluated by learners of their learning environment (Knowles, Holton, & Swanson, 2005).

Online learning: A form of education where students access content over the Internet, participate in virtual discussions with an instructor and other students, and submit assignments and receive feedback electronically (Laaser, 2011).

Paradigm: A philosophical or theoretical framework made up of interrelated assumptions that provide a way of seeing and inquiring into the world (Glesne, 2011).

Perception: The capability whereby people understand their environment (Crane, 2011).

Significance

This qualitative study presents an understanding of online learning experiences from students' perspectives. Although research on instructional delivery methods is growing, students' perceptions of their learning experiences have been neglected in the extant literature. This study helps to fill this research gap. This study is significant because it helps online faculty and university administrators understand the factors that motivate students and help them sustain and increase enrollments thus validating the call

by Warschauer (2007). Postsecondary institutions will also benefit by enacting curricular reforms that make the learning experience of online students more fruitful. This study provides a foundation for further research, and is a resource for entrepreneurs desiring to start new institutions of higher education offering online programs.

Guiding/Research Questions

In developing the guiding research questions for this study, I was concerned with remaining sensitive to human experiences. As Adams (2008) observed, "Working with ethics involves realizing that we do not know how others will respond to and/or interpret our work" (p. 179). In that spirit, the questions that follow were developed with the understanding that this is an exercise in ethics and there is no intention to inflict harm on participants. The study was guided by two research questions:

1. How do students perceive and describe their learning experiences with online course content?
2. How do students describe their interactions with instructors and other students in online courses?

Review of the Literature

Theoretical Framework

Research has been variously defined. According to Craighead, Hanna, Gibson, and Meredith (2007), research is vitally important in any discipline because it enhances the understanding of those involved in the discipline. Mackenzie and Knipe (2006) characterized research as an exploration in which collected data is analyzed and interpreted to "understand, describe, predict, or control an educational or psychological

phenomenon or to empower individuals in such contexts" (p. 194). Mertens (2005) argued that "the exact nature of the definition of research is influenced by the researcher's theoretical framework" (p. 2).

A theoretical framework also can be referred to as a paradigm, and a study's paradigm guides how the subject matter is studied, analyzed, and interpreted (Glesne, 2011). Creswell (2009) noted that a paradigm includes one's world view, which Guba (1990) described as "a basic set of beliefs that guide action" (p. 17). The current study is constructivist and interpretive. The design used was a case study, and data collection was multimodal. Mertens (2005) gave an insight into what is the interpretive/constructive paradigm originated.

"The interpretivist/constructivist paradigm grew out of the philosophy of Edmund Husserl's phenomenology and Wilhelm Dilthey's and other German philosophers' study of interpretive understanding called hermeneutics" (Mertens, 2005, p.12 citing Eichelberger, 1989).

The constructivist-interpretative approach relies on the sample studied to generate data to understand participants' backgrounds and experiences. In that approach, a researcher develops patterns of meaning from data and usually relies on qualitative data collection methods and analysis (Mackenzie & Knipe, 2006). A constructivist-interpretive approach was justified for the current study because it involved examining patterns of meaning in order to understand how students interpreted their experiences in online courses. A constructive interpretive approach was preferred because it presented a thorough understanding of the experiences and perceptions of online students at UWS

and reporting the findings as it were. That is, researching and understanding how the participants made meaning of their experiences and perceptions by looking through their lenses. (Koskinen, Zimmerman, Binder, Redstrom, & Wensveen, 2011).

In an interpretive research the report represents the views and opinions of the participants and the subjectivity of the researcher clearly demarcated. In this study, I presented the report providing accurate statements of participants' views and opinions. (Gubrium, Holstein, Marvasti, & McKinney, 2012).

Online Education

The growth in online education has heightened competition among postsecondary institutions (Loyen, Magda, & Rikers, 2008). With that competition has come increasing emphasis on attending to student satisfaction (Jackson, Jones, & Rodriguez, 2010). Dobbs, Waid, and del Carmen (2009) found that distance learning students are attracted by the convenience and flexibility of online courses.

According to Boekaerts (2008), most studies of online programs have focused on their technical aspects, neglecting the importance of students' perceptions. Bollinger and Martindale (2004) and Tallent-Runnels et al. (2006) argued that the growth in online education should prompt more research that addresses students' satisfaction with online instruction. In an online learning environment, students are expected to take a more active approach to their education, and course outcomes depend heavily on students' attitudes towards online learning (Neely & Tucker, 2010). Those attitudes have not been assessed at UWS according to the dean of student affairs at the university. This study was designed to do so, using a constructivist-interpretivist paradigm and Moore's

transactional distance theory (1993). In analyzing distance learning, Moore (1993) enumerated four important variables: faculty-student interaction, student-content interaction, student-student interaction, and student character. Those variables, along with age, served as an organizing principle for the current study.

Moore's Transactional Distance Theory

According to Moore (1993), analyzing distance education necessarily involves attending to dialogue, structure, and learner autonomy. Moore emphasized that these considerations are separate from technological ones, focusing on instructional and learning behaviors and the interaction between the two. This (1993) analysis was based on the assumption that distance learning requires different teaching techniques and learning dynamics than does traditional face-to-face instruction. Moore further described pedagogy as consisting of course structure and instructional dialogue, claiming that distance learning is a function of those two variables, plus learner autonomy. Moore (1993) expatiated that the transactional distance theory is an attempt to explain the interaction among learners, teachers, and course structure and to account for how that interaction affects the learning environment.

For Moore (1993), distance education is characterized by the transaction that occurs when there is a separation of time and space between learner and teacher, a separation that "leads to special patterns of learner and teacher behaviors" (p. 1). Moore cautioned that these behaviors should be considered relative rather than absolute because transactional distance is not a fixed measurement. In considering the interactive dimension of distance education, Moore distinguished among three types of interaction:

faculty-student, student-content, and student-student. He also emphasized the importance of what he called student character.

Faculty-Student Interaction

Moore (1993) described dialogue as "an interaction or a series of interactions having positive qualities that other interactions might not have" (p. 2) and singled out interaction as one of the most important components of online learning. Faculty-student interaction, Moore stated, is influenced by educational philosophy, personality, course subject matter, and the environment. Moore noted that in distance education, like face-to-face teaching, some communication will be one-way. But a reliance on one-way communication, he argued, leads to greater transactional distance and less favorable learning experiences. Reducing transactional distance, then, means controlling communication.

Other researchers have also acknowledged the importance of faculty-student interaction. Tomei (2006) described it as playing a "pivotal role in student attitudes about online learning and distance education" (p. 532), and Bollinger and Martindale (2004) characterized it as the single most significant factor in determining students' satisfaction in online learning environments. Swan (2001) found that "students who had perceived high levels of interaction with the instructor also had high levels of satisfaction with the course and reported higher levels of learning than students who thought they had less interaction with the instructor" (p. 316). According to a survey of college students taking online courses at Indiana State University, 83% expected instructors to be available at any time and to provide regular feedback (Mupinga, Nora, & Yaw, 2006, p. 186). A

study of online courses at a midwestern university revealed that “course structure-dialogue predicted student satisfaction in the online courses studied” (Sanders & Hirshbuhl, 2007, p. 20).

Student-Content Interaction

Course structure reflects the “rigidity or flexibility of the program’s educational objectives, teaching strategies and evaluation methods” (Moore, 1993, p. 3). Course structure influences learning experience because it determines how well a given course meets the varied expectations of individual students. Course structure affects communication—specifically, how much dialogue is allowed or encouraged (Moore, 1993). Highly structured programs, Moore charged, have little allowance for dialogue and are thus ill-equipped to respond to student input.

Moore (1993) defined student-content interaction as “the process of intellectually interacting with content that results in changes in the learner’s understanding, the learner’s perspective or the cognitive structures of the learner’s mind” (p. 3) and characterized it as “the defining characteristic of education” (p. 3). Course content includes assignments, presentations, discussions, and assessments (Reisetter et al., 2005). According to Moore and Kearsley (2005), highly structured content influences students’ perception of their learning experiences in an online program, an assertion that was explored in the current study.

Student-Student Interaction

According to Dobbs et al. (2009), although many researchers have studied the structure of online programs, few have examined interaction among students. In

traditional education, student-student interaction occurs face to face. In online education, it is mediated electronically, through email, discussion boards, instant messaging, Skype, and document sharing (Jackson et al., 2010). Some distance learning institutions require residencies, where students physically assemble at a given location for seminars and communication with faculty and peers.

Student Character

Another variable of transactional distance that influences students' learning experiences is the personalities of students themselves. An important component of personality for distance learners is autonomy—the ability to work independently. Moore (1993) defined learner autonomy as "the extent to which in the teaching/learning relationship it is the learner rather than the teacher who determines the goals, the learning experiences, and the evaluation decisions of the learning program" (p. 5). Confessore and Park (2004) described learner autonomy as consisting of four components: desire to learn, initiative, resourcefulness, and persistence. Moore took issue with Knowles's assumption that autonomous behavior is natural for most adults. For Moore, autonomy is a learned skill rather than a natural outcome of aging.

Age

Many researchers on online education have noted the importance of age as a variable in student satisfaction and success (Dobbs et al., 2009; Jackson et al., 2010; Sanders & Hirshbuhl, 2007). As Roach and Lemasters (2006) noted, age is a predictor of one's comfort with computers. Undergraduate distance learners tend to be older than their counterparts at brick-and-mortar schools (Sargeant, Curran, Allen, Jarvis-Selinger, & Ho,

2006). In the current study, participants were divided into two groups—those ages 18 to 31 years (G1) and those 32 years old or older (G2)—to see if there were differences in learning experiences and perceptions of online courses based on age.

Implications

Although there is a substantial body of research on distance learning, few studies (Bennett, Maton, & Kervin, 2008; Lane & Yamashiro, 2008; Song et al., 2004) have addressed the learning experiences and perceptions of students in online courses, and no such research has been conducted at UWS, the school under study. For that reason, the findings of the current study should be of value to UWS faculty and administrators as they seek to refine online course content and delivery. Although the results of this study will inform faculty and administrators, the ultimate beneficiaries will be students because improving their academic experience is the ultimate goal of any curricular and pedagogical reform.

Summary

There has been considerable growth in online education in recent years (Allen & Seaman, 2008; Taylor & McQuiggan, 2008; Varvel, 2007; Wolf, 2006). Allen and Seaman attributed this growth largely to the economic recession and predicted that online course enrollments would continue to grow. Rising online enrollments have prompted discussions about the quality of online course delivery, faculty training, and students' learning experiences (Taylor & McQuiggan, 2008; Varvel, 2007). Some researchers have cited students as the most important stakeholders in online education (Greener, 2008; Rodriguez et al., 2008), whereas others have argued that faculty expertise and dedication

are most important (Abel, 2005; Varvel, 2007). Moore (1993) stated that students, faculty, and course content are all necessary components to consider in evaluating online learning environments.

Varvel (2007) found that many instructors have not been adequately prepared to teach online courses because the focus of their training was on face-to-face instructional delivery. Varvel reported that college and university administrators increasingly emphasize training faculty in online instructional delivery. At the same time, learners' perceptions of online instruction have received little research attention (Glass & Sue, 2008; Powell, 2007). The current study was an attempt to fill that gap in the literature. The study was based Moore's transactional distance theory. Data collection was multimodal, conducted either in person or electronically.

This study follows a four-section format. Section 1 consisted of the problem and introduction to the study. Section 2 covers the study's methodology (research design and approach), a description of the target population, sample, instrumentation, materials, data collection, and data analysis. Section 3 includes the project, literature review, discussion of the project, and social change. Section 4 covers reflections and conclusions, including strengths and limitations of the study.

Section 2: The Methodology

Introduction

In this section, I will discuss the methodology for a case study of undergraduate university students' perceptions of their experience with online courses. The section covers research design, including why the chosen design was selected. It also includes a description of the participants, the researcher-participant relationship, data collection, and data analysis.

Research Design and Approach

Burns (2000) described research as systematic investigation. For Creswell (2008), research is "a process of steps used to collect and analyze information to increase our understanding of a topic or issue" (p. 3). Mackenzie and Knipe (2006) described an exploratory process whereby collected data are analyzed and interpreted to "understand, describe, predict, or control an educational or psychological phenomenon or to empower individuals in such contexts" (p. 194). According to Mertens (2005), "The definition of research is influenced by the researcher's theoretical framework" (p. 2). That framework, or paradigm, guides how data are collected, analyzed, and interpreted (Glesne, 2011). Creswell (2009) characterized a paradigm as a world view, which Guba (1990) described as "a basic set of beliefs that guide action" (p. 17).

The current study was designed as a constructivist-interpretative case study. The constructivist-interpretative paradigm is based on hermeneutics and relies on the participants being studied generating data that reflects their backgrounds and experiences

(Mackenzie & Knipe, 2006; Mertens, 2005). That paradigm has also been influenced by Moore's (1992) transactional distance theory.

According to McKenzie and Knipe (2006), researchers using the 'interpretive-constructive' methodology employ a qualitative design to collect and analyze data. Such an approach was appropriate for the current study because the purpose was to derive patterns of meaning in how students interpret their experiences in online courses.

According to Corbin and Strauss (2008), "Qualitative research allows researchers to get at the inner experience of the participants, to determine how meanings are formed through and in culture, and to discover rather than test variables" (p. 12). Qualitative research requires an understanding of participants in order to develop meaning and understand their perspectives (Lodico et al., 2010; Merriam, 2002). Creswell (2009) emphasized that a researcher should focus on understanding the meaning participants attach to the issue being studied and not the meaning the researcher has about the issue.

Creswell (2007) discussed five major types of qualitative studies: narrative research, phenomenology, ethnography, grounded theory, and case study. With narrative studies, the sample size is usually small—typically, one or two participants. Because I wanted a more representative sample, narrative research was not selected.

In phenomenological studies, a researcher attempts to capture the "essence of human experience" (Lodico et al., 2010, p. 16). Although a phenomenological study has some similarities with a case study, in that both are based on participants' perspectives, the major difference is that a phenomenological study merely describes those perspectives, whereas case studies provide rich descriptions of one or more cases and

address the research questions, issues, or problems of the study (Glesne, 2011; Merriam, 2009).

An ethnographic researcher studies a group's cultural characteristics in a local setting over time (Creswell, 2009). Although the current study may reflect participants' cultural influences, those influences were not its main focus. Instead, I was interested in participants' perspectives of their learning experience. Grounded theory was considered and rejected because the purpose of this study was not to generate a theory to explain a phenomenon (Glesne, 2011).

Yin (2008) defined the case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 18). For Yin (2009), case study research is used "when a how or why question is being asked about a contemporary set of events, over which the investigator has little or no control" (p. 13). According to Yin (2003), a case study might be based on one or more of several data collection methods: interviews, questionnaires, observations, documents, audiovisual materials, and field notes. Whereas Yin's definition focused on the research process, Stake (2005) emphasized the unit of study, the case, and suggested that a case study has less to do with the *how* and more to do with the *what* that is studied. For Stake (2006), although a case study presents opportunities to examine how a bounded system functions, "the functioning is not the case" (p. 1).

According to Merriam (2009), a case study is "an in-depth description and analysis of a bounded system" (p. 40). In the same vein, Hancock and Algozzine (2006)

described a case study as researching a phenomenon “in its natural context, bounded by space and time” (p. 15). Case studies, Hancock and Algozzine stated, explore topics involving individuals, groups, or events and facilitate “a deep understanding of situations and meaning for those involved” (p. 11).

The current study was a case study, and the bounded system under investigation was the online program at a specific university. The study was further bounded by time, occurring over approximately 11 weeks. The choice of a case study design for this research was driven by the research questions and the purpose of the research study.

How and why questions had to do with participants’ perceptions of their experience as online learners. Selecting a case study design ensured that the learned experiences and perceptions of the participants were thoroughly examined and reported as the participants stated them.

Research and Interview Questions

The purpose of this study was to examine the learning experiences and perceptions of students in online courses at UWS. Advances in technology in the 1990s led to an increase in online course enrollments (Jackson et al., 2010; Lapointe & Reisetter, 2008; Mayadas, 2009; Rodriguez et al., 2008). Most researchers examining online education have focused on how to increase enrollment in online courses and few have addressed improving the online environment to ensure students’ success (Greener, 2008; McQuiggan, 2007; Powell, 2007). Confirming this assertion, Zacharis (2011) stated that further research should examine how course structure and class size contributes to students’ satisfaction in the online program. Also Lee and Rha (2009)

agreed that there is need to further conduct research to determine the influence of interactions on students' learning experiences. In their study with undergraduate and graduate participants from a western university, Kuo et al. (2013) further confirmed the need for more research studies to "assess the design of online courses and use this as a moderating factor in the prediction of student satisfaction. Such research could shed further light on whether learner-learner interaction is a consistent predictor of student satisfaction".

This study was conducted to fill the gap of further research to examine course structure and students' interactions in the online program. The intent was to examine factors that contribute to the success of online education and provide suggestions for online course providers to better design courses to meet students' expectations and assure their success in the online environment. The study was based on two research questions, which gave rise to 12 interview questions (see Appendix D). According to Creswell (2009), the central research question should be broken into more direct subquestions to help a researcher obtain detailed data to address the problem statement.

Participants

The target population for this study was all postsecondary students who have taken online courses. The research population was those students who have completed at least 12 credits of online coursework in nursing, business administration, or environmental resource management at UWS. From this population, a sample of 18 students was purposefully selected: eight students from nursing, six from business administration, and four from environmental resource management. Concept sampling

was employed, whereby a researcher selects participants or sites that will generate adequate data to assure a rich analysis of the concept being studied (Creswell, 2008). In selecting the sample, I strove for gender balance and a variety of ages.

Access to Participants

According to Marshall and Rossman (2006), a researcher must obtain entry into the field in order to interview participants. I obtained entry by contacting the UWS Research Ethics Coordinator and a gatekeeper was appointed who conveyed the university's IRR approval to me. The gatekeeper introduced me to faculty heads who assisted in identifying possible participants for the research. This made my access to UWS smoother, gave me more credibility as a researcher, and cordiality in my contacts with the pool of participants.

Researcher-Participant Relationship

I made the first contact with participants by sending an email introducing myself and the purpose of the research. Subsequently, informed consent forms were electronically mailed to participants identified for the pilot study. I received responses from all prospective pilot study participants, and the pilot study was conducted successfully. During the main study, consent to participate was sent to individuals different from the participants in the pilot study. My relationship with participants was respectful, cordial, honest, and impersonal. This relationship evolved over time, and participants understood that I was gathering data to present their voice to university administrators and faculty members. Participants became progressively more open and honest in discussing their experiences and perceptions of the online course program.

Throughout the interview process, I respected participants' dignity and privacy, and I sought to protect them from harm.

Ethical Considerations

Best and Kahn (2006) argued that ethics is the keystone in carrying out qualitative research. Jones and Kottler (2006) added that the importance of the rights of participants cannot be overemphasized. Research involving human subjects poses ethical issues because of questions that might require divulging personal and confidential information. It is essential that participants be protected from harm and that vulnerable populations not be exploited (Eide & Kahn, 2008). To protect participants in the current study, the site of the research is not named; instead, a pseudonym (UWS) is used. Also, participants are identified by number, and no identifying personal information appears in the published report. Before data collection began, approval was obtained from Walden University's Institutional Review Board. In addition, I achieved certification for qualitative research by the National Institutes of Health in June 2011.

An important part of conducting research with human subjects is obtaining informed consent. Drew and Hardman (2007) enumerated three elements of informed consent: capacity, information, and voluntariness. Capacity involves participants' ability to understand and evaluate information provided by a researcher. That information must be communicated in easily understood language. Any ambiguities should be clarified so that participants have a clear understanding of the study's scope and what is expected from them. Finally, participants should be aware that participation is voluntary and that they have the right to withdraw from the study at any time without repercussions. These

conditions were met in the informed consent form used in the current study (see Appendix C).

Data collected for this study—including consents, interview recordings and transcripts, and analyzed data—will be kept for at least 5 years in secured storage and disposed of in accordance with Walden University's policy on disposal of research data. Throughout the study, respect for participants and the site was a priority.

Data Collection

Participants were notified by electronic mail regarding the objectives of the study. The notification described the voluntary nature of participation and the confidentiality of all data gathered throughout the research period (see Appendix A). All participants signed an informed consent form (see Appendixes B and C) before being interviewed. Questionnaires were mailed to all participants, and 100% response was achieved. Data collection was multimodal.

According to Yin (2003) the main characteristic of a case study design is that it employs various data collection methods to ensure trustworthiness of the report. Multiple data sources promote a clearer understanding of the case being studied (Creswell, 2008, 2009; Glesne, 2011; Hancock & Algozzine, 2006; Lodico et al., 2010; Merriam, 2009).

Data from interviews, questionnaires, field notes, and audiotapes were collected. Field notes were used to record nonverbal communication and participants' interactions with the environment. The questionnaire was a combination of closed and open-ended questions administered by electronic mail. A pilot test was carried out prior to administering the questionnaire to participants. Interviews were semistructured,

employed open-ended questions, and were based on an interview guide (see Appendix D). Questions addressed how participants have experienced online learning at UWS.

Consent forms were sent to 24 students from the departments of nursing, business administration, and environmental resource management via electronic mail through faculty heads. Twenty (83.3%) of the students returned their consent forms and signified their interest to participate in the study. Two students withdrew, citing family engagements. Questionnaires were sent to the 18 participants in the study via email. All 18 participants returned their questionnaires, completely filled out, within 8 weeks. Face-to-face interviews were initially scheduled to take place between April 29, 2013, and July 6, 2013, according to participants' convenience. Six interview dates were changed to accommodate participants' request. The last interview was conducted on September 18, 2013. The final sample of this study was 18, or 75% of the initially identified students. Participant demographics are summarized in Table 2.

Table 2

*Participant Demographics (*N *= 18)*

Dept.	#	Gender		Age	
			F	G1 <35	G2 >35
Nursing	8	3	5	5	3
Business administration	6	4	2	4	2
Environmental resource management	4	1	3	2	2

As Table 2 shows, there were 10 female (55.5%) and eight (44.5%) male participants. Of these, 11 (61%) were ages 18 to 35 years and seven (39%) were over age

35. The department of nursing had the highest number of participants (44.5%), followed by business administration (33.3%) and environmental resource management (22.2%).

Pilot Study

The interview questions were subjected to a pilot study. Questions were reviewed by three education professors with extensive background in qualitative research from two highly acclaimed universities in California. Questions were then administered to five students selected from potential participants for the research. Prior to the pilot study, informed consent was obtained from each of the five participants (see Appendix B). Results of the pilot study were reviewed by the three education professors and found suitable for administration in the final study.

Data Monitoring

Data were stored in a password-protected database on a fourth-generation Intel Core i7-477os processor, Dell 27-inch touch computer with eight gigabytes of memory. The data were also stored on a Kingston Technology 1TB Data Traveler Hyper X Predator USB 3.0 Flash Drive and kept in a Bank of America safe deposit box accessible only to me. One advantage of using a database is that data are always available for independent inspection and can be easily retrieved at a later date (Wickham & Woods, 2005). Qualitative data analysis software (NVivo9) was used to organize the data.

Data

Data were generated through face-to-face interviews with participants in the university library, three public libraries, a Barnes and Noble bookstore, three public parks, and Starbucks. A piloted interview questionnaire was used with all participants.

Six single-session interviews lasted from 59 minutes to 118 minutes. Eight participants were interviewed in two sessions of 45 minutes to 79 minutes each because of their schedule. The interval between interviews was on average 5 days.

Interview questions were based on the study's two research questions, which explored participants' learning experiences and perceptions of their online courses. All interviews were audio recorded (with participants' permission), supplemented by my notes. Electronic mail and telephone messages were sent to participants after the interviews to clarify ambiguous comments and discrepant data. In four instances, participants preferred to discuss the ambiguities over Skype.

Role of the Researcher

I was the sole interviewer and data collector in this study. I have a bachelor of science degree and a master of business administration degree in finance from the University of Nigeria. As part of the coursework for my MBA, I completed three courses on research applications and conducted a study involving face-to-face interviews of finance experts in the Nigerian banking industry. As part of coursework in Walden University's doctoral program, I completed two courses in qualitative research and conducted two studies, one based on a face-to-face interviews and one based on observation. In both studies, I used interview protocols and personal observation logs (see Appendix J).

In conducting qualitative research, a researcher's task is to discover the meanings that participants attribute to the issue or phenomenon being studied (Creswell, 2009). Researchers should not interpret information based on their own world view but rather

according to the world views of participants (Merriam, 2009). The researcher's role in the current study was that of learner: listening to, observing, and learning from participants in order to capture their views and the meanings they attached to the issues under consideration (Glesne, 2011). I had no previous or current professional roles at the setting under study and no personal or professional relationship with participants.

Data Analysis

The purpose of this case study was to examine the learning experiences and perceptions of students in online courses at a university in the western United States. The study was based on Moore's transactional distance theory, specifically his four interaction components: student-content, faculty-student, student-student, and student character.

Interview recordings were transcribed with the aid of Dragon Naturally Speaking 12–Premium edition (DNS12P), speech recognition software that transcribes audio recordings into text. Transcribed documents were saved on a desktop computer with password protection, then sent to participants for their review, comments, and approval. The last participant-approved transcript was received during the second week of November 2013. As I completed the transcription of face-to-face interviews with participants, I reflected on the purpose of the study, the review of literature, and the potential themes that emerged from the data. According to Marshall and Rossman (2006) when a researcher combines transcribed interview data with initial analysis of data, it allows for more efficiency and reflection in data analysis.

Approved transcripts were uploaded onto a Dell Precision T5610 Tower Workstation. Using Excel worksheets, the data were organized into a priori themes according to Moore's (1993) transactional distance theory. The selected themes described the components of online learning as postulated by Moore and provided information about the perceptions and experiences of students in the online learning program. From these themes, implications for faculty and university administration were developed.

Two qualitative data-analysis tools used to retrieve, organize, search, categorize, and code textual and visual data (Lewins & Silver, 2007) were considered but not used because the themes were already identified a priori. The two most popular tools are NVIVO 9 and Atlas.ti, both of which enable a user to create codes and discover themes in textual data. To become familiar with NVivo 9, I attended a 2-day workshop in Chicago, Illinois, in December 2013, but I ended up not using the tool.

A priori coding or explicit coding involves the use of a predetermined code before analysis of data, based on a theory or literature review (Yin, 2009). In this study, Moore's (1993) theory of distance education formed the framework for the research questions. However, the three education professors who reviewed the research questions and the pilot study recommended that I should take the NVivo9 training in the event of discrepant data that might not fit into the explicit codes. Yin (2009) noted that there is no way to anticipate which themes will emerge from the collected data when contemplating a priori coding.

Uploaded data were classified according to the study's two research questions. Specifically, data were coded using four a priori themes drawn from Moore's (1993)

transactional distance theory: student-content interactions, faculty-student interactions, student-student interactions, and student character. Data analysis involved coding by using deductive thematic analysis, which Braun and Clarke (2006) described as "a method for identifying, analyzing, and reporting patterns (themes) within qualitative data. . . . A theme captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set" (p. 80).

Data review consisted of an initial close reading of all interview transcripts. During that reading, I took notes, highlighting similarities and differences in responses. Member checks were facilitated by giving participants an opportunity to review their transcriptions for accuracy. A constructivist-interpretative approach was used to examine the perceptions and experiences of participants in the online learning environment in UWS. According to Mackenzie and Knipe (2006), this approach develops patterns of meaning from data and usually relies on qualitative data collection methods and analysis. In order to understand how participants made meaning of their perceptions and experiences in the online learning environment, I presented their views unmodified, ensuring their voices were accurately reported.

Data were triangulated to ensure that conflicting information was avoided, while constant comparison ensured that the data were adequately validated (Lodico et al., 2006). Constant comparison was accomplished by use of Dell Precision T5610 Tower Workstation. Triangulation was achieved by cross-checking coded transcripts, notes taken during interviews, and notes taken during initial data review. Triangulation of data

from multiple sources was carried out in order to strengthen the study's conclusions and reduce threats to validity. Creswell (2008) defined triangulation as "the process of corroborating evidence from different individuals (e.g., a principal and a student), types of data (e.g., observational field notes and interviews), or methods of data collection (e.g., documents and interviews)" (p. 266). In the words of Corbin and Strauss (2008), "The theory should represent an abstract rendition of the raw data. It is important to determine how well that abstraction fits the raw data and also to determine whether anything salient was omitted from the theoretical scheme" (p. 54).

To ensure that nothing important is left out, Corbin and Strauss (2008) recommended member checking, which involves ascertaining from participants the accuracy of a researcher's interpretation of the data. To that end, I sent both the transcriptions and the findings to each participant to ensure that the findings reflect their views and experiences. Their responses confirmed that they were able to recognize their perceptions, voices, and experiences from the findings (see Appendices F and G).

Data analysis can yield conflicting views, outliers, or data that do not correspond with other data. To minimize this possibility, I reexamined all data with an eye toward resolving perceived discrepancies (Lodico et al., 2010). Two inconsistencies were noticed, and the data were sent back to the respective participants for resolution. According to Creswell (2009), presenting discrepant information adds to a study's credibility because there are bound to be different views of an issue when several individuals are interviewed.

Glesne (2011) described other methods to ensure validity and trustworthiness, including prolonged engagement and persistent observation, peer review and debriefing, negative case analysis, clarification of researcher bias, member checking, thick description, and external audits. Interview transcripts and field notes in the current study were validated using member checks, triangulation of data, negative case analysis, and clarification of researcher bias. Constant comparison was used to determine differences and similarities in data (Lodico et al., 2010). Transcripts were shared with participants for editing (Rubin & Rubin, 2005). Researcher bias was clarified using self-reflection (Creswell, 2009). These validation methods ensured accuracy and reliability of data collection and analysis.

Trustworthiness

Credibility in qualitative research is important in establishing trustworthiness (Merriam, 2009; Stake, 2010; Yin, 2009). According to Yin, trustworthiness is enhanced by reporting a study's operational measures—that is, the research questions, methodology, instrumentation, and all other relevant procedures. Trustworthiness is further enhanced by triangulation (Creswell, 2009). Stakes (2010) noted that collecting data from multiple sources compensates for the drawbacks of individual sources and exploits the advantages of each method. Data collection for the current study included face-to-face interviews and field notes.

Establishing an early relationship with participants prior to data collection enhances trustworthiness (Stake, 2010; Yin, 2009). In the current study, that was accomplished by having department heads introduce me to participants before they

received consent forms. According to Yin (2009), iterative questioning to elicit more details from participants improves a study's credibility. I conducted repetitive questioning to ensure that ambiguous responses were clarified by participants. Potential threats to validity by nonresponse bias were mitigated by notifying participants about the questionnaire and following up with electronic mail reminders. Finally, trustworthiness was enhanced through member checks, whereby interview transcripts were sent to participants for their review, comments, and approval.

Assumptions, Delimitations, and Limitations

It was assumed that all participants answered interview questions honestly and to the best of their abilities. It was further assumed that the sample used for this study was representative of online students at UWS. The study was limited to 18 student participants in three online departments at a single university who had taken a minimum of 12 units of online coursework in nursing, business administration, or environmental resource management. Results from the study may not be applicable to other universities or departments.

A potential limitation of case studies is that a researcher could allow ambiguous information "or biased views to influence the direction of the findings and conclusions" (Yin, 2009, p. 14). In this study, I minimized that possibility by engaging in bracketing, a process of identifying potential bias and then setting aside, or bracketing, any preconceived notions that might interfere with objective data collection and analysis. Reliability is the extent to which a study can be replicated by another researcher following the same procedures and obtaining similar results (Yin, 2009). Reliability in

this study was strengthened by reporting the interview protocol used, relaying information by participants in their own words, and triangulation (Creswell, 2009; Lodico et al., 2006; Merriam, 2009; Yin, 2009).

Section 3: The Project

Introduction

The purpose of this case study was to examine the learning experiences and perceptions of students in online courses at a university in the western United States. The study was based on Moore's (1993) transactional distance theory and its four interaction components: student-content, faculty-student, student-student, and student character. The goal of this project study was to relate the experiences and perceptions of participants in their own words and to convey the findings of this study to university administrators and faculty members. This study will also be shared with all students involved in the online program at the university by placing a copy in the university library. Although Moore's theory of distance education formed the framework for this study, the study was not designed to prove or disprove Moore's theory but instead to examine how participants perceived their online courses using Moore's interaction factors.

Discussion

This section covers participants' ratings of student-content versus student-student interactions, and student-content versus faculty-student interactions. Also included in this section are interpretation of findings, implications for social change, and a review of literature.

The purpose of this study was to examine the perceptions and learning experiences of students in the online course environment at a university in a western state. Moore's distance theory was chosen as the theoretical framework. The four interaction factors enunciated by Moore were used to examine participants' perceptions

and learning experiences. The findings showed that learner-course content interaction was the strongest predictor of students' perceptions and learning experiences with their online courses. This finding confirmed the assertion by Kuo et al. (2013) and showed that when course content is easily understood or is learner friendly, participants' perceptions and learning experiences of the online courses increases. This finding is confirmed by Murray, Pérez, Geist, and Hedrick (2013), who reported that students who felt successful in the online course were those who understood the course content and scored highly in their test. Murray et al. further stated that "students with higher access rates earned higher grades and students with the lowest grades accessed fewer resources" (2013, p. 112). *Access rate* refers to access to interaction with course content.

The study also showed that participants rated learner-instructor interactions as second strongest predictor of their perceptions and learning experiences. Participants stated that they rated this factor second to course content because they benefitted from instructor feedback. Some participants complained of delayed and critical feedback from instructors. This finding is contrary to the report by Baker (2010), who found that learner-instructor interaction was the strongest indicator of students' satisfaction in the online course program. However, Paechter, Maier, and Macher (2010) confirmed this finding that learner-instructor interaction was not as significant in their study as learner-content interaction.

The participants in this study rated student-student interaction least among the four interaction factors. Student character was rated above student-student interaction.

When asked to rate student-content and student-student, participants rated student-content as superior to student-student interaction.

Student-Content Versus Student-Student Interactions

Students were asked to rate student-content and student-student interactions in order of preference, based on their learning experiences and perceptions of online courses at UWS. Results showed that student-content interaction was preferred over student-student interaction (see Table 3).

Table 3

Ratings of Student-Content Versus Student-Student Interactions

Participants→ Components↓	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Student-content	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Student-student	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Note. A rating of 1 indicates more importance, and a 2 indicates less importance.

As Table 3 indicates, all participants unambiguously preferred to interact with course content rather than with other students in a course. For example, Participant 7 said,

> I don't think that my peers are more knowledgeable than me in the courses we have taken so far. Why should I go to them for discussions outside the mandatory online discussion posts? As a matter of fact, if I have a serious question, I will

search the web to get my answer or ask my professor, certainly not my peers. Therefore, I choose student-content interaction over student-student interaction.

According to Participant 12,

> I don't think anyone of us cares about what the heck the other student is doing. If I don't care about them, why should I interact with anybody outside my course content or my professors? If I want to socialize with classmates, I will take the traditional class. Student-content interaction is obviously preferred.

Participant 15's sentiments were representative of the larger group:

> I enrolled in online courses because I do not have the funds, time, and luxury of attending a traditional classroom on campus. My schedule is such that I post my discussions at my own time, and I make sure I submit my papers as and when they are due after spending hours gathering materials on the web. I don't even have the time to read posts by my colleagues to give comments on their postings. Who really cares what my colleagues think or what they are doing? I would choose student-content interaction over student-student interaction any day. All our courses have course readings online and links to extra information so you don't really need the opinion or views of someone you don't know.

These views are consistent with an observation made by Mason and Rennie (2010) that well-designed course content is more important in an online course program than motivational support from faculty or interaction with fellow students. Lowery (2009) found a higher correlation between satisfaction and student-content interaction than with faculty-student interaction, and a negative correlation in student-student interactions

among their participants. Participants in that study stated that they concentrated on researching course materials and interacting with faculty rather than interacting with students.

Student-Content Versus Faculty-Student Interactions

Participants were asked to rate student-content interaction against faculty-student interactions based on their learning experiences and perceptions in online courses at UWS. These results are summarized in Table 4.

Table 4

Ratings of Student-Content Versus Faculty-Student Interactions

Participants→ Components↓	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Student-content	1	2	1	1	1	1	1	2	1	2	1	1	2	1	1	1	1	1
Faculty-student	2	1	2	2	2	2	2	1	2	1	2	2	1	2	2	2	2	2

Note. A rating of 1 indicates more importance, and a 2 indicates less importance.

As Table 4 shows, 14 of 18 (78%) participants rated student-content above faculty-student interactions. Most of these said that student-content interaction is more important because active learning is encouraged when courses include individual and group assignments, discussion templates, projects, presentations, and assessments. Those who preferred faculty-student interactions said that professors provide clear objectives and goals for both group and individual assignments, ensure that assignments are

completed when due, and offer support and encouragement to students who might otherwise drop out. The preference for student-content interaction revealed by participants in the current study is consistent with other research (Baxter & Jack, 2008; Bejerano, 2008; Dobbs et al., 2009; Jackson et al., 2010). This means that in this study, students' favorable perception and positive learning experiences are highest when course content is easily accessible and understood.

Student Character

The participants stated that one of the requirements for admission into an online course at the university is to have basic knowledge of computing. They also stated that the university admission policy is that all students must achieve passing grades in two mandatory computing courses before continuing with their online program. Perseverance, resourcefulness, and ability to search the Internet for information are important qualities needed to be successful in the online program. Representative responses are as follows:

> To be successful in any online course, a student has to be resourceful and persistent, otherwise such a student will drop out so fast. (Participant 2)

> I think that the most important quality for us [students in online program] is to be computer literate and show that we are comfortable with online technology. (Participant 9)

> I chose the online program without fully understanding the implications, but I count myself as having knowledge about computers. After taking the two mandatory computer courses, I realized that convenience or flexibility to

> complete assignments at my own time is not the only quality required to be successful in my online program. Comfort in using Internet tools like chats, emails, bulletin boards, search tools, Twitter, and other digital tools are very important, as well as the determination to continue with my program no matter the odds or challenges. (Participant 11)

> Apart from being competent in the use of the Internet, the ability to navigate technical issues and complete assignments on schedule is also important. Sometimes I feel like quitting, but my self determination to continue overrides those little moments of confusion. (Participant 18)

The findings of this study showed that a participant's basic computer skill is not really the only requirement to be successful in online courses at UWS. Equally important are the abilities to use computers to complete assignments, perform other technical tasks like Twitter, and the use of other digital tools.

Interpretation of Findings

This study was designed to examine students' experiences and perceptions of online learning in three departments at a university in the western United States. Participants were asked to rate the importance of four interaction factors: student-content, faculty-student, student-student, and student character. The interview protocol had 12 questions. However, as the interviews proceeded, additional questions arose to clarify participants' learning experiences and perceptions. Participants seemed honest and forthcoming in expressing their views, especially when they were informed that they would not be identified. Participants explained why they decided to take online courses

instead of traditional classes. They also discussed expectations, shortcomings, and disappointments, along with features they would like university authorities to change.

Research Question 1

How do students describe their interactions with instructors and other students in online courses?

To address the first research question, participants were asked to rank faculty-student and student-student interactions in order of preference and describe the reason for their choice. Results are summarized in Table 5.

Table 5

Ratings of Faculty-Student Versus Student-Interactions

Participants→ Components↓	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Faculty-student	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1
Student-student	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2

Note. A rating of 1 indicates more importance, and 2 indicates less importance.

As Table 5 shows, 17 of the 18 participants (94%) preferred faculty-student interaction over student-student interaction. Relevant excerpts from interviews are as follows:

> I prefer faculty interaction to student-student interaction because professors support and clarify difficult concepts and skills and are able to give students

feedback on discussions, tests, presentations, and quizzes. I don't really use student-student interactions except during discussion posts when I have to comment, acknowledge, support, or critique my colleagues' posting. (Participant 1)

Faculty-student interaction is second to student-content interaction on my scale of interactions in the online learning environment. On occasions when I don't understand some of my readings and assignments, I ask my professors for clarification. I have used student-student interaction in some cases, but definitely faculty-student interaction is more important to me than student-student interaction. (Participant 2)

There are a lot of benefits in using interactions in computer-mediated learning. The major advantage for me is that students appreciate to a higher degree the interactions with professors over interactions with fellow students. I choose faculty-student interaction because my professors set the emotional tone for our online interactions. They also give us positive feedback on assignments that help us become more successful in our online courses. (Participant 3)

I prefer faculty-student interaction over student-student interaction because our professors provide us with prompt, specific, and uncritical feedback on our learning activities. (Participant 4)

Interactions of any sort play a vital role in the online educational process. Teachers, professors, and instructors serve a useful purpose as moderators, guides, and sometimes mentors. Their importance in online education is second to

student-content interaction. On the other hand, student-student interaction is important, but on my scale of online learning interaction, student-student is the least of all. (Participant 5)

Online learning is a self-directed activity, and it is a learner-centered approach, which enables us to develop autonomy and independence in our study habits. It also shifts the responsibility for learning on us. Having said this, sometimes it could be overwhelming, and faculty-student interaction may be the only source of receiving encouragement to stay the course. So, I choose faculty-student interaction over student-student interaction. (Participant 6)

I was disappointed three times by my course mates when I asked about some content materials that I didn't quite understand during our group presentation project. My group members told me they did not understand what we were expected to do, but it turned out that they all completed the assignment and I was the only person who did not submit any material for the project. As a result of that horrible experience, I think that student-student interaction did not really work for me. I therefore prefer to use faculty-student interaction. (Participant 7)

Between faculty-student and student-student interactions, I use faculty-student interaction more frequently. The reason I use faculty-student interaction is because my professors give uncritical feedback on assignments and are supportive in encouraging me to achieve my goal. (Participant 8)

For me interaction generally is important to the success of any online course program. I value student-content interaction as the most important of online

interactions, and faculty-student interaction as second, and higher than student-student interaction. Our professors are easily accessible, and their feedback, support, instructions, and directives on course materials are exemplary. (Participant 9)

I will choose faculty-student interaction over student-student interaction because instructors encourage greater student participation in online learning activities by affirming our abilities, knowledge, and making positive comments about our online course discussions, postings, and presentations. (Participant 10)

Professors acknowledge the diversity of our background and interests. They adequately facilitate our threaded discussions, give highly academic feedback, and are supportive when students have problems with content materials. Based on my experience in completing 42 credits of courses in my department with a 4.0 GPA, I choose faculty-student interaction over student-student interaction. (Participant 11)

Faculty-student interaction is an important component in the online learning process. As a result of my experience in taking 30 credits of online courses already in my department, I believe that faculty-student interaction is more important than student-student interaction because my professors encourage persistence in completing my course work, are supportive of my efforts, and are not competing with me as my colleagues do. They also provide prompt and suggestive feedback and no critical feedback, as my colleagues often do. (Participant 12)

My professors have content expertise, which is vital in explaining concepts and skills to us. Professors are able to guide, facilitate, encourage, support, and give uncritical and positive feedback. After completing 28 credits in my department, I believe that faculty-student interaction is more important than student-student interaction. (Participant 13)

I have completed 36 credits in my department, and I value faculty-student interaction more than student-student interaction because our instructors are knowledgeable about the course content and they recommend appropriate additional resources to meet the needs of diverse learners like me. Instructors also set the emotional and intellectual tone for our online courses. They provide adequate and prompt feedback to help us improve our knowledge base and be successful in our online courses. (Participant 14)

I believe that faculty-student interaction is more important than student-student interaction because my professors provide guidance for our group discussions, presentations, online course readings, and other online activities. Professors are able to identify students who are not fully participating in group online activities. Professors also encourage and motivate students to achieve success in online courses. (Participant 16)

Faculty-student interaction is more important to me than student-student interaction. My professors are flexible with due dates, they give prompt and positive feedback, and they help us to identify course materials online. Most of our course materials are not well-organized online because they are spread all

> over the website and it takes a lot of time finding information on the site. It will be a good idea to have all the information and materials we need properly organized online so that we don't have to spend too much time searching for information on the website. (Participant 17)
>
> Faculty-student interaction is more important than student-student interaction because I trust my professors more than I trust my colleagues. Most of my instructors are very helpful and understand the situations under which we learn. However, sometimes it is difficult to match test questions to what is in the textbook. I have three concerns which I will like the department to address: (a) Quizzes and tests should match textbook/content of course. (b) More prompt reply from instructors when emailing back their comments on our work. (c) Streamline things, certain information that we need are in many areas online. It will help if everything we need for the course was in one place for easy access. (Participant 18)

Only one participant said that student-student interaction is more important than faculty-student interaction:

> I learn more in group discussions than independently. I feel more comfortable asking fellow course mates questions and tapping their knowledge than receiving instructions from professors or reading the course materials. I think I prefer student-student interaction to faculty-student interaction. (Participant 15)

This minority view is consistent with findings in other studies. Johnson, Bishop, Holt, and Stirling (2001) and Rogers (2003) concluded that some students in online

courses learned better from peers than from their instructors. Hendriks and Maor (2003) reported that peer interaction tends to help some online students learn better because online peers bring with them “pre-experiential knowledge” to online threaded discussions, which in turn promotes learning.

Research Question 2

How do students perceive and describe their learning experiences with online course content?

Most studies of online learning have focused on how to present materials to learners; as a result, little attention has been devoted to the experiences and perceptions of students in the online learning environment (Gao & Lehman, 2003; Liaw & Huang, 2000; Northrup, Lee, & Burgess, 2002; Zhang, 2005). In the current study, participants were asked to rank the four components of online course interactions in order of importance: faculty-student, student-content, student-student, and student character. Results are shown in Table 6.

Table 6

Ranking of Four Interaction Components

Participants→ Components↓	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Faculty-student	3	1	3	3	3	2	2	1	2	1	3	3	1	3	4	3	3	3
Student-content	1	2	2	1	1	1	1	2	1	2	1	1	3	1	1	1	1	1
Student-student	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4
Student character	2	3	1	2	2	3	3	3	3	3	2	2	2	2	2	2	2	2

Note. Responses ranged from 1 (most important) to 4 (least important).

Relevant excerpts from interviews are as follows:

I have taken 30 credits of online course in my university and I find that when the course content is clearly outlined, I feel that I will make a good grade in the course. (Participant 1)

Student-content interaction is the most important because it contributed greatest to my successes so far in the online courses I have taken. When I understand what I am expected to do from the start to the end of the course, I am motivated to spend more time reviewing the course materials in order to achieve success regardless of other interactions. (Participant 4)

Understanding the course calendar, syllabus, materials, and course descriptions is central to passing an online course. (Participant 5)

While faculty-student interaction is necessary to explain difficult concepts, guide, and support students in the online education, student-content is the most important interaction that insures success with online courses. (Participant 6)

All the four interactions in online courses are effective and important, but for me student-content interaction is the most important because it determines for me whether I will take an online course or not. I have already taken 38 credits of online courses in my university and the only course in which I scored B is the course that I did not completely understand what is required in that course. For the other courses, I made As. (Participant 7)

Student-content interaction is most important for me because my goal for taking a course is to get a very good grade, and for that to happen, I must thoroughly understand the course content. (Participant 9)

Student-content is vitally important for me. If I have a good grasp of what the online course content involves, then I am most certainly going to pass the class with a good grade, other interactions notwithstanding. (Participant 11)

Student-content is the epicenter of success in an online course. In my learning experience, student-content interaction made me feel really good at reading books and writing papers. (Participant 12)

I took 36 credits prior to my current online course and I can testify that the driving force in achieving success in an online course is to read and understand the course

materials, assignments, expected discussions, quizzes, tests, presentations, and due dates. Other interactions are of lesser importance to me. (Participant14)

I registered to take online courses because they create opportunity for me to learn materials at my own time and pace. Whenever I have time, I work on 2 to 3 weeks assignments, discussions, and presentations before the due dates. So, I pick student-content among others as the most important interaction in online course program. (Participant 15)

A high student-content interaction motivates me to achieve highly. For me, student-content interaction is the most important interaction because clear expectations motivate me to achieve my goals. (Participant 16)

I like faculty-student interaction because my professors do explain concepts to us and they serve as moderators and also support us every time we run into difficulties. However, if I don't understand the course content, then I am not even going to register for that course. I can safely say that student-content is the most important interaction in taking online courses for me. My perception of learning increased with a clear understanding of the course content. (Participant 17)

Before now, I thought that faculty-student interaction is the most important factor in online courses until this interview because I used to take the course content for granted. I have completed 36 credits of online courses and it is vitally important to me to understand course content before taking the course. So, I now know that student-content interaction is the most important because that has always been the

first factor that I consider before registering to take an online course.

(Participant 18)

Moore (1999) defined student-content interaction as “the process of intellectually interacting with the content that results in changes in the learner’s understanding, the learner’s perspective, or the cognitive structures of the learner’s mind” (p. 2). For Moore, student-content interaction defines education, for without it, education cannot occur. In the current study, 13 of 18 participants said student-content was the most important interaction based on their experiences with online courses (see Table 7).

Table 7

Most Important Interactions

Component	*n*	%
Faculty-student	4	22%
Student-content	13	72%
Student-student	0	0%
Student-character	1	6%
Total	18	100%

Note. Percentage of participants responding to their choice of interactions.

In Table 8, participants’ second, third, and fourth choices are shown.

Table 8

Ranking of Four Interaction Preferences

	1st		2nd		3rd		4th	
	n	%	*n*	%	*n*	%	*n*	%
Student-content	**13**	**72%**	1	6%	0	0%	0	0%
Faculty-student	4	22%	**14**	77%	4	22%	0	0%
Student-character	1	6%	3	17%	**13**	**72%**	1	6%
Student-student	0	0%	0	0%	1	6%	**17**	**94%**

Note. The most frequent responses are shown in bold.

The results of this study suggest that students who prefer to interact with course content believed that they achieved higher success in the online courses at UWS in terms of scores, completing assignments, quizzes, discussions, presentations, and tests. Participants were asked what grades they received in their first and last course in their first year of taking online courses. These results are shown in Table 9.

Table 9

Scores in Online Courses A 161 and B 366.

Participants→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Online courses↓																		
A 161	A	B	B	A	A	A	A	C	A	B	A	A	B	A	A	A	A	A
B 366	A	A	B	A	A	A	A	B	A	B	A	A	C	A	A	A	A	A

Results of this study indicate a relationship between a preference for student-content interaction and grades in online courses. Participants 1, 4, 5, 6, 7, 9, 11, 12, 14, 15, 16, 17, and 18 chose student-content as the most important interaction in their online course program, and all of them received a grade of A in both online courses they reported on. These results are consistent with a study by Fredericksen, Pickett, Shea, Pelz, and Swan (2000), who found that students who interacted more with content in their online courses also reported the highest level of learning. Similarly, Reisetter et al. (2007) reported that in their study of online courses, learner-content interaction was rated highest. In the same vein, Vrasida (2000) stated that "student-content interaction is the fundamental form of interaction on which all education is based" (p. 12), a view echoed by Tuovinen (2000); Cuthrell and Lyon (2007); and Rovai, Ponton, Wighting, and Baker (2007). Earlier, Moore (1993) had argued that student-content interaction is "the defining characteristic of education" (p. 3). A counter example is Jing and Ting (2000), who found that faculty-student interaction was most important in an online course program.

Time Spent Online per Week

Participants were asked how many hours they spent online with content materials, course assignments, and interactions with instructors and fellow students. Responses are summarized in Table 10.

Table 10

Hours Per Week Spent on Online Courses (N = 18)

Hours per week	Content materials	Interaction with instructors	Interaction with fellow students	Course assignments
2	-	-	16	
4	-	-	2	
6	-	-	-	
8	-	2	-	
10	-	4	-	
12	-	12	-	-
14	2	-	-	2
16	3	-	-	3
18	-	-	-	-
20	13	-	-	13

As Table 10 shows, participants spent the same amount of time on content materials and course assignments. Participants explained that when they are online reading content materials, they are also completing their course assignments. Data analysis revealed that 72% of participants reported that they spend 20 hours online per week reading content materials and completing their assignments, 22% spend 16 hours ,and 11% spend 14 hours. Responses also revealed that 22% of participants spend 6 hours per week interacting with instructors, 44% spend 8 hours, 12% spend 10 hours, and 22% spend 12 hours interacting with instructors per week. Finally, responses indicated that 89% of participants spend 2 hours interacting with fellow students, and 11% spend 4 hours in such interaction.

Participants were asked, “How comfortable are you with the use of computer to access your online courses? All 18 participants said they are very comfortable with the use of computer. One said, “I did not know initially that I am not good at the use of

computer until I took my first mandatory course in computer online in my first semester. Now, I am as comfortable and confident in computer use as any other student,"

Perception of Online Courses

Do you perceive that the online courses met your expectations?

All 18 participants said the online courses met their expectations.

Do you perceive that the online methods of course content delivery met your expectations?

Thirteen participants (72%) said current methods of content delivery are satisfactory, and five (28%) wanted the method to include web conferencing. Current methods include Blackboard, Internet video streaming, course CD, and downloadable files.

Do you perceive that the online course discussions met your expectations?

Online course discussions involve students logging onto Blackboard and posting responses to other students' posts. Seventeen participants (94%) stated that online course discussions did not meet their expectations. They said they did not gain much from the discussions and would prefer to work independently. One stated that faculty should design better group projects so that students will interact more. Only one participant said discussions with other students helped in understanding the content.

Do you perceive that the online student-student interactions met your expectations?

Seventeen participants (94%) stated that they do not care about student-student interaction. One said that student-student interaction met expectations but could be improved.

Do you perceive that the online student-instructor interactions met your expectations?

Sixteen participants (89%) said that online student-instructor interactions met their expectations, although three would like to see faster feedback from instructors.

Do you perceive that in the online course, student-content interactions met your expectations?

All the participants said the course content was what they expected. A representative comment is as follows:

> The course content is a determining factor for me to enroll in a course; if I like the course content I am in. For the past two years in this university, I can tell you that the course content has been ideal and the presentation well deserving of my commendation.

What changes would you suggest for course content delivery?

Fourteen participants (78%) said they want the current delivery methods to continue unchanged. Four (22%) want the faculty to introduce web conferencing as a course delivery method.

Age

Participants' ages ranged from 18 to 40 years. Age did not seem to be a factor in the four interactions studied. Older participants' responses regarding comfort with computers were not different from younger participants. This result is in contrast to Roach and Lemasters (2006), who found that age was a predictor in students' use of computers. However, findings in the current study are consistent with Rodriguez et al. (2008), who concluded that "student characteristics such as age and knowledge of

electronic communication technology did not determine student success in the online program" (p. 109). Perkins, Wellman, and Wellman (2009) found differences between older and younger students regarding the type of feedback they received, the kind of citations they made, and type of questions they asked. Participants in this study were asked about their comfort with computer use prior to enrollment in online courses at UWS. The findings showed that participants' ages did not show any difference with comfort in using computers. Some of the responses are stated below:

> I am 38 years old and I am highly computer savvy, so taking online courses posed no problems. I enjoy taking online courses and making PowerPoint presentations, posting discussions, and helping the younger students in my group with PowerPoint presentations. (Participant 12)
>
> I am 19 years old. I used computer tools to make presentations in high school, but I did not consider myself a computer guru prior to taking online courses here in the university. I learned quite a lot about computer use in my two mandatory courses and I am now comfy with computer tools. (Participant 3)

The responses by three of the participants represented the general opinion of all participants in this study. In the current study, previous computer knowledge was not predicted by age.

Implications for Social Change

Shale and Garrison (1990) stated that "in its most fundamental form, education is an interaction among instructor, student, and subject content" (p. 1). The current study was an exploration of how various forms of participation (learner-content, instructor-

learner, learner-learner, and learner character) influence postsecondary students' perceptions of online courses. The study's purpose is consistent with Koohang and Durante's (2003) contention that students' perceptions of online learning are critical to their motivation and success, and with Arbaugh and Rau (2007), who argued that interaction in an online learning environment is important because it influences students' satisfaction and academic success.

This study can promote positive social change by offering postsecondary instructors and online facilitators a better understanding of the learning experiences and perceptions of students in online courses. Results of this study confirm that instructional design should be student-friendly. Participants said they would like to see their course content materials more readily accessible with links, rather than having to spend hours searching for materials. They want course materials to focus more on objectives, goals, and learner expectations. They want better communication devices to access course materials online, including individual and group video conferencing. They want instructors to be more engaging in their interactions with students. Feedback should be timely, constructive, nonthreatening, positive, and corrective.

This study will enable university administrators to design training workshops for faculty to improve their interactions with students. It will also show designers of higher education online programs that enrollment increases in online education must be accompanied by attention to students' needs. In light of the low importance participants attached to student-student interaction, it is incumbent on faculty and administrators to

find ways to build greater community among online learners. Online students will benefit from carefully designed courses that take into consideration their perceptions and needs.

Review of Literature

There continues to be substantial growth in online enrollment in postsecondary institutions, as reported by the Babson Survey Research Group's annual survey of more than 2,500 colleges and universities (Allen & Seaman, 2014). According to the report, the number of students enrolled in at least one online course increased from 6.7 million in 2011 to 7.1 million in t 2012. The researchers also predicted that by 2013, most higher institutions in the country will offer at least one online course.

With the progressive annual growth in online learning enrollment, the need for a thorough understanding of online learners' experiences and perceptions cannot be overemphasized. Studies examining the experiences and perceptions of students in online learning are sparse (Gilbert, Morton, & Rowley, 2007; Lei & Gupta, 2010; Smart & Cappel, 2006; Wang, 2004). Nichols (2010) stated that most research on online learning has focused more on pedagogy than on students' experiences. Nevertheless, students are the most important part of any online learning environment (Benneth, Maton, & Kervin, 2008; Lint, 2013; Wintera, Cottona, Gavina, & Yorkeb, 2010). A clearer understanding of the experiences and perceptions of learners will help postsecondary institutions improve delivery strategies and assure students' success (Moore, Dickson-Dean, & Galyen, 2011; Nanfito, 2014; Nichols, 2009).

In a study at Universiti Sains Malaysia, Siti Sarah and Issham (2011) concluded that online students' experiences should be further researched to ensure that content delivery meets learners' expectations:

> The e-learning portal in the School of Distance Education has been perceived to be pedagogically effective. . . . More investigation needs to be carried out of how we could improve the portal to include friendlier design and recover the robustness of the delivery platform by examining the experiences and perceptions of students in the program. (p. 57)

Other researchers have reached a similar conclusion (Bekele, 2010; Vonderwell, Liang, & Alderman, 2007). Jung (2012) claimed that "there have been few efforts to investigate the concept of quality from learners' perspectives or to incorporate their needs and perceptions in quality standards in distance education" (p. 94). He stated that this dearth of investigation

> is rather surprising, particularly in distance education contexts where the quality of the learning is not derived only from the products and services delivered to the learner but also from the knowledge, understanding, and relationships that are co-developed by both teachers and learners during the teaching and learning processes. (p. 101)

Yueng and Yang (2010) noted that because rapid technological development and the technical savviness of students in online courses, it is important to puruse further studies that examine students' experiences and how they perceive the courses they take.

The current study was based on Moore's (1993) transactional distance theory. Other researchers have also appropriated Moore's theory (Andersen, 2003; Bender, 2003; Dennen, Darabi, & Smith, 2007; Kang & Gyorke, 2008; Karatas, 2008; McGill & Hobbs, 2008; Swan, 2002; Zhang, 2003), but no one has used it to examine online students' perceptions of their course experience. This study used the four interaction factors of Moore's distance theory to examine the experiences and perceptions of online students at UWS.

In the current study, participants' reported that their most important interaction was with course content. This view is consistent with results from a study by Hannay and Newvine (2006), who reported that "students felt a greater level of connection with the curriculum than they felt with the instructors" (p. 130). Sheridan and Kelly (2010) found that students were more likely to be motivated if they clearly understood what is expected of them, rather than being motivated by relationships with instructors. Galy, Downey, and Johnson (2011) concluded that learner-content interaction plays the most important role in ensuring that online students are successful. Nister and Neubauer (2010) stated that learner content is the most important factor in the successful implementation of an online program. Swan (2001) cited three factors—"clarity of design, interaction with instructors, and active discussion among course participants—as influencing students' satisfaction and perceived learning (p. 307).

On the other hand, Mazzolini and Maddison (2003) focused on the instructor-student relationship and observed that instructor postings and the method of course delivery affected the perceptions of students in their study. They concluded that the

number of student postings in response to instructor requests did not necessarily reflect their learning experiences. Rather, the quality of course design is of prime importance. Capra (2011) asserted that learner-instructor interaction could become as vital to online education as learner-content interaction if instructors are able to provide more effective and immediate feedback, give clear instructions, and exercise diligence in response to students' questions. Moore and Kearsley (2012) stated that feedback from instructors should be short, unambiguous, effective, and immediate.

Some researchers have described the student-student relationship as vital in the successful implementation of online programs (Aragon & Johnson, 2008; Crisp, 2010; Edwards & Helvie-Mason, 2010; Rose, 2009; Farnsworth & Bevis, 2009). According to Picciano (2002),

> The success of many online courses is dependent upon the nature of student to student and student to faculty interaction. However, how interaction affects learning outcomes and what are the relationships between the two is a complex pedagogical phenomenon in need of further study. (p. 33)

A contrary view was expressed by Xue, Yan, Chuan-Hoo, and Hock-Hai (2007), who concluded that interactions among students taking the same online course may not correlate with student satisfaction. On the other hand, Rovai (2007) stated that instructors should encourage student-student interaction because each student helps the other to learn and as a result, all members of a class are actively involved in the online learning process. Simonson, Smaldino, Albright, and Zvacek (2012) argued that student interaction with colleagues should be encouraged by online program designers to ensure success and

student satisfaction. Other researchers have concluded that students can improve their learning experience and become more successful through by sharing of ideas, skills, and concepts among themselves (Alden, 2010; Bradley, 2011; Kapur, 2011; Smyth, 2011).

Jungjoo (2013) studied interaction among students in online courses and found that they were not interested in collaborating with each other because the course content was easy to understand. Jungjoo also noteed that the digital world has made it easy to find information for oneself. This ability is part of what Bandura (1994) called self-efficacy: “people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives” (p. 71). Self-regulatory behavior is important in any educational setting, but especially in an online learning envivornment (Bandura, 1997; Christensen, Horn, & Johnson, 2008; Zimmerman, 2002). Indeed, several researchers have concluded that self-efficacy among students has increased because of technological development (Rudestam & Newton, 2007; Zhang & Kenny, 2010).

Section 4: Reflections and Conclusions

In this section, I will reflect on the findings of this study as well as discuss the strengths and limitations of this research study. This section will also show my reflections as a researcher, recommendations for action, and recommendation for further research studies.

Strengths and Limitations

A potential limitation of case studies is that a researcher could allow ambiguous information "or biased views to influence the direction of the findings and conclusions" (Yin, 2009, p. 14). In this study, I minimized that possibility by engaging in bracketing, a process of identifying potential bias and then setting aside (bracketing) any preconceived notions that might interfere with objective data collection and analysis. Bracketing, according to Tufford (2010), is a "method used in qualitative research to mitigate the potentially deleterious effects of preconceptions that may taint the research process" (p. 83). Reliability is the extent to which a study can be replicated by another researcher following the same procedures and obtaining similar results (Yin, 2009). Reliability in this study was strengthened by reporting the interview protocol used, relaying information by participants in their own words, and triangulating data (Creswell, 2009; Lodico et al., 2006; Merriam, 2009; Stake, 2011; Yin, 2009). The data collected from participants were analyzed, and the apriori themes that emerged were directed related to the four factors of Moore's Distance Theory (1993).

Despite these provisions, the current study did have limitations. One was sample size: 18 student participants in three online departments at a single university who had

taken a minimum of 12 units of online coursework in nursing, business administration, or environmental resource management. Results from the study may not be applicable to other universities or departments. The sample size of 18 student participants was chosen because a larger sample size may warrant a longer length of research time in the field and the likelihood of saturation was considered before limiting the sample size to 18. Also, since no statistical test was planned, the sample size was deemed adequate for this study. In order to remediate the limitations and ensure the validity of this study, I hired an independent reviewer to examine and scrutinize the interview data. Finally, I considered the purpose of the study and the two research questions designed for this study, and decided that a sample size of 18 will adequately provide enough data for analysis and interpretation.

Recommendations for Action

It is clear from the study data that instructor interactions with students in UWS's online program should be reviewed, with an emphasis given on timely feedback to students. Course materials should be made easily accessible without technical hitches. The amount of audio-video course materials should be increased. University leaders should also incorporate mandatory individual and group video conferencing at least once a term to improve faculty-student and student-student interactions according to most participants' responses.

Student-student interaction in this online course program should be improved by developing strategies to build a greater sense of community among students. Although some participants cited feedback and content knowledge as reasons why they chose

faculty-student interaction as most important to them, two of the participants informed me during the interview that they had experienced delayed electronic mail response from instructors. This view was expressed by about 56% of the study participants. They also said they would like to see information on their department website reorganized to make it more student-friendly. Three other participants noted that they had difficulty matching test questions and quizzes against textbook readings.

Recommendations for Further Study

Online course programs are predicted to continue growing, and the challenges facing online learners are expected to require ongoing attention (Allen & Seaman, 2011; Brown & Wrisley, 2009; Noel-Levitz, 2013). Participants in this study were asked how they see their online courses in the next 5 years. Participant 4 said that "the long-term plan of the university is to continue to increase enrollment in the online program and it will have significant problems with interactions and content delivery if the university neglects [to] study reports such as yours" (i.e., the current study). Another participant said, "There should be more research studies in our university to explore the drop-out rates and reasons why students do not interact effectively in the online program." Participant 15 said," I would like to see a research study exploring the views and opinions of our professors on the online program in our college." It is important for the university administration to commission more studies in the near future to examine interactions between students in the online program. The university authorities should also conduct research to asses students' satisfaction as the enrollment in online programs continues to grow. According to a 2010 U.S. Department of Education publication on the practices in

online learning, “policy-makers and practitioners need to know about the effectiveness of Internet-based, interactive online learning approaches and need information about the conditions under which online learning is effective” (p. 1). Future studies at UWS should also examine ways to increase student-student interaction in the online learning environment in order to encourage a sense of community among students taking the same online course.

Researcher’s Reflections

My experience as an adult online learner for over 5 years pales in comparison to the experience gained from this study. Because I thought it would be difficult to eliminate personal bias in conducting this study, I hired an independent reviewer to assist me. It turned out that my experiences as an older adult learner were different from those of participants in this study. I started my online doctoral program already having a good job, whereas many participants in this study said they enrolled in an online program to have the prospect of a better job and live the American dream. Some of the participants said that they enrolled because they want to become the first in their family to graduate. Others stated that they enrolled because online education is cheaper and enables them to learn at their own pace. Several participants said that they enrolled in an online program because they already had families and could not attend traditional classes due to increased family responsibilities.

Conclusion

Many researchers have examined interaction as a vital component in students' success in postsecondary online courses (Bruning, 2005; Burnett et al., 2007; Coombs-Richardson, 2007; Crane, 2011; Fresen, 2007; Greener, 2008; Kearsley, 2000; Kim, Liu, & Bonk, 2005; Laser, 2011; McBrien et al., 2009; Moore, 1993; Northrup, 2001; Sutton, 2001; Thorpe & Godwin, 2006; Walker, 2005; Yildiz & Chang, 2003). However, as noted by Laser (2011), no prior studies addressed students' perceptions of their learning experiences in an online environment. This doctoral study is the first to consider online students' experiences and perceptions in light of four interaction factors: student-content, faculty-student, student-student, and student character.

One attraction of online learning is that it enables students to learn at their own leisure and pace (Cuthrell & Lyon, 2007; Rovai, Ponton, Wighting, & Baker, 2007). In this study, 72% of participants in this study rated student-content interaction as most important. As one of the participant stated "Properly designed content material with clearly stated objectives, goals, assignments, due dates, quizzes, tests, and expectations sets the tone for the entire course." Another participant said, "If there is ambiguity of any form with the content materials, I will not take the course." Asked whether it would matter if the instructor was well liked by students, this interviewee said, "It does not matter who the instructor is. I will not register for a course that I don't clearly understand what I am expected to do." Another said, "If the course content is not interesting, I will not take the course. I will read the course content to determine how interesting it will turn out to be, because I don't want to take any boring course."

The view of most of the participants was that student-content interaction was the most important predictor that shapes the perceptions and learning experiences of the participants at UWS. According to most of the participants, understanding the content in itself is a motivation to take the course. This conforms to the assertion made by D'Souza and Maheshwari (2010) that online courses should have in built motivational factors to sustain the interest of students. It is therefore vital that UWS administration should pay close attention to the design of their online courses to ensure course content clarity and easy accessibility. Some of the participants also said that easily accessible and intuitive online course content made them more successful. One participant suggested that "with the pace of technological advancement, the university should be thinking of providing students with audio-video lectures" to augment the current textbook readings as a way of improving student-content interaction. I believe that the UWS administration should incorporate audio-video lectures as part of the online learning delivery tool. There is a likelihood of passing the cost of the audio-video lectures to students as part of their tuition. This is something the administration will have to consider. Four participants (22%) stated that they would like to see web conferencing as part of the instructional delivery method. This is also an excellent idea, but the university administration will have to make the final decision because of the cost component.

Fourteen participants (77%) chose faculty-student interaction when asked to choose which interaction they would rate second to student-content. Several said that instructor feedback response time could be improved, one claiming that it took more than 16 days for an instructor to respond to an electronic mail inquiry. Twelve of these 14

participants also described having received negative feedback from an instructor. One of the participants said that feedback should be “timely, detailed, specific, motivational, supportive, nonthreatening, and positive.” Another participant suggested that “the university should ensure that all instructors undergo online professional training on feedback response.” Several participants expressed sentiments similar to this one: “Alternative modes of communication like video conferencing should be mandatory for students with their instructors to discuss issues arising from the online course and make suggestions for improvement at least once per term.” Summing up, Participant 4 said, “After considering the course content, the other important factor that I will consider is the instructor. Is he/she mean, kind, friendly, or strict? Positive answers to these questions will help me decide if I want to take the course or not.” As many authors have reported (Crisp, 2009; Ehrenberg, 2010, Wintera, Cottona, Gavina, & Yorkeb, 2010), faculty-instruction is vital to the success of online courses. Delayed and negative feedbacks are major issues raised by over 60% of the participants in this study regarding faculty-student interaction. The university administration needs to take a very critical note of this issue and take necessary steps to remedy instructor feedback to ensure they are timely, non-critical, effective, and respectful.

Asked to rate the third-most important interaction factor, 13 participants (72%) chose student character. Most participants said that taking an online course presupposes that a student can navigate the Internet. Three participants (17%) said they were not initially proficient using computers, but after three to four online courses they now feel confident searching for anything online. One of the participants said,

> If any online student lacks knowledge of basic Internet surfing, such a student will rely more on colleagues for assistance. I had a friend last year who had little knowledge about using the Internet to access materials. She was an older lady and I showed her how to navigate the Internet. Three weeks later she was good at it.

Another important personal attribute for academic success is motivation. One interviewee said, “Before contemplating taking an online course, I believe that I am quite ready to make time to complete the course. . . . If I am not motivated, I will drop out.” From the responses by the study participants, it is my view that self-motivation played a vital role in their perceptions and learning experiences of the online courses. According to Russell (2013) motivation in online studies is a vital component of student satisfaction. Acknowledging this view, Robb and Sutton (2014) in their study reported that “building student motivation by utilizing technology will aid in overcoming the challenges of online learning and improving success” (p.54). Other authors that have affirmed in their studies that motivation is an important factor in online learning are (Afzal, Ali, Khan, & Hamid, 2010; Daniels, 2010; Gregory, Horsham-Brathwaite, Queenan, & Skott, 2010; Nonis, & Hudson, 2010).

Seventeen participants (94%) rated student-student interaction as the least important of all four of the interaction components. Most participants said that because online courses necessitate self-directed and motivated learners, a student does not need to depend on colleagues to succeed. As one participant put it, “How can you depend on a colleague you don’t even know that well or see?” Another participant said, “Before enrolling in an online course, you should be sure you can do it alone or forget it. If you depend on

someone else, you may as well give yourself an F grade." Another interviewee bluntly stated, "I don't really care about my colleagues because I know I can be successful without anyone. This is an online class and not a social organization." Perhaps this opinion is consistent with my experience in online learning. I prefer to complete my assignments alone than work in a group. Poor group dynamics tends to weaken the morale and destroy the essence of group activity leading to failure or poor grades in online courses. Therefore, some students may believe that the online program is best suited for students who prefer to work alone than work in a group.

Participants were asked what could be done to improve student-student interaction. They said that designers of online programs could incorporate mandatory video conferencing between students as part of the curriculum. They also suggested more group activities, such as video conferencing, that would increase interaction with colleagues. Other group activities that some participants suggested included creating multiple opportunities for students to discuss issues, events, and ideas in pairs and in small online groups of three or four students. Some participants also suggested that the instructors provide well designed and engaging small group projects and activities.

Moller, Foshay, and Huett (2008) stated that "our educational system is producing learners who prefer to interact with the content and the instructor, but not each other" (p. 72). In a study by Reisetter et al. (2007), online learners rated student-content as the most important interaction, stating that when course content is carefully designed with clear expectations, it is the optimal interaction factor in online learning. Northrup (2009) also found that students rated online content interaction as most important to them. Findings

from the current study confirm these earlier results. The lesson for educators is clear: The best guarantee of student success in online programs is well-designed courses.

Results of this study indicate that course design, instructor-learner interaction, learner character, and learner-learner interactions all determine learner satisfaction and success in an online learning environment. Participants would like to see improved course design and delivery methods, including instructor training to give immediate, unambiguous, and nonthreatening feedback. Participants also indicated support for the continuation of mandatory freshman computer-use courses, and they recommended new social communication tools to foster learner-learner interaction. It was also possible as I found out during the interview that delayed feedback tended to have negative impact in study participants' communication with faculty. The impact of immediate feedback prevented faculty from giving the necessary support and motivation to participants in this study. Further research on how to encourage learner-learner interactions at the university is recommended.

References

Abel, R. (2005). *Achieving success in Internet-support learning in higher education: Case studies illuminate success factors, challenges, and future directions.* Lake Mary, FL: The Alliance for Higher Education Competitiveness. Retrieved from http://www.a-hec.org/media/files/A-HEC_IsL0205_6.pdf

Adams, T. E. (2008). A review of narrative ethics. *Qualitative Inquiry, 14*(2), 175-94.

Afzal, H., Ali, I., Khan, M. A., and Hamid, K. (2010). A study of university students' motivation and its relationship with their academic performance. *International Journalof Business and Management, 5*(4), 80-89.

Alden, J. (2010). Use of wikis to support collaboration among online students. In H. Yang, & S. Yuen, *Collective intelligence and e-learning 2.0: Implications of web-based communities and networking* (pp. 110-126). New York, NY: IGI Global.

Allen, I. E., & Seaman, J. (2008). Staying the course: Online education in the United States, 2008. Retrieved from http://www.sloanc.org/publications/survey/pdf/staying_the_course.pdf

Allen, I. E., & Seaman, J. (2009). *The seventh annual Sloan survey of online learning.* Retrieved from http://sloanconsortium.org/publications/survey/learning_on_demand_sr2010

Allen, I. E., & Seaman, J. (2010). *Class differences: Online education in the United States, 2010.* Retrieved from http://sloanconsortium.org/publications/survey/class-differences

Allen, I. E., & Seaman, J. (2011). *Going the distance: Online education in the United States, 2011.* Retrieved from http://www.onlinelearningsurvey.com/reports/goingthedistance.pdf

Allen, I. E., & Seaman, J. (2014). *Grade change: Tracking online education in the United States.* Babson Park, MA: Babson Survey Research Group and Quahog Research Group. Retrieved from http://www.onlinelearningsurvey.com/reports/gradechange.pdf

Aragon, S., & Johnson, E. (2008). Factors influencing completion and non-completion of community college online courses. *American Journal of Distance Education, 22*(3),146-158.

Arbaugh, J. B., & Rau, B. L. (2007). A study of disciplinary, structural, and behavioral effects on course outcomes in online MBA courses. *Decision Science Journal of Innovative Education*, *5*(1), 65-95.

Ash, K. (2009). Experts debate cost savings of virtual education. *Education Week, 28*(25), 1-9.

Baker, G. (2010). The impact of instructor immediacy and presence for online student affective learning, cognition, and motivation. *The Journal of Educators Online, 7*(1), 1-30. Retrieved from http://www.anitacrawley.net/Articles/BakerPaper.pdf

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, *13*(4), 544-559.

Bazeley, P. (2009). Analysing qualitative data: More than identifying themes. *Malaysian Journal of Qualitative Research*, *2(*2), 6-22.

Bejerano (2008). Raising the question: The genesis and evolution of online degree programs: Who are they for and what have we lost along the way? *Communication Education*, *57*(3), 408-414.

Bekele, T. A. (2010). Motivation and satisfaction in Internet-supported learning environments: A review. *Educational Technology and Society*, *1*(2), 116-127.

Bell, P. (2007). Predictors of college student achievement in undergraduate asynchronous web-based courses. *Education*, *127*(4), 523-533.

Benneth, S., Maton, K., & Kervin, L. (2008). The “digital natives” debate: A critical review of the evidence. *British Journal of Educational Technology*, *39*(5), 775-786.

Beqiri, M. S., Chase, N. M., & Bishka, A. (2009). Online course delivery: An empirical investigation of factors affecting student satisfaction. *Journal of Education For Business*, *85*(2), 95-100. doi:10.1080/08832320903258527

Bernard-Brak, L., Lan, W. Y., & Paton, V. O. (2010). Profiles in self-regulated learning in the online learning environment. *The International Review of Research in Open and Distance Learning*, *11*(1), 183-202.

Bernard, R. M., Abrami, P. C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., Wallet, P. A., Fiset, M., & Huang, B. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of Educational Research*, *74*(3), 373-439.

Berridge, G. G., Penney, S., & Wells, J. A. (2012). eFACT: Formative assessment of classroom teaching for online classes. *Turkish Online Journal of Distance Education*, *13*(1), 68-78.

Betts, K., Hartman, K., & Oxholm III, C. (2009). Re-examining and repositioning higher education: Twenty economic and demographic factors driving online and blended program enrollments. *Journal of Asynchronous Learning Network*, *13*(4), 3-23.

Bocchi, J., Eastman, J. K., & Swift, C. (2004). Retaining the online learner: Profile of students in an online MBA program and implications for teaching them. *Journal of Education for Business*, *79*(4), 245-253.

Boekaerts, M. (2008). Motivation to learn. *Educational Practices*, *10*(2) 116-124.

Bollinger, D. U., & Martindale, T. (2004). Key factors for determining student satisfaction in online courses. *International Journal on E-Learning*, *3*(1), 61-67.

Bowen, G. A. (2005). Preparing a qualitative research-based dissertation: Lessons learned. *The Qualitative Report 10*(2), 208-222. Retrieved from http://www.nova.edu/ssss/QR/QR10-2/bowen.pdf

Bradley, W. E. (2011). A conceptual framework for the design and evaluation of online learning modules in professional training and academic education in business. *Proceedings of the American Society of Business and Behavioral Sciences*, *18*(1), 196-207. Retrieved from http:asbbs.org/files/2011/asbbs2011v1/pdf/b/bradleyw.pdf

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.

Brown, R. (2001). The process of community building in distance learning classes. *Journal of Asynchronous Learning Networks*, *5*(2), 18-35.

Brown, S. T., & Wrisley, C. D. (2009). Evaluative parameters of an online nursing program from learners' perspectives. J*ournal of Nursing Education*, *102*(2), 209-226.

Bullen, M., Morgan, T., & Qayyum, A. (2011). Digital learners in higher education: Generation is not the issue. *Canadian Journal of Learning and Technolog*, *37*(1), np. Retrieved from: http://www.cjlt.ca/index.php/cjlt/issue/view/71

Burns, R. (2000). *Introduction to research methods.* London, UK: Sage Publications Ltd.

Capra, T. (2011). Online education: Promise and problems. *Journal of Online Learning and Teaching*, *7*(2), 288-293.

Christensen, C., Johnson, C. W., & Horn, M. B. (2008). *Disrupting class: How disruptive innovation will change the way the world learns.* New York, NY: McGraw-Hill.

Cole, J. I., Suman, M., Schramm, P., Zhou, L., Salvador, A. (2013). *The digital future project 2013: Surveying the digital future*. The World Internet Project. Retrieved from http://www.worldinternetproject.net/_files/_Published/_oldis /713_2013_digital_future_report_usa.pdf

Confessore, G., & Park, E. (2004). Factor validation of the learner autonomy profile and extraction of the short form. *International Journal of Self-Directed Learning*, *1*(1), 39-58.

Coombs-Richardson, R. (2007). Personalizing distance education. *Kappa Delta Pi Record*, *43*(2), 71-75.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage.

Corry, M. (2008). Quality in distance learning. *Distance Learning, 5*(1), 88-91.

Craighead, C. W; Hanna, J. B; Gibson, B. J., & Meredith, J. R. (2007). Research approaches in logistics. *The International Journal of Logistics Management, 18(*1), 22-40.

Crane, T. (2011). The problem of perception. *Stanford encyclopedia of philosophy* (Spring ed.), Edward N. Zalta (Ed.). http://plato.stanford.edu/archives/ spr2011/entries/perception-problem.

Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Upper Saddle River, NJ: Pearson Education Inc.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed method approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Crisp, G. (2009). Conceptualization and initial validation of the college student mentoring scale. *Journal of College Student Development, 50*(2), 177-191.

Crisp, G. (2010). The impact of mentoring on the success of online community college students. *Review of Higher Education, 34*(1), 39-60.

Daniels, E. (2010). Creating motivating learning environment: What we can learn from researchers and students. *English Journal,* 100(1), 25-29. Retrieved from: http://www.academia.edu/1504898/Teachers_Matter

DeLoach, S.B., & Greenlaw, S.A. (2007). Effectively moderating electronic discussions. *Journal of Economic Education*, 419-434.

Dennen, V. P., Darabi, A. A. & Smith, L .J. (2007). Instructor-learner interaction in online courses: The relative perceived importance of particular instructor actions on performance and satisfaction. *Distance Education*, *28*(1), 65-79.

DiSlavio, P. (2008). *Aligning faculty incentives with shifting modes of delivery*. Academic Leader Magna Online Seminar.

Dobbs, R. R., Waid, C. A., & del Carmen, A. (2009). Students' perceptions of online courses: The effect of online course experience. *Quarterly Review of Distance Education*, *10*(1), 9-26.

Drew, C. J., & Hardman, M .L. (2007). *Intellectual disabilities across the lifespan* (9th ed.). Upper Saddle River, NJ: Merrill.

D'Souza, K. A., & Maheshwari, S. K. (2010). Factors influencing student performance in the introductory management science course. *Academy of Educational Leadership Journal*, *14*(3), 99-120.

Dunston, J. & Albalawi, J. (2014). *Improving satisfaction and delivery of graduate courses in an online program.* Proceedings of the 2014 Midwest Section Conference of the American Society for Engineering Education.

Edwards, J., & Helvie-Mason, L. (2010). Technology and instructional communication: Students' usage and perceptions of virtual office hours. J*ournal of Online Learning and Teaching*, *6*(1), 174-186.

Ehrenberg, R.G. (2010). *Rethinking the professoriate.* Paper presented at the American Enterprise Institute. Conference on Innovation and Entrepreneurship in Higher Education, Washington, DC.

Eide, P., & Kahn, D. (2008). Ethical issues in the qualitative researcher-participant relationship. *Nursing Ethics, 15*(2), 199-207.

El Mansour, B., & Mupinga, D. M. (2007). Students positive and negative experiences in hybrid and online courses. *College Student Journal*, *41*, 242-248.

Fallon, G. (2011). Making the connection: Moore's theory of transactional distance and its relevance to the use of virtual classroom in postgraduate online teacher education. *Journal of Research on Technology in Education, 43*(3), 187-209.

Farnsworth, K., & Bevis, T. (2009). *A fieldbook for community college online instructors.* Washington, DC: Community College Press.

Ficklen, E., & Muscara, C. (2001). Harnessing technology in the classroom. *American Educator*, *5*(3), 22-29.

Galy, E., Downey, C., & Johnson, J. (2011). The effect of using e-learning tools in online and campus-based classrooms on student performance. *Journal of Information Technology Education Research*, *10*(1), 209-230.

Gilbert, J. S., Morton, R. J., & Rowley, P. L. (2007). E-learning: The student experience. *British Journal of Educational Technology*, *38*(4), 560-573.

Glass, J., & Sue, V. (2008). Student preferences, satisfaction, and perceived learning in an online mathematics class. *MERLOT Journal of Online Learning and Teaching*, 4(3), 325-338.

Glesne, C. (2011). *Becoming qualitative researchers: An introduction* (4th ed.). Boston, MA: Pearson Education, Inc.

Grandzol, C. J., & Grandzol, J. R. (2010). Interaction in online courses: More is not always better. *Online Journal of Distance Learning Administration*, *13*(2), 12-18. Retrieved from http ://www.westga.edu/~distance/ojdla/summer132/Grandzol Grandzol132. html

Greener, S. L. (2008). Self-aware and self-directed: Student conceptions of blended learning. *MERLOT Journal of Online Teaching and Learning*, *4*(2), 243-253.

Gregory, J. L.; Horsham-Brathwaite, C.; Queenan, M. L.; & Skott, B. P. (2010). An investigation of student study: Behaviors in post-secondary classes. Paper 31 presented at NERA Conference Proceedings. Retrieved from: http://digitalcommons.uconn. edu/cgi/viewcontent.cgi?article=1001&context=nera_2010

Gubernick, L., & Ebeling, A. (1997). I got my degree through email. *Forbes, 159*(12), 84-92.

Hancock, D. R., & Algozzine, B. (2006). *Doing case study research: A practical guide for beginning researchers.* New York, NY: Teacher College Press.

Hannay, M., & Newvine, T. (2006). Perceptions of distance learning: A comparison of online and distance learning. *Journal of Online Learning and Teaching*, *2*(1), 121-136.

Heckman, R., & Annabi, H. (2006). How the teacher's role changes in on-line case study discussions. *Journal of Information Systems Education*, *17*(2), 141-150.

Heejung, A., Sunghee, S., & Keol, L. (2009). The effects of different instructor facilitation approaches on students' interactions during asynchronous online discussions. *Computers and Education*, *53*(3), 749-760.

Herman, T., & Banister, S. (2007). Face-to-face versus online coursework: A comparison of costs and learning outcomes. *Contemporary Issues in Technology and Teacher Education*, *7*(4), 318-326.

Hew, K. F. & Cheung, W. S. (2008). Attracting student participation in asynchronous online discussions: A case study of peer facilitation. *Computers and Education*, *51*(3), 1111-1124.

Hill, J. R. (2002). Overcoming obstacles and creating connections: Community building in web-based learning environments. *Journal of Computing in Higher Education*, *14*(1), 67-86.

Hofmann, D. W. (2002). Internet-based distance learning in higher education. *Tech Directions*, *62*(1), 28-32.

Holmberg, B. (1983). Guided didactic conversation in distance education. In D. Stewart, D. Keegan, & B. Holmberg (Eds.), *Distance education: International perspectives*, (114-122). New York, NY: St. Martin's Press.

Hoover, A. (2010). Student perceptions of online teaching styles. *Review of Educational Research*, *95,* 309-415.

Issham, I., Siti Sarah, M. J., & Rozhan, M. I. (2010). Technical appliance in e-learning: Student's perception on the usage of online learning. *International Journal of Emerging Technologies in Learning*, *5*(2), 31-35.

Jackson, L. C., Jones, S. J., & Rodriguez, R. C. (2010). Faculty actions that result in student satisfaction in online courses. *Journal of Asynchronous Learning Networks*, *14*(4), 78-96.

Johnson, E. M., Bishop, A., Holt, A., Stirling, J., & Zane, J. (2001). Reflections in cyberspace: Web conferencing for language teacher education. *Australian Journal of Educational Technology*, *17*(2), 169-186. http://www.ascilite.org.au/ajet/ ajet17/johnson.html

Jones, W. P., & Kottler, J. A. (2006). *Understanding research: Becoming a competent and critical consumer.* Upper Saddle River, NJ: Pearson.

Jung, I. (2012). Asian learners' perception of quality in distance education and gender differences. *The International Review of Research in Open and Distance Learning*, *13*(2), 90-119.

Jungjoo, K. (2013). Influence of group size on student's participation in online discussion forums. *Computers and Education*, *6*2(1), 123-129.

Kahn, L. B. (2009). *The long-term labor market consequences of graduating from college in a bad economy.* Yale School of Management. Retrieved from http://mba.yale.edu/faculty/ pdf/kahn_longtermlabor.pdf.

Kang, H., & Gyorke, A. S. (2008). Rethinking distance learning activities: A comparison of transactional distance theory and activity theory. *Open Learning*, *23*(3), 203-214.

Kapur, M. (2011). Temporality matters: Advancing a method for analyzing problem-solving processes in a computer-supported collaborative environment.

International Journal of Computer-Supported Collaborative Learning, *6*(1), 39-56.

Karatas, S. (2008). Interaction in the Internet-based distance learning researches: Results of a trend analysis. *The Turkish Online Journal of Educational Technology*, *7*(2), 46-58.

Keengwe, J., Onchwari, G., & Wachira, P. (2008). Computer technology integration and student learning: Barriers and promise. J*ournal of Science Education and Technology*, *17*(6), 560-565. doi:10.1007/s10956-008-9123-5

Knowles, M. S., Holton III, E. F., & Swanson, R. A. (2005). *The adult learner: The definitive classic in adult education and human resource development* (6th ed.). Burlington, MA: Elsevier.

Kuo, Yu-Chun, Walker, A. E., Belland, B. R., & Schroder, K. E. (2013). A predictive study of student satisfaction in online education programs. *The International Review of Research in Open and Distance Learning*, *14*(1), 35-50. Retrieved from: http://files.eric.ed.gov/fulltext/EJ1008076.pdf

Laaser, W. (2011). Economics of distance and online learning: Theory, practice and research. *International Review of Research in Open and Distance Learning*, *12*(2), 138-142.

Lapointe, L., & Reisetter, M. (2008). Belonging online: Students' perceptions of the value and efficacy of an online learning community. *International Journal on E-learning*, *7*(4), 641-665.

Lee, J., Carter-Wells, J., Glaeser, B., Ivers, K. & Street, C. (2006). Facilitating the development of a learning community in an online graduate program. *Quarterly Review of Distance Education, 7*(1), 13-34.

Lee, H. J., & Rha, I. (2009). Influence of structure and interaction on student achievement and satisfaction in web-based distance learning. *Educational Technology & Society, 12*(4), 372-382. Retrieved from http://www.ifets.info/journals/12_4/31.pdf

Lei, S. & Gupta, R. (2010). College distance education courses: Evaluating benefits and costs from institutional, faculty, and students' perspectives. *Education, 130*(4), 616-631.

Lewins, A., & Silver, C. (2007). *Using software for qualitative data analysis: A step-by-step guide.* London, UK: Sage.

Lewis, C. C., & Abdul-Hamid, H. (2006). Implementing effective online teaching practices: Voices of exemplary faculty. *Innovative Higher Education, 31*(2), 83-98.

Lint, A. H. (2013). Academic persistence of online students in higher education impacted by student progress factors and social media. *Online Journal of Distance Learning Administration, 16*(4), 718-745.

Lodico, M., Spaulding, D. T., & Voegtle, K. H. (2010). *Methods in educational research: From theory to practice.* San Francisco, CA: John Wiley & Sons.

Lowery, P. (2009). Interactive assignments for online students. *Journal on Systemics, Cybernetics, and Informatics, 7*(2), 7-10.

Loyen, S., Magda, J., & Rikers, R. M. (2008). Self-directed learning in problem-based learning and its relation to self-regulated learning. *Educational Psychology Review*, *20*(4), 411-427.

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues in Educational Research, 16*(2), 193-205.

Margaryan, A., Littlejohn, A., & Vojt, G. (2011). Are digital natives a myth or reality? University students' use of digital technologies. *Computers & Education*, *56*(2), 429-440. Retrieved from: http://www.gcu.ac.uk/academy/publications/ publicationsresearchpublications/

Marks, R. B., Sibley, S. D., & Arbaugh, J. B. (2005). A structural equation model of predictors for effective online learning. *Journal of Management Education*, *29*(4), 531-563.

Mason, R., & Rennie, F. (2010). Evolving technologies. In K. Rudestam, & J. Schoenholtz-Read (Eds.), *Handbook of online learning* (pp. 91-128). Thousand Oaks, CA: Sage.

Mayadas, A. F. (2009). *Opening remarks.* Fifteenth Annual Sloan-C International Conference on Online Learning. The Power of Online Learning: Opportunities for Tomorrow. Orlando, FL.

Maybery, D., Reupert, A., Patrick, K., & Chittleborough, P. (2009). The importance of being human: Instructors' personal presence in distance programs. *International Journal of Teaching and Learning in Higher Education*, 47-56.

Mazzolini, M., & Maddison, S. (2003). Sage, guide or ghost? The effect of instructor intervention on student participation in online discussion forums. *Computers and Education*, *40*(3), 237-253.

Mazzolini, M., & Maddison, S. (2007). When to jump in: The role of the instructor in online discussion forums. *Computers and Education, 49*(2), 193–213.

McBrien, J. L., Jones, P., & Cheng, R. (2009). Virtual spaces: Employing a synchronous online classroom to facilitate student engagement in online learning. *International Review of Research in Open and Distance Learning*, *10*(3), 1-17.

McGill, T. J. & Hobbs, V. J. (2008). How students and instructors using a virtual learning environment perceive the fit between technology and task. *Journal of Computer Assisted Learning*, *24*(3), 191-202.

McQuiggan, C. (2007). The role of faculty development in online teaching's potential to question teaching beliefs and assumptions. *Online Journal of Distance Learning Administration*, *10*(3). Retrieved from: http://www.westga.edu/~distance/ojdla/ fall103/ mcquiggan103.htm.

Means, B., Yoyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. Retrieved from http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation.* San Francisco, CA: Jossey-Bass.

Mertens, D. M. (2005). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches* (2nd ed.) Thousand Oaks, CA: Sage.

Moller, L., Foshay, W. R., & Huett, J. (2008). The evolution of online teaching learning: Implications for instructional design. *TechTrends, 52*(3), 66-70.

Moore, G. M. (1989). The three types of interaction. *American Journal of Distance Education, 3*(2), 1-6.

Moore, G. M. (1993). Theory of transactional distance. In D. Keegan (Ed.), *Theoretical principles of distance education.* New York, NY: Routledge.

Moore, M., & Kearsley, G. (2005). *Distance education: A systems view* (2nd ed.). Belmont, CA: Wadsworth.

Moore, M., & Kearsley, G. (2012). *Distance education: A systems overview of online learning.* Belmont, CA:Wadsworth.

Mortagy, Y., & Boghikian-Whitby, S. (2010). A longitudinal comparative study of student perceptions in online education. *Interdisciplinary Journal of E-Learning and Learning Objects, 6(*1), 23-43.

Mupinga, D. M., Nora, R. T., & Yaw, D. (2006). The learning styles, expectations, and needs of online students. *College Teaching, 54*(1), 185-189.

Murray, M. C., Perez, J., Geist, D., & Hedrick, A. (2013). Student interaction with content in online and hybrid courses: Leading horses to the proverbial water. Informing science: *The International Journal of an Emerging Transdiscipline, 16,*

99-115. Retrieved from http://www.inform.nu/Articles/Vol16/ISJv16p099-115MurrayFT114.pdf

Nagel, D. (2008). Is blended learning effective? *Campus Technology.* Retrieved from http://campustechnology.com/articles/2008/09/is-blended-learningeffective.aspx?sc_lang=en

Nanfito, M. (2014). *MOOCs: Opportunities, impacts, and challenges. Massive open online courses in colleges and universities.* Seattle, WA: Create Space Independent Publishing.

National Center for Educational Statistics. (2003). *Distance education at degree-granting postsecondary institutions: 2000-2001.* Retrieved from http://nces.ed.gov/surveys/peqis/publications

Neely, P. W., & Tucker, J. P. (2010). Unbundling faculty roles in online distance education programs. *International Review of Research in Open and Distance Learning*, *11*(2), 20-32.

Nichols, M. (2010). Student perceptions of support services and the influence of targeted interventions on retention in distance education. *Distance Education*, *31*(1), 93-113.

Nistor, N., & Neubauer, K. (2010). From participation to dropout: Quantitative participation patterns in online university courses. *Computers and Education*, *55*(2), 663-672.

Noel-Levitz (2013). *2013 national adult learners satisfaction-priorities report.* Retrieved from www.noellevitz.com/Benchmark

Nonis, S. A. & Hudson, G. I. (2010). Performance of college students: impact of study time and study habits. *Journal of Education for Business, 85,* 229-238.

O'Malley, J., & McGraw, H., (1999). Students perceptions of distance learning, online learning and the traditional classroom. *Online Journal of Distance Learning Administration, 2*(5). http://www.westga.edu/~distance/ojdla/winter24/omalley24.html

Paechter, M., Maier, B., & Macher, D. (2010). Students' expectations of and experiences in e-earning: Their relation to learning achievements and course satisfaction. *Journal of Computer & Education*, 54,222-229. http://dx.doi.org/10.1016/j.compedu.2009.08.005

Palmer, S. R., & Holt, D. M. (2009). Examining student satisfaction with wholly online learning. *Journal of Computer Assisted Learning, 25*(2), 101-113.

Park, J. H., & Choi, H. J. (2009). Factors influencing adult learners' decision to drop out or persist in online learning. *Educational Technology and Society, 12*(4), 207-217.

Perkins, G., Wellman, N. & Wellman, W. (2009). *The impact of student age on online learning.* Proceedings of Society for Information Technology & Teacher Education International Conference 2009 (pp. 1071-1074). Chesapeake, VA: AACE.

Picciano, A. G., Seaman, J., & Allen, I. E. (2010). Educational transformation through online earning: To be or not to be. *Journal of Asynchronous Learning Networks, 14*(4), 17-35.

Pitney, W. A., & Parker, J. (2009). *Qualitative research in physical activity and the health professions.* Champaign, IL: Edward Brothers.

Powell, D. C. (2007). Student satisfaction with a distance learning MPA program: A preliminary comparison of on-campus and distance learning students' satisfaction with MPA courses. *MERLOT Journal of Online Teaching and Learning, 3*(1), 1-18.

Quillen, I. (2011). New technology may offer fresh vistas for savings and for educational benefits. *Education Week, 30*(16), 20-22.

Reisetter, M., LaPointe, L., & Korouska, J. (2007). The impact of altered realities: Implications of online delivery for learners' interactions, expectations and learning skills. *International Journal of Electronic Learning, 6*(1), 55-77.

Roach, V., & Lemasters, L. (2006). Satisfaction with online learning: A comparative descriptive study. *Journal of Interactive Online Learning, 5*(1), 317-332.

Robb, C. A. & Sutton, J. (2014). The importance of social presence and motivation in distance learning. *The Journal of Technology, Management and Applied Engineering, 31*(2).

Rodriguez, M. C., Ooms, A., & Montañez, M. (2008). Students' perceptions of online-learning quality given comfort, motivation, satisfaction, and experience. *Journal of Interactive Online Learning, 7*(2), 105-125.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: The Free Press.

Rose, K. (2009). Student perceptions of the use of instructor-made videos in online and face-to-face classes. *Journal of Online Learning and Teaching, 5*(3), 487-495.

Rourke, J. R. (2001). Online learning: Fad or fate? *Principal Leadership, 1*(9), 8-14.

Rovai, A. P. (2007). Facilitating online discussions effectively. *The Internet and Higher Education*, *10*(1), 77-88.

Rubin, H. J., & Rubin, I. S. (2005). *Qualitative interviewing: The art of hearing data* (2nd ed.). Thousand Oaks, CA: Sage.

Russell, Jae-eun Lee. (2013). *Supporting students' motivation in college online courses* (Doctoral dissertation). Retrieved from: http://ir.uiowa.edu/cgi/viewcontent.cgi (4749).

Salimi, A. (2007). The promise and challenges for distance education in accounting. *Strategic Finance*, *88*(7), 19-53.

Sammons, M. C., & Ruth, S. (2007). The invisible professor and the future of virtual faculty. *International Journal of Instructional Technology and Distance Learning*, *3*(1), 67-74.

Sanders, S. A., & Hirschbuhl, J. J. (2007). Effect of learner attributes, dialogue, and course structure on students' satisfaction and performance in online allied health courses. *Journal of Interactive Instruction Development*, *20*(1), 17-27.

Sargeant, J., Curran, V., Allen, M., Jarvis-Selinger, S., & Ho, K. (2006). Facilitating interpersonal interaction and learning online: Linking theory and practice. *Journal of Continuing Education in Health Professions, 26*(2), 128-136.

Sener, J. (2009). Why online education will attain full scale. *Journal of Asynchronous Learning Networks*, *14*(4), 3-16.

Sheridan, K., & Kelly, M. (2010). The indicators of instructor presence that are important to students in online courses. *Journal of Online Learning and Teaching*, *6*(4), 764-779.

Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2012). *Teaching and Learning at a distance: Foundations of distance education.* Boston, MA: Pearson.

Siti Sarah, M. J., & Issham, I. (2011). The effectiveness of e-learning portal in distance education as perceived by students in Universiti Sains Malaysia. *Malaysian Journal of Distance Education*, *13*(1), 47-57.

Smart, K. L., & Cappel, J. J. (2006). Students' perceptions of online learning: A comparative study. *Journal of Information Technology Education*, *5*(3), 201-219.

Smith, T. S. (2005). An examination of the perceptions of Louisiana Technical College traditional and non-traditional students and faculty regarding effective teaching behaviors and office systems technology programs. *Dissertation Abstracts International 66*(05), 1623A. (UMI No. 3175832)

Smyth, R. (2011). Enhancing learner-learner interaction using video communications in higher education: Implications from theorising about a new model. *British Journal of Educational Technology*, *42*(1), 113-127.

Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *Internet and Higher Education*, *7*(1), 59-70.

Stake, R. E. (1995). *The art of case study research.* Thousand Oaks, CA: Sage.

Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 443-466). Thousand Oaks, CA: Sage.

Stake, R. E. (2006). *Multiple case study analysis.* New York, NY: Guilford Press.

Stake, R. E. (2007). *Reconsidering generalization and theory in case study research.* Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Stake, R.E. (2010). *Qualitative research: Studying how things work.* New York, NY: Guilford Press.

Stone, S. J., & Chapman, D. D. (2006). *Instructor presence in the online classroom.* Paper presented at the Academy of Human Resource Development International Conference (AHRD), Columbus, OH, February 22-26.

Swan, K. (2001). Virtual interaction: Design factors affecting student satisfaction and perceived learning in asynchronous online courses. *Distance Education*, *22*(2), 306-332.

Tallent-Runnels, M. K., Thomas, J. A., Lan, W. Y., Cooper, S., Ahern, T. C., Shaw, S. M., & Liu, X. (2006). Teaching courses online: A review of the research. *Review of Educational Research*, *76*(1), 93-135.

Taylor, A., & McQuiggan, C. (2008). Faculty development programming: If we built it, will they come? *EDUCAUSE Quarterly*, *31*(3), 29-37.

Tomei, L. A. (2006). The impact of online teaching on faculty load: Computing the ideal class size for online courses. *Journal of Technology and Teacher Education, 14*(3), 531-541.

Tsayang, G. (2011). Bachelor of education in educational management students' perceptions of their program study: Case of University of Botswana. *International Journal of Scientific Research in Education, 4*(1), 17-26.

Tufford, L. (2010). Bracketing in qualitative research. *Qualitative Social Network, 11*(1), 80-96.

U.S. Department of Education. (2010). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies.* Retrieved from http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

Varvel, V. (2007). Master online teacher competences. *Online Journal of Distance Learning Administration, 10*(1).

Vogt, W. P. (2010). *Quantitative research methods for professionals.* Boston, MA: Pearson Custom Publishing.

Vonderwell, S., Liang, X., & Alderman, K. (2007). Asynchronous discussions and assessment in online learning. *Journal of Research on Technology in Education, 39*(3), 309-316.

Walker, J. T., Martin T., White, J., Elliott, R., Norwood, A., Mangum, C., & Haynie, L. (2006). Generational (age) differences in nursing students' preferences for teaching methods. *Journal of Nursing Education, 45*(9), 371-374.

Wallace, R. M. (2003). Online learning in higher education: A review of research on interactions among teachers and students. *Education, Communication, and Information*, *3*(2), 242-280.

Wang, Y. (2004). Assessment of learner satisfaction with asynchronous electronic learning systems. *Information and Management*, *41*(1), 75-86.

Warschauer, M. (2006). *Laptops and literacy: Learning in the wireless classroom.* New York, NY: Teachers College Press.

Wickham, M. D., & Woods, M. (2005). Reflecting on the strategic use of CAQDAS to manage and report on the qualitative research process. *The Qualitative Report*, *10*(4), 687-702.

Wilson, C. (2001). Faculty attitudes about distance learning. *EDUCAUSE Quarterly*, *24*(2), 70-71.

Wintera, J., Cottona, D., Gavina, J., & Yorkeb, J. D. (2010). Effective e-learning? Multi-tasking, distractions and boundary management by graduate students in an online environment. *Research in Learning Technology*, *1*8(1), 71-83.

Wolf, P. (2006). Best practices in the training of faculty to teach online. *Journal of Computing in Higher Education*, *17*(2), 47-78.

Xue, Y., Yan, L., Chuan-Hoo, T., & Hock-Hai T. (2007). Students' participation intention in an online discussion forum: Why is computer-mediated interaction attractive? *Information and Management*, *4*(5), 456-466.

Yuen, S., & Yang, H. (2010). Using social networking to enhance sense of community in e- learning courses. In H. Yang, & & S. Yuen (Eds.), *Collective intelligence and*

e-learning 2.0: Implications of Web-based communities and networking (pp. 281-304). New York: IGI Global.

Yin, R. K. (2008). *Introducing the world of education: A case study reader.* Thousand Oaks, CA: Sage.

Yin, R. K. (2009). *Case study research: Design and method* (4th ed.). Thousand Oaks, CA: Sage.

Zacharis, N. Z. (2011). The effect of learning style on preference for web-based courses and earning outcomes. *British Journal of Educational Technology*, *42*(5), 790-800. Retrieved from http://www.readcube.com/articles/10.1111%2Fj.1467-8535.2010.01104.x?r3_referer=wol&tracking_action=preview_click&show_checkout=1

Zhang, Z., & Kenny, R. (2010). Learning in an online distance education course: Experiences of three international students. *The International Review of Research in Open and Distance Learning*, *11*(1), 248-269.

Appendix A: Invitation Letter

Dear Online Student:

I am a doctoral (EdD) student at Walden University. I am carrying out a qualitative research under the supervision of Dr. Felicia Blacher-Wilson. My proposed research will examine the learning experiences and perceptions of students in online courses at your university. The focus of my study is in three online departments of business administration, criminal justice, and nursing. Participation in this study is voluntary. The interview will take approximately 30 -40 minutes to complete and the date, time, and place of interview will be at your discretion. Responses obtained from you during the interview will be kept confidential and anonymous.

The research interview questions have been approved by Walden University Institutional Review Board. If you wish to participate, please complete the bottom part of this letter. If you have any questions concerning this research, please contact me or Dr. Felicia Blacher-Wilson at the following numbers:

Dr. Felicia Blacher-Wilson

1-985-764-3242

Email: Felicia.blacher-wilson@waldenu.edu

Alex A Nwankwo

1-818-939-9180

Email: alex.nwankwo@waldenu.edu

Please complete the following:

(1) Yes, I will participate_____ (2) No, I will not participate_____

Appendix B: Informed Consent Form (Pilot Study)

You are invited to take part in a pilot study designed to improve and validate an interview guide and interviewing process. This interview guide will be used to conduct in-depth, open ended interviews on the learning experiences and perceptions of students enrolled in online courses at a privately owned university in the western states.

Eligibility

To be eligible to participate in this pilot study, you must be a student aged 18 years and above at the university who have taken at least 12 units of online courses in Nursing, Business Administration, or Criminal Justice departments. This consent form serves to provide you basic information about this pilot study to help you decide whether you want to take part. This study is being conducted by researcher Alex A Nwankwo, who is a doctoral student at Walden University.

Background Information

The purpose of this pilot study is to improve and validate an interview guide and interviewing process which will be used to examine the learning experiences and perceptions of students enrolled in online nursing, business administration, and criminal justice courses in a privately owned university in the western states (UWS).

Procedures

If you agree to participate in this pilot study, you will be requested to:

- Provide the researcher with your email, Skype identification, telephone

number, and or your Instant Messenger identification for ease of communication with you.

- Participate in a tape recorded, interactive interview that will provide the researcher with answers to open ended questions over the phone, email, or face to face.

- Provide objective feedback that identifies ambiguous, offensive, or confusing questions in order to assist the researcher to improve the interview guide.

- Provide feedback that may or may not be positive. Your feedback will ensure that offensive, confusing, and ambiguous questions are identified and corrected to lend validity to the research study.

Participation in the pilot study will last approximately 15 to 20 minutes. The venue, date, and time of the interview will be at your discretion. You can reschedule the interview at any time to suit your schedule.

You can withdraw participation from the pilot study at any time without any repercussions. Clarifications of your response may be requested through face-to-face, emails, Instant Messenger, or Skype.

Voluntary Nature of the Pilot Study

Your participation in this pilot study is voluntary. Everyone will respect your decision whether to participate in the study or not. If you decide to join the pilot study now, you can still change your mind during or after the study. You may stop at any time.

Risks and Benefits of Being in the Pilot Study

Involvement in a study can involve some minor risk such as fatigue, having to sit for a period of time to engage in the interview process or stress when having to respond to certain questions. As you participate in this pilot study you may experience fatigue or feelings of stress. Your participation in this study would not pose risk to your safety or well-being.

Benefits

The potential benefits of this study are:

Participants in this pilot study may feel empowered that they contributed to a research study that sheds light on a better understanding of online learning experiences from students' perspectives.

The feedback from participants will ensure that the interview guide and interviewing process are valid for conducting the research.

Compensation for Participation

There will be no compensation for participating in this pilot study.

Privacy

Any information you provide will be kept confidential and the researcher will not use your personal information for any purposes outside of this pilot study. Also, the researcher will not include your name or anything else that could identify you in the pilot study or in the research report. Pseudonyms will be used for all pilot study participants and data will be kept secure by the researcher in a password protected database accessible

only to the researcher and committee member.

Contacts and Questions

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email at alex.nwankwo@waldenu.edu or by telephone at 818-939-9180. If you want to know more about this pilot study you can email Dr. Felicia Blacher-Wilson who is the supervising faculty for this study at felicia.blacher-wilson@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 1210.

Walden University's approval number for this study is IRB 10-31-12-0175785 and it expires on October 30, 2013. You will be given a copy of this form to keep for your records.

Statement of Consent

I have read the above information and I feel I understand the study well enough to make a decision about my involvement.

By replying to this email with the words "I consent", I understand that I am agreeing to the terms described above.

……

Date of Consent_____

Appendix C: Informed Consent Form (Main Study)

You are invited to take part in a case study research on the learning experiences and perceptions of students enrolled in online courses at a privately owned university in the western states. The researcher is inviting students aged 18 years and above at the university who have taken at least 12 units of online courses in Nursing, Business Administration, or Criminal Justice departments. This consent form serves to provide you basic information about this study to help you decide whether you want to take part. This study is being conducted by researcher Alex A Nwankwo, who is a doctoral student at Walden University.

Background Information

The purpose of this study is to examine the learning experiences and perceptions of students enrolled in online nursing, business administration, and criminal justice courses in a privately owned university in the western states (UWS).

Procedures

If you agree to participate in this study, you will be requested to:

- Provide the researcher with your email, Skype identification, telephone number, and or your Instant Messenger identification for ease of communication with you.

- Participate in a face to face interview that will last approximately 30 to 40 minutes.
- The venue, date, and time of the interview will be at your discretion.

- You can reschedule the interview at any time to suit your schedule.
- You can withdraw participation from the study at any time without any repercussions.
- Clarifications of your response may be requested through face-to-face, emails, Instant Messenger, or Skype.
- Transcribed data from the questionnaire and interview will be sent back to you by email at a later date for verification and authentication of data before findings are reported. Here are some sample questions:

1. Please tell me about a typical school day with your online course?
    a. How many hours do you spend online on one course?
    b. How many courses are you currently taking?
2. Let us talk about your experience with the first online course, what was your experience with that first course?
    a. How many other courses did you take thereafter?
    b. How many courses have you taken to date?
    c. What has motivated you to continue taking online courses?

Voluntary Nature of the Study

Your participation in this study is voluntary. Everyone will respect your decision whether to participate in the study or not. If you decide to join the study now, you can still change your mind during or after the study. You may stop at any time.

Risks and Benefits of Being in the Study

Involvement in a study can involve some minor risk such as fatigue, having to sit for a period of time to engage in the interview process or stress when having to respond to

certain questions. As you participate in this study you may experience fatigue or feelings of stress. Your participation in this study would not pose risk to your safety or wellbeing.

Benefits:

The potential benefits of this study are:

- A better understanding of online learning experiences from students' perspectives.
- Assist online faculty and university administrators understand the factors that motivate students and help them sustain enrollments.
- Assist postsecondary institutions enact curricular reforms that will make the learning experience of online students more fruitful.
- Provide a foundation for further research, will be a resource for entrepreneurs desiring to start new institutions of higher education offering online programs.
- The ultimate beneficiaries will be students because improving their academic experience is the ultimate goal of any curricular and pedagogical reform.

Compensation for Participation

At the end of the interview process you will receive a $5.00 Starbucks gift card from the researcher as a thank you gift for your participation in this study.

Privacy

Any information you provide will be kept confidential and the researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the

study reports. Pseudonyms (BA1-BA6; NS1-NS6; CJ1-CJ6) will be used for all study participants and data will be kept secure by the researcher in a password protected database accessible only to the researcher and committee members. Data will be kept for a period of at least 5 years, as required by Walden University.

Contacts and Questions

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email at alex.nwankwo@waldenu.edu or by telephone at 818-939-9180. If you want to know more about this study you can email Dr. Felicia Blacher-Wilson who is the supervising faculty for this study at felicia.blacher-wilson@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 1210. Walden University's approval number for this study is IRB 10-31-12-0175785 and it expires on October 30, 2013. You will be given a copy of this form to keep for your records.

Statement of Consent

I have read the above information and I feel I understand the study well enough to make a decision about my involvement.

By replying to this email with the words "I consent", I understand that I am agreeing to the terms described above.

Date of Consent_____

Appendix D: Interview Questions

1. Please tell me about a typical school day with your online program?
    a. How many hours do you spend online on one course?
    b. How many courses are you currently taking?
2. I want you to recall the first time you wanted to take an online course, obviously there were so many things you considered before taking the course.
    a. What did you consider before taking the course?
    b. What course did you take?
    c. Tell me about your expectations of the course?
3. Now, let us talk about your experience with the first online course, what was your experience with that first course?
    a. How many other courses did you take thereafter?
    b. How many courses have you taken to date?
    c. What has motivated you to continue taking online courses?
4. I am sure that there are courses you enjoyed and some that you did not. Can you tell me about one course that you liked and why?
    a. Now, tell me about one other course that you did not like, and why?
5. Having taken so many online courses within a short period of time, how would you describe your learning experiences?
    a. Tell me what advice you would give to a new student intending to enroll in an online course in your program?
6. Please tell me about your online content delivery –what methods of delivery are adopted for your courses?
    a. Which of the methods do you find effective and why?
    b. Do you find it easy to access online course information?
    c. Do you perceive the online course information to be adequate, why or why not?
    d. Can you describe your comfort level with computer use?
7. Please describe what you think the ideal online course delivery process would be like; considering the current delivery process in place in your university?
8. In your opinion, what impact do instructors have on the online courses?
    a. How do you feel about the level of interaction with instructors in your program?
    b. When does these interactions occur and how often?
9. Now tell me about your interaction with other students in your program: How often do you interact with other students?

    a. What is the method of interaction?
    b. How beneficial are the interactions?
10. You will recall that the first question I asked was about your considerations, reactions, and expectations of online courses. Based on the number of courses you have taken so far and your experiences with online courses. How do you perceive online courses in your program?
    a. How has your expectations of online courses changed? (probe for reasons of change).
11. Now let us talk about the challenges you encounter in your online courses.
    a. What types of challenges do you encounter in your online program?
    b. How frequent?
    c. What efforts are made by the administrators and faculty to resolve the challenges?
12. I have one last question for you but I will understand if you would like to stop or take a break. Would you mind if I ask about your age group 18-31, 32 and up?

Thank you so much for your time, patience, and detailed responses to my questions.

Here is the Starbucks gift card I promised at the end of the interview.

Thank you and I will be contacting you again shortly to clarify any ambiguities in this interview if necessary and I will send you a copy of the interview transcript for review and confirmation of the information transcribed. Have a pleasant day.

Appendix E: Research Questionnaire

1. Gender

(a) Male (b) Female

2. Age

(a) 18-31 (b) 32 and up

3. Course

(a) BA1, BA2, BA3, BA4, BA5, BA6 (b) NS1, NS2, NS3, NS4, NS5, NS6
(c) CJ1, CJ2, CJ3, CJ4, CJ5, CJ6

4. Number of courses taken to date:

(a) Less than 12 units (b) 12 units or more

5. How many hours do you spend on your online course?
   Reading instructional materials _____hrs.

   Interaction with instructor _____hrs.

   Interaction with other students _____hrs.

   Participation in online courses _____ hrs.

   Course assignments ___hrs.

6. Time spent on course

(a) I feel that I spend adequate time on my courses.
(b) I feel I spend just the right amount of time on my courses.
(c) I feel I don't spend enough time on my courses.
(d) I feel I need to spend more time on my courses.

7. How comfortable are you with the use of computer to access your online courses?

(a) I am comfortable with the use of computer to access my online courses and materials.
(b) I am somehow comfortable with the use of computer to access my online courses and materials.
(c) I am not all that comfortable with the use of computer to access my online courses and materials.
(d) I am not at all comfortable with the use of computer to access my online courses and materials.

8. Course expectations

(a) I feel that the courses I took were well presented in terms of course content.

(b) I feel that the courses I took were somehow well presented in terms of course content.

(c) I feel that the courses I took were not properly presented in terms of course content.

(d) I feel that the courses I took were not well presented in terms of course content.

9. Online experience

(a) My experience with my online courses has been great because_____
_____
_____.

(b) My experience with my online courses has been somehow great because
_____
_____
_____.

(c) My experience with my online courses has not been all that great because
_____
_____
_____.

(d) My experience with my online courses has not been great because
_____
_____
_____.

10. Perception of online courses.

(a) Do you perceive that the online courses met your expectations?
Yes No

(b) Do you perceive that the online methods of course content delivery met your expectations?
Yes No

(c) Do you perceive that the online course discussions met your expectations?
Yes No

(d) Do you perceive that the online student-student interactions met your expectations?
Yes No

(e) Do you perceive that the online student-instructor interactions met your expectations?
Yes No

(f) Do you perceive that the online course student-content interactions met your expectations?
Yes No

(g) What changes would you suggest for course content delivery?

_____

_____

_____

_____

_____.

(h) What changes would you like to make regarding student-instructor interactions?

_____

_____

_____

_____

_____.

(i) What changes would you like to make regarding student-student interactions?

_____

_____

_____

_____

_____.

(j) What changes would you like to make regarding student-content interactions?

_____

Appendix F: Table of Codes 1

Appendix F reflects the validation of interview transcripts by participants on Research Question 1. In order to ensure accurate representation of participants' views, perceptions, and experiences I showed this table to all participants to obtain their validation of the interview transcripts.

Research Question 1 (Faculty-Student Versus Student-Student)	Transcript	Code
	"I prefer faculty interaction to student-student interaction because professors support and clarify difficult concepts and skills and are able to give students feedback on discussions, tests, presentations, and quizzes".	FS
	"On occasions when I don't understand some of my readings and assignments, I ask my professors for clarification. Though, I have used student-student interaction in some cases, but definitely faculty-student interaction is more important to me than student-student interaction".	FS
	"I have completed 42 credits of online course with a GPA of 2.80 and I choose faculty-student interaction because my professors set the emotional tone for our online interactions. They also give us positive feedback on assignments that help us become more successful in our online courses".	FS
	"I prefer faculty-student interaction over student-student interaction because our professors provide us with prompt, specific, and non-critical feedback on our learning activities".	FS
	"On the other hand, student-student interaction is important, but on my scale of online learning interaction, student-student is the least of all".	FS

	"faculty-student interaction is more important than student-student interaction because I trust my professors more than I trust my colleagues. The majority of our instructors are very helpful and understand the situations under which we learn. However, sometimes it is difficult to match test questions to what is in the textbook".	SC
	"I learn more in group discussions than independently. I feel more comfortable asking fellow course mates questions and tapping their knowledge than receiving instructions from professors or reading the course materials. I have a 3.90 GPA from 38 credits in my department, and I think I prefer student-student interaction to faculty-student interaction".	SS
	"I was disappointed 3 times by my course mates when I asked about some content materials that I didn't quite understand during our group presentation project. My group members told me they did not understand what we were expected to do, but it turned out that they all completed the assignment and I was the only person who did not submit any material for the project. As a result of that horrible experience, I think that student-student interaction did not really work for me, I therefore prefer to use faculty-student interaction"	FS
	"Between faculty-student and student-student interactions, I use faculty-student interaction more frequently. I have finished 36 credits of courses in my online program so far and my GPA is 3.25. The reason I use faculty-student interaction is because my professors give non-critical feedback on assignments and are supportive in encouraging me to achieve my goal".	FS
	"I value student-content interaction as the most important of online interactions, and faculty-student interaction as second, and higher than student-student interaction. Our professors are easily accessible, and their feedback, support, instructions, and directives on course materials are	FS

	exemplary".	
	"I will choose faculty-student interaction over student-student interaction because instructors encourage greater student participation in online learning activities by affirming our abilities, knowledge, and making positive comments about our online course discussions, postings, and presentations".	FS
	"professors acknowledge the diversity of our students' background and interests, they adequately facilitate our threaded discussions, give highly academic feedback, and are supportive when students have problems with content materials. Based on my experience in completing 42 credits of courses in my department with a 4.0 GPA, I choose faculty-student interaction over student-student interaction".	FS
	"faculty-student interaction is an important component in the online learning process. As a result of my experience in taking 30 credits of online courses already in my department, I believe that faculty-student interaction is more important than student-student interaction because my professors encourage persistence in completing my course work, are supportive of my efforts, and not competing with me as my colleagues do. They also provide prompt and suggestive feedback and no critical feedback as my colleagues often do".	FS
	"my professors have content expertise which is vital in explaining concepts and skills to us. Professors are able to guide, facilitate, encourage, support, and give non-critical and positive feedback. After completing 28 credits in my department, I believe that faculty-student interaction is more important than student-student interaction".	FS
	"I have completed 36 credits in my	FS

	department and I value faculty-student interaction more than student-student interaction because our instructors are knowledgeable about the course content and they recommend appropriate additional resources to meet the needs of diverse learners like me".	
	"I believe that faculty-student interaction is more important than student-student interaction because my professors provide guidance for our group discussions, presentations, online course readings, and other online activities".	FS
	"faculty-student interaction is more important to me than student-student interaction. Currently, I have successfully completed 38 credits of online courses in my department and I have a GPA of 3.0. My professors are flexible with due dates, they give prompt and positive feedback, and they help us to identify course materials online".	FS
	"faculty-student interaction is more important than student-student interaction because I trust my professors more than I trust my colleagues. The majority of our instructors are very helpful and understand the situations under which we learn".	FS

Appendix G: Table of Codes 2

Appendix G reflects the validation of interview transcripts by participants on Research Question 2. In order to ensure accurate representation of participants' views, perceptions, and experiences I showed this table to all participants to obtain their validation of the interview transcripts.

Research Question 2 (Student-Content Versus Other Interactions)	Transcript	Code
	"I have taken 30 credits of online course in my university and I find that when the course content is clearly outlined, I feel that I will make a good grade in the course".	SC
	"student-content interaction is the most important because it contributed greatest to my successes so far in the online courses I have taken".	SC
	that "when I understand what I am expected to do from the start to the end of the course, I am motivated to spend more time reviewing the course materials in order to achieve success regardless of other interactions".	SC
	"understanding the course calendar, syllabus, materials, and course descriptions is central to passing an online course". activities".	SC
	"On the other hand, student-student interaction is important, but on my scale of online learning interaction, student-student is the least of all".	FS
	"faculty-student interaction is more important than student-student interaction because I trust my professors more than I trust my colleagues. The majority of our	SC

	instructors are very helpful and understand the situations under which we learn. However, sometimes it is difficult to match test questions to what is in the textbook".	
	"I learn more in group discussions than independently. I feel more comfortable asking fellow course mates questions and tapping their knowledge than receiving instructions from professors or reading the course materials. I have a 3.90 GPA from 38 credits in my department, and I think I prefer student-student interaction to faculty-student interaction".	SS
	"I was disappointed 3 times by my course mates when I asked about some content materials that I didn't quite understand during our group presentation project. My group members told me they did not understand what we were expected to do, but it turned out that they all completed the assignment and I was the only person who did not submit any material for the project. As a result of that horrible experience, I think that student-student interaction did not really work for me, I therefore prefer to use faculty-student interaction"	FS
	"Between faculty-student and student-student interactions, I use faculty-student interaction more frequently. I have finished 36 credits of courses in my online program so far and my GPA is 3.25. The reason I use faculty-student interaction is because my professors give non-critical feedback on assignments and are supportive in encouraging me to achieve my goal".	FS
	"I value student-content interaction as the most important of online interactions, and faculty-student interaction as second, and higher than student-student interaction. Our professors are easily accessible, and their feedback, support, instructions, and directives on course materials are exemplary".	FS

	"I will choose faculty-student interaction over student-student interaction because instructors encourage greater student participation in online learning activities by affirming our abilities, knowledge, and making positive comments about our online course discussions, postings, and presentations".	FS
	"professors acknowledge the diversity of our students' background and interests, they adequately facilitate our threaded discussions, give highly academic feedback, and are supportive when students have problems with content materials. Based on my experience in completing 42 credits of courses in my department with a 4.0 GPA, I choose faculty-student interaction over student-student interaction".	FS
	"faculty-student interaction is an important component in the online learning process. As a result of my experience in taking 30 credits of online courses already in my department, I believe that faculty-student interaction is more important than student-student interaction because my professors encourage persistence in completing my course work, are supportive of my efforts, and not competing with me as my colleagues do. They also provide prompt and suggestive feedback and no critical feedback as my colleagues often do".	FS
	"my professors have content expertise which is vital in explaining concepts and skills to us. Professors are able to guide, facilitate, encourage, support, and give non-critical and positive feedback. After completing 28 credits in my department, I believe that faculty-student interaction is more important than student-student interaction".	FS
	"I have completed 36 credits in my	FS

	department and I value faculty-student interaction more than student-student interaction because our instructors are knowledgeable about the course content and they recommend appropriate additional resources to meet the needs of diverse learners like me".	
	"I believe that faculty-student interaction is more important than student-student interaction because my professors provide guidance for our group discussions, presentations, online course readings, and other online activities".	FS
	"faculty-student interaction is more important to me than student-student interaction. Currently, I have successfully completed 38 credits of online courses in my department and I have a GPA of 3.0. My professors are flexible with due dates, they give prompt and positive feedback, and they help us to identify course materials online".	FS
	"faculty-student interaction is more important than student-student interaction because I trust my professors more than I trust my colleagues. The majority of our instructors are very helpful and understand the situations under which we learn".	FS

Appendix H: UWS IRB Authorization to Conduct Research

Institutional Review Board for Human Subjects Research

Date: 12 December 2012

To: Alex Nwankwo, Walden University Student

cc: Paul Newberry, IRB Chair
Felicia Blacher-Wilson, Walden University

From: University Research Ethics Review Coordinator

Subject: **Protocol 12-116: Authorization Following Exemption from Full Review**

I am pleased to inform you that your protocol, **"A Case Study of Students' Learning Experiences and Perceptions of Online Course Content and Interactions",** has been approved, following exemption from full review. This research activity was exempted as defined in Paragraph 46.101 of Title 45, *Code of Federal Regulations* based on the following criteria: (1) Research involving the use of [standardized] educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior, UNLESS: (a) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects, and (b) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation. Approval is based on your IRB protocol received on December 4th, 2012 and your clarifications and revisions completed on December 12th, 2012.

This authorization is strictly limited to the specific activities that have been authorized by the IRB. In conducting this research, the investigator must carefully review the final, authorized version of the protocol to ensure that the research is conducted as authorized by the IRB. If you want to modify these activities, notify the IRB in advance so proposed changes can be reviewed. If you have any questions, or there are any unanticipated problems or adverse reactions, please contact me immediately."

The following person[s], only, are authorized to interact with subjects in collecting data or in obtaining informed consent. Investigator is responsible for ensuring that any research assistants interacting with data having personal identifiers are HSPT certified.

Human Subjects Protection Training Certified:
Alex Nwankwo [6-25-2011]

Any signed consent documents must be retained for at least three years to enable research compliance monitoring and in case of concerns by research participants. Consent forms may be stored longer at the discretion of the principal investigator [PI].The PI is responsible for retaining consent forms. If the PI is a student, the faculty supervisor is responsible for the consent forms. The consent forms must be stored so that only the authorized investigators or representatives of

the IRB have access. At the end of the retention period the consent forms must be destroyed [not re-cycled or thrown away]. Please destroy all audio tapes after scoring.
This authorization will be valid until the end of November 2013.

University Research Ethics Review Coordinator