Students' Perceptions towards the Quality of Online Education: A Qualitative Approach

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Abstract

How to ensure the quality of online learning in institutions of higher education has been a growing concern during the past several years. While several studies have focused on the perceptions of faculty and administrators, there has been a paucity of research conducted on students' perceptions toward the quality of online education. This study utilized qualitative methods to investigate the perceptions of students from two universities and one community college regarding the quality of online education based on their own online learning experiences. Interviews and observations were conducted with three students. Various documents were collected, digital and printed. Positive and negative experiences of students were examined. Factors that contribute to those experiences were also identified. The findings of this research revealed that flexibility, cost-effectiveness, electronic research availability, ease of connection to the Internet, and well-designed class interface were students' positive experiences. The students' negative experiences were caused by delayed feedback from instructors, unavailable technical support from instructors, lack of self-regulation and self-motivation, the sense of isolation, monotonous instructional methods, and poorly-designed course content The findings can be used by instructors to understand students' perceptions regarding online learning, and ultimately improve their online instructional practices.

Introduction

With the fast development of the Internet, many colleges and universities have offered online courses as a viable alternative to traditional face-to-face instruction. However, considerable concerns and problems have developed, particularly as it relates to the quality of online education. Online education, according to Harasim (1989), is a new domain of learning that combines distance education with the practice of face-to-face instruction utilizing computer-mediated communication. Ascough (2002) suggested that online education has the following features: (a) it provides a learning experience different than in the traditional classroom because learners are different, (b) the communication is via computer and World Wide Web, (c) participation in classroom by learners are different, (d) the social dynamic of the learning environment is changed, and (e) discrimination and prejudice is minimized (p.1).

New technologies, the Internet, streaming video, net-meeting etc. now makes higher education more accessible and affordable for many students, and for those who would have been unable to pursue higher education in a traditional in-class setting (Bianco & Carr-Chellman, 2002). Consequently, online learning has now become an integral part of higher education institutions' expanding curriculum.

The term online education is often associated with Internet education, virtual education, cyber-learning, and asynchronous learning (Office of Sustainable Development, 2000). Kearsly (2000) reported the following themes that shape online education: collaboration, connectivity, student-centeredness, unboundedness, community, exploration, shared knowledge, multisensory experience, and authenticity (p. 4-10).

Volery (2000) also concluded that online delivery is a form of distributed learning enabled by the Internet. According to Paulsen (2002), online education is characterized by:

- the separation of teachers and learners (which distinguishes it from face-to-face education),
- the influence of an educational organization (which distinguishes it from self-study and private tutoring),
- the use of a computer network to present or distribute some educational content
- the provision of two-way communication via a computer network so that students may benefit from communication with each other, teachers, and staff. (p.1)

Online courses and degrees have been widely adopted by higher education institutions as another method to substitute traditional classroom instruction. Allen and Seaman's (2003) recent survey on online education delivered by higher education institutions in the United States, found that at least 80% of the course content delivered by those institutions were delivered online. Regardless of the definition, an early indication of the widespread popularity of

online education courses can be found in a survey conducted by the U.S. Department of Education, which revealed that more than 54,000 online education courses were being offered in 1998, with over 1.6 million student's enrolled (cited in Lewis, et al., 1999). In a more recent study, Allen and Seaman (2003) reported that: (a) over 1.6 million students took at least one online course during the Fall of 2002, (b) over one-third of these students (578,000) took all of their courses online, (c) among all U.S. higher education students in Fall 2002, 11 percent took at least one online course, and (d) among those students at institutions where online courses were offered, 13 percent took at least one online course (p.1).

Statement of the problem

Although it is has been reported in a recent study that 80% of course content offered in institutions of higher learning are being delivered online (Allen & Seaman, 2003), students in this study were still reluctant to take online courses and complained about the online classes they had taken. One participant noted, "Not only does the courses costs more, but they made me feel lost all the time" (Personal communication, November 11, 2003). Another participant stated, "The online class was very boring, and I don't feel the instructor helped me a lot"(Personal communication, November 11, 2003). It appeared that these students held unpleasant experiences from their prior online learning experiences. What caused their negative experiences? Was it the learner themselves? Was it the program? Or was it because of the instructor? How do students perceive the quality of online education based upon their own online learning experiences? Are they satisfied or dissatisfied with the online education they have received? What are the factors that shape students' online learning experiences? All of those questions prompted the present study and its investigation to explore students' perceptions towards the quality of online education.

Rationale for study

As the number of online education courses in higher education has increased, concerns and issues have arisen about the quality of these courses (Yang & Cornelious, 2003). Many problems that have arisen in online education regarding its quality are often related, but not limited to: (a) the requirement of separate quality assurance standards, (b), programs having low (or no) quality standards, and (c) there is no consensus on what constitutes learning quality (Twigg, 2001).

Carnevale (2000) reported that Nick Smith (D, Michigan), the chairman of the House of Representatives science subcommittee on basic research expressed deep concerns about the quality of internet-based courses during a hearing in May of year 2000. Representative Smith stated that he remained skeptical of the quality of online learning, "... students who take courses online don't interact as much as their peers in traditional courses, and that they may walk away with knowledge but not with an understanding of how to think for themselves (p. 51.)" Concerns have also arisen as to the use of technology as a panacea to correct financial problems of institutions rather than serve as a valid teaching method (Hensrud, 2001). Brown & Green (2003) have also argued that online course delivery is often viewed by "administrators as a 'cash cow' venue – a means of delivering instruction to a large number of paying customers without the expense of providing things such as temperature controlled classroom and parking spaces" (p. 148).

Many opponents of online education question whether or not online learning can provide the same interaction between instructor-students and students -students as traditional classrooms offered (Roblyer & Ekhaml, 2000). Some opponents also question the quality of online education since the quality of instructors who teach online courses cannot be guaranteed (Weiger, 1998). Arguments are made that as consumers of online education, students are unlikely to be able to find out information about the quality of the courses that are provided (Twigg, 2001). Schools or universities that offer online education courses typically do not provide comparative information for students e.g., how would a student know which online course meets his/her needs? Moreover, prerequisites that are essential for taking a particular online course are usually not clearly stated on websites for students, and when students are encountering technical problems, who will they be able to ask for assistance if it is not available to them (Twigg, 2001, p. 15). Thus, additional research is needed to examine the quality of online education.

Proponents are in support of online education. They have suggested that the lack of face-to-face interaction can be substituted by online discussions in bulletin board systems, online video conferences or on listservs (Blake, 2000). Online education can also promote students' critical thinking skills, deep learning, collaborative learning, and problem-solving skills (Ascough, 2002; Rosie, 2000 & Briggs, 1999). Donlevy (2003) asserted that online education may help schools expand curricula offerings with less cost and can help graduates gain important technology skills to improve their marketability. Proponents also argue that online education can encourage non-discriminatory teaching and learning practices since the teachers and students, as well as students and their

classmates typically do not meet face-to-face. Palloff and Pratt (1999) reported that because students cannot tell the race, gender, physical characteristics of each other and their teachers, online education presents a bias-free teaching and learning environment for instructors and students.

Quality, as used in this study is the extent to which an internet-based distance education program meets the benchmark criteria established by the Institute of Higher Education Policy in 2000 (IHEP 2000). In order for a distance education program to be recognized as a quality program it should meet these specific criteria (Hensrud, 2001). According to Kearsley (2000), to be considered as good-quality online course, ten most critical elements must be incorporated. They are "content, pedagogy, motivation, feedback, coordination/organization, usability, assistance, workload, and flexibility" (p.105). Numerous research projects have been conducted from the perspectives of faculty (Bennett & Bennett, 2002; Bower, 2001; O'Quinn & Corry, 2002; Yueng, 2001) and administrators (Alley, 2001; Giannoni & Tesone, 2003; Husman & Miller, 2001) toward the quality of distance education, where the Internet was used as the major delivery method, based upon the IHEP's quality benchmarks. However, there is a lack of research to measure the quality of online education from the students' perspective. Little is known about the quality of programs that offer online education, especially those programs based on the Internet. Faculty, administrators, and policy makers need to know how their "customers" view the quality of online education programs based upon their own learning experiences.

Purpose of the Study

Although the literature regarding online education is expanding, studies related to the quality of online education are limited. Among those examined, few researchers have examined the quality of online education from the students' perspective. Therefore, there is a need to investigate students' perceptions towards the quality of online education. The purpose of this study was to examine the quality of existing online education courses that utilize the Internet as the primary instructional delivery method. The focus of this study was to examine students' perceptions of the quality of online education. The findings of this study may contribute to the literature of online education in terms of quality assurance. The results should hopefully enable institutions offering online education to evaluate their programs based on the findings and the recommendations in this study.

Research Questions

Answers to the following research questions were sought in this study.
1. What is the experience of students who are receiving online education? How do they perceive the quality of online education from their experiences?
2. What are factors that have shaped students' online education experience? How do those factors contribute to the quality of online education?

Limitations

There are several limitations of this study which need to be addressed. First, the three students who participated in this study were taking three different classes offered at only two universities and one community college. Each instructor in the study had his/her own characteristic in regard to how he/she presented course content and communicated with students. Therefore, the characteristics of the instructor may have had an influence on students' perceptions of their online education.

Second, there were different types of formats utilized to present the online courses. Two classes used WebCT as courseware technology, and one class used Blackboard. Although there are many similarities for the two courseware technology, the layout, the design of the class, and interface were all different.

Third, the classes were across disciplines and were taught at different levels. One was a graduate course in Educational Psychology. One was an undergraduate course in Music Appreciation, and the third was a social development class, which was taught at the undergraduate level.

Definition of Terms

This study adopted the term of *online education* identified by Paulsen (2002). According to Paulsen, online education is characterized by

- the separation of teachers and learners (which distinguishes it from face-to-face education),
- the influence of an educational organization (which distinguishes it from self-study and private tutoring),
- the use of a computer network to present or distribute some educational content

- the provision of two-way communication via a computer network so that students may benefit from communication with each other, teachers, and staff. (p.1.)

Review of Literature

Many quantitative studies (Bennett & Bennett, 2002; Goodwin, 1993; Hara & Kling, 1999) have been conducted in an effort to determine the effectiveness of on-line learning. However, there has been little research that has sought to control for student variables that could provide answers to the following questions such as: How do students' computer skills affect perceptions of on-line quality? Do students' computer skills also affect students' learning outcomes? How does the communication within the on-line environment affect student's perception and learning outcome? According to Thurmond, Wambach, Connors & Frey (2002) these are just a few of the questions that are often ignored or under investigated in research that has assessed the quality of on-line learning.

Quality assurance guidelines and principles

The quality of online education has also prompted the attention of higher education accreditation associations. Many organizations published and proposed their guidelines or principles to ensure the quality of online education. In the early 1990s, the Western Cooperative for Educational Telecommunications (WECT) developed "Principles of Good Practice for Electronically Offered Academic Degree and Certificate Programs" (Twigg, 2001). Since then, many other groups have developed similar principles and practices. For example, The American Distance Education Consortium (ADEC) drafted "ADEC Guiding Principles for Distance Learning". A joint task force of the American Council of Education and the Alliance: An Association for Alternative Programs for Adults developed "Guiding Principles for Distance Learning in a Learning Society." The Instructional Telecommunications Council provided "Quality Enhancing Practices in Distance Education." The American Federation of Teachers (AFT) developed "Distance Education: Guidelines for Good Practice." The Council of Regional Accrediting Commissions updated and explained WECT's statement, and published "Guidelines for the Evaluation of Electronically Offered Degree and Certificate Programs" (Twigg, 2001).

In 2000, The Institute for Higher Education Policy (IHEP) first reviewed all of the existing principles or guidelines, and proposed 24 benchmarks for measuring quality Internet-based learning, which were grouped into seven categories: (a) institutional support, (b) course development, (c) teaching/learning, (d) course structure, (e) student support, (f) faculty support, and (g) evaluation and assessment (IHEP, 2000). Among the seven categories, three categories are related to students. They are teaching/learning, course structure, and student support. The IHEP student Benchmark scales are adopted as theoretic framework of this study to see if students' perceived good quality of online education is congruent with IHEP Benchmarks.

Students' perceived strengths of online learning

Petrides (2002) conducted a qualitative study to determine learners' perspectives on web-based learning. The research was conducted in a blended university online class, which means the class was a one-semester regularly scheduled class with web-based technology (LearningSpace) as a supplement. When interviewed, some participants indicated that they tended to think more deeply about the subject areas when responding in writing as compared to giving verbal responses. They explained that they were able to continually reflect upon each other's reflections because of the public and permanent display of the discussion postings on the Web. As stated by one participant, "There is something that forces you to think more deeply about subject areas when you have to respond in writing" (Petrides, 2002, p. 72). Another participant reiterated this opinion, indicating that the online technology allowed more reflection than in face-to-face classroom discussion.

Vonderwell (2003) interviewed 22 students in regards to their perceptions of their asynchronous online learning experiences. Some participants expressed that the asynchronous environment allowed them to write carefully about their ideas. For example, Vonderwell revealed that one participant stated, "The discussion questions were not just for writing the answers; they required reflection" (p. 86).

Flexibility is an area of strength of the online learning environment that has been identified by researchers (Petrides, 2002; Schrum, 2002). In Petride's (2002) study, he reported that participants revealed that it was easier to work in collaborative groups in an online course, since there was no less needs to rearrange everyone's schedule. In addition to flexibility with time, choices related to the learning experience were also reported as positive. Participants in Chizmar and Walber's (1999) study on web-based learning environments guided by principles of good teaching practice also indicated that the ability to freely pick and choose from the menu of diverse learning experiences enabled them to find the approaches that best fit the way they learn.

Convenience is also an advantage reported in the online learning literature. For example, in Poole's (2000)

study of student participation in a discussion-oriented online course, the findings indicated that students participated in online discussions at the times which is most convenient to them, such as on weekends. Poole also found that students mostly accessed the online course from their home computers, which was the place most convenient to them. Other researchers have also found similar results that online learners read and respond to instructor's comments in online discussions at times convenient to them e.g. early morning, late evening (Murphy & Collins, 1997).

Students' perceived weakness of online learning

Delay communication is one weakness of online learning that is reported by many researchers (Howland & Moore, 2002; Petride, 2002; Hara & Kling, 1999; Vonderwell, 2003). According to the study by Howland & Moore (2002), the communication between students and between students and instructor was a critical issue. The absence of face-to-face interaction between student and instructor contributed to negative perceptions of many students. Students felt unconfident in guidance when the feedback from instructor was delayed. In addition, in Howland & Moore's study (2002), they found that many students reported that it was difficult to get clarification on assignments, etc. due to lack of communication between student and instructor. The general impression of communication between students was also negative. The message board was the main communication gateway between students and instructor. Each student was required to make a posting on message board each week. The students often reported that the message board posting was ineffective and they were disappointed in the level and quality of communication (Howland & Moore, 2002).

Petride's (2002) study on learners' perspectives on web-based learning also reported that some participants felt a lack of immediacy in responses in the online context in comparison to what could typically occur in a structured face-to-face class discussion. This appears to be especially obvious in asynchronous online discussions, when students have to wait for others to read and respond back to their postings or e-mail messages.

Hara and Kling (1999) did a qualitative case study of a web-based distance education course at a major U.S. university. Their participants reported the lack of immediacy in getting responses back from the instructor, and as a result they felt frustrated. Recent studies indicate similar results. For example, in Vonderwell's (2003) study, one reported disadvantage of an online course was the delay of immediate feedback from the instructor. One participant stated, "It might take hours, maybe a day or so before you get an answer back for the question" (Vonderwell, 2003, p. 84).

Lack of a sense of online community and the feelings of isolation were other weakness that learners have reported in their online learning experiences. Vonderwell (2003) reported that online learning participants indicated a lack of connection with the instructor, especially "one-on-one" relationship with the instructor. Vonderwell revealed that one participant stated, "I still feel like I know a little bit about my instructor, but not the same way that I would if I was in a class. I don't know much about her personality at all" (p.83). Other studies have found similar results. For example, Woods (2002) in his study on the online communication between instructor and learner reported that online learners reported feeling isolated from faculty as well as other learners in the online courses they had taken.

Factors that influenced students' online learning experiences

There are many factors that will influence students' online learning experiences. Song, Singleton, Hill and Koh's (2004) survey study on 76 graduate students' perceptions of useful and challenging components in learning online reported that lack of community, difficulty understanding instructional goals, and technical problems were challenges in their online learning experiences. Some other factors identified by other researchers are learner characteristics (Howland & Moore, 2002) and design of the learning environment (Clark, 2002; Dwyer, 2003; Song et al., 2004).

Learner characteristics that influenced students' experiences

Learner characteristics influence the way online learners learn and their online learning experiences. Howland & Moore's (2002) study on students' perception as distance learners in Internet-based courses revealed that students who were the most positive in their perceptions of on-line learning were those with attributes consistent with constructivist learners. The most positive students were more independent, proactive and responsible for their learning. In contrast, the students who reported more negative perceptions of their on-line learning experience had the same expectations for structure and information as they did for an in-class format. Those students with negative perceptions expressed the need for more feedback from the instructor as well as more structure. These students reported the lack of feedback and communication from the instructor as abandonment (Howland & Moore, 2002).

Another study conducted by Garrison, Cleveland-Innes, and Fung (2004) on online students' role

adjustment suggested that students do see a difference in the learning process and a need for their role adjustment and the online learning should be viewed as more cognitive or internally oriented. Garrison et. al (2004) also pointed out that online learners must take more responsibility, adjust to a new climate, adjust to new context, synthesize ideas, learn how to participate, synthesize ideas, apply ideas or concepts, and stimulate their own curiosity to be successful in online class.

Learning Environment that influenced students' experiences

Another important aspect of the on-line experience is the design of the on-line environment itself. Clark (2002) stated in *Myths in E-learning* that the effectiveness of e-learning "all depends on the quality of the designed content" (p. 599). He also suggested that the content of e-learning should be more "meaningful, distinct, vivid, organized and personal" (p.601) to increase students' retention.

In current online education practices, the text is the primary means of communication. Text is found in traditional paper based format, multi-media and on-line mediums. These texts exist not in isolation but within a specific context. The learning style and learning objectives are part of the context in which the text is experienced. According to Dwyer (2003) the use of text alone has been shown to be unreliable for the most effective communication between individuals lacking shared concrete experiences. However, the level of effectiveness of textural communication is enhanced when incorporated with feedback, analogies, questions and visuals.

Images can convey the meaning better than words. As Clark (2002) stated, "A picture really is worth a thousand words and the on-line environment can take advantage of the ability to include animation, photographs, video and other graphics" (p. 601). Dwyer's (2003) meta-analysis study on examining the effectiveness of text based internet learning environment revealed that the inclusion of visual images in the learning environment can be extremely effective but the inclusion of visual images should be based on specific educational objectives. He also found that visualizations are effective according to the type of visualization and the type of learning objective and some visual aids are highly effective in achieving specific learning objectives.

When the learning environment is varied rather than text communication only, students feel more satisfied with their learning. Thurmond et al.'s (2002) study of evaluating 120 students' satisfaction in a web-based learning environment asserted that the virtual learning environment including emails, computer conferences, chat groups, and online discussions has a greater impact on student satisfaction than does student characteristics. Song et al.'s (2004) survey study also asserted that design of the course is one of the helpful components in their online learning. Other helpful components included comfort with online technologies, time management and motivation of the learner.

Methodology

Research design The design selected for this research study was qualitative in nature using interviews, observations, and documents. Qualitative research provides an understanding of a situation or phenomenon that tells the story rather than determining cause and effect (Fraenkel & Wallen, 2003; Glesne, 1999).

Techniques for conducting qualitative research include observations, interview, and document analysis. Triangulation—putting together various types and pieces of information –can lead to a better analysis or interpretation of a situation. According to Patton (1990), "Studies that use only one method are more vulnerable to errors linked to that particular method than studies that use multiple methods in which different types of data provide cross-data validity checks" (p. 18). Interviews and observations are only two parts of that process. Strengthening the information collected from observations and interviews with other data is not essential, but desirable (Stake, 1995). The data collection techniques used in this study consisted of the structured and unstructured interviews, observations, and documentations.

Data Collection Data were collected using the following methods: interviews, observations, and documents. Multiple sources for data collection will allow the researchers to use different data sources to validate and crosscheck findings (Patton, 1990). Documents were collected and evaluated as additional resources for the study. Each participant in this study engaged in two interviews. One of the interviews was structured and the other was unstructured. Two observations were conducted in an effort to gain more qualitative data. The observations were approximately 60-minute sessions. The observations were conducted in the setting that participants usually completed their online coursework. Documents were collected from all participants. These documents were printouts and other information to substantiate information that was already collected and witnessed during the observations and interviews process. Data were analyzed to answer the research questions and to cross reference similarities and differences among participants.

Interviews Fraenkl & Wallen (2003) have suggested that interviewing is an essential method for checking the accuracy of the impressions that a researchers has gained through observations (p. 455). Interviews can be conducted in several ways-with prepared questions, a protocol or interview guide, or as an unplanned event. Patton (1990) described six different types of questions that all contribute valuable information to the research study: (a) experience/behavior questions-what the individual does in this situation or has previously done; (b) opinion/value questions-what the individual thinks or believes about a situation or issue; (c) feeling questions-what the individual's natural emotional responses would be to a situation or issue; (d) knowledge questions-what facts the individual knows about the situation or issue; (e) sensory questions-what sensory response the individual would have to the situation or issue; and (f) background or demographic questions-what characteristics describe the individual. Each of these questions guides the researcher in developing an understanding of the phenomenon. This study employed a variety of questioning techniques (see Appendix A) to encourage the participants to describe their perceptions of the quality of online education based on their own experiences.

Formal structured interviews were conducted for each participant at the beginning of the study. Each participant's interview lasted approximately 60 minutes each. The interviews were conducted at the convenience of the participants, such as in their dorm room, office, or the campus library. Unstructured interviews were conducted with each participant. The unstructured interviews lasted approximately 45-60 minutes. Each participant had an unstructured and a structured interview. Sample questions asked during the formal interviews included: As a student, how does your experience of online educational programs compare with traditional in-class instruction? How do you like or dislike it? As a student, how would you rate the overall quality of the online instruction you receive? Very good, good, moderate, or not good? Why? In what ways could online education programs serve your educational needs? As a student, how do you feel about the communication between yourself and the instructor? Between you and other students?

Questions for the unstructured interviews were based on things that were observed or were not seen during observations. Also, much room was allowed for spontaneous questions and responses from both the participants and the researchers.

Observations Observations were conducted from February to May during the spring semester of 2004. An integral part of qualitative research, observations allow the researcher to determine if what the participant has said in the interview is transferred into action during the online learning experience. Participant observation "gives a firsthand account of the situation under study and, when combined with interviewing and document analysis, allowed for a holistic interpretation of the phenomenon being investigated (Merriam, 1998, p. 102). During the observation process, field notes were made and transcribed. Pictures about the setting of the environment where the participants normally work for online classes were also taken.

Participants were given the opportunity to schedule their observations at their convenience and in settings conductive for them. Each participant was observed twice. Some of the observations took place in the participant's homes, dorm rooms, offices, or the campus library. During the process of observation, extensive field notes were taken. Those notes included participants' study habits, description of the physical environment where the participants were studying, and how the participants were actively or inactively involved in his/her online learning.

Documentation Fraenkel and Wallen (2003) indicated that documents refers to any kind of information that exists in some type of written or printed form intended for private or public consumption public and are available to the researcher for analysis. Thus, photographs, participants' email messages, printed version of the class layout, and participants' submitted assignments along with class syllabus were collected as data sources.

Documents concerning online education were collected from all participants. These documents included syllabus, course information, tests, study notes, discussion board postings, emails, etc. The majority of the documents received from the participants were printouts from each participant's course site. The purpose of implementing observations, interviews, and documents was to provide trustworthiness and accountability to the data. The researchers were attempting to determine whether the participants' actions and interview responses were the same. The researchers examined how closely what the participants said in the interview, and observations were aligned with what actually happened in the typical online learning settings.

Participants The sample for this research study were three students enrolled in online learning courses. The participants received online instruction from two different universities (University of Southern Mississippi, and Mississippi State University) and one community college (East Mississippi Community College) in Mississippi.

Fraenkel & Wallen (2003) have concluded that purposive sampling is based on the assumption that one needs to "select a sample from which they feel will yield the best understanding of whatever it is they wish to study"

(p. 440). However, convenience sampling was used in this study. Two males and one female student participated in this study. Among the three, one was Caucasian, and two were African American. These participants were all enrolled in online classes. Their exams and other assessments were completed online. Two of the participants received instruction delivery via WebCT and the other participant received instruction via Blackboard. Two of these participants were non-traditional students. One was a housewife of approximately 42 years old, and the other participant was almost 40 years old and held a full time job. Both participants took undergraduate courses offered online. The third participant was a traditional student of 25 years of age, who took graduate online course.

Procedures The initial step in the procedure was the selection of study participants. Convenience sampling was done because the participants were known to the researchers. Participants' interviews and observations were then conducted during the spring semester of 2004. Structured interviews with the participants were first conducted separately. Conversations were recorded during the entire interview processes. Following, the participants engaged in unstructured interviews two weeks later. The interviews were conducted in different places to accommodate the needs and convenience of the participants. One participant was interviewed twice in his dormitory room. The second participant was interviewed twice in her home. The third participant was interviewed in his office once and once at the campus library.

After the completion of interviews, data were organized and preliminarily analyzed. The first observation was then scheduled upon the participants' consent to see how he/she worked for the online class. A week later, the second observation was scheduled with participants to confirm whether or not there had been any change in participants' behaviors when the participants became familiar with the research process.

During the process of the first and second observations, various documents were collected. Photographs were taken for the physical setting of the online environment of the participants. The online class design and layout were also printed as archival data. Some other documents such as syllabus, discussion posting messages were also collected during this stage of the process.

Data Analysis Data analysis is a key component of qualitative research. Transcripts made of audiotaped interviews were checked for accuracy against the original recordings. Data analysis was also conducted simultaneously with data collection. Extensive coding of the interview and observation transcripts was conducted by researchers. The constant comparative method (Glaser & Strauss, 1967) was used to analyze the qualitative data from different sources over time. Data were organized around each research questions, which related to experiences of students who were taking online classes and the factors that shaped those experiences. The researchers examined the interviews, observations, and archival data for similarities and differences. This information was then complied around two major areas. These areas were positive experiences and negative experiences of online education.

The positive experiences included: flexibility, cost-effectiveness, convenience, self-paced, availability of technical support, and ease of connection. The negative experiences included: delayed instructor feedback, unavailable technical support from instructor, self-regulation and self-motivation, and a sense of isolation. The factors that attributed to particpants' positive experiences were: easy access to computers and Internet, well-designed course layout, available technical support from the university and library, spontaneous grade postings after assessments, and flexible class participation time. The factors that attributed to participants' negative experiences were: untimely or lack of feedback from instructor; monotonous instructional methods, lack of technical support, lack of interpersonal communication, and poorly-designed course interface. Limitations of the analysis is reported and discussed in the findings section of this paper.

Data collection and analysis provided answers to the following research questions: (1) What is the experience of students who are receiving online education? (2) How do students perceive the quality of online education from their experiences? (3) What factors shaped the students' online education experience? (4) How do those factors contribute to the quality of online education?

Findings and Discussion

The purpose of this study was to examine students' perceptions towards the online education based upon the online learning experiences they had. Students perceptions toward online education based on their own experiences have been examined. The factors which shaped those students' online education experiences have also been investigated.

The findings of this research will be grouped in two clusters: students' positive experiences and negative experiences. The students' positive experiences were: flexibility, cost-effectiveness, electronic research availability, and ease of connection to the Internet. The students' negative experiences were identified as: delayed feedback from instructors, unavailable technical support from instructor, lack of self-regulation and self-

motivation, and the sense of isolation. Factors that contributed to students' positive experiences were: flexibility of class participation time and self-paced study, cost-effectiveness of online class, electronic research availability, well-designed course layout, ease connection of the Internet, easy navigation of the online class interface, and familiarity with the instructor. Factors that contributed to student' negative experiences were: delayed feedback from instructor; unavailable technical support from instructor, lack of self-regulation and self-motivation, sense of isolation, monotonous instructional methods, and poorly-designed course content.

Positive experiences and contributed factors

1. Flexibility

The flexibility of online education has been widely recognized as one advantage. The most important factor that contributed to participants' positive experience was the flexible class participation time. All three participants in this study emphasized the convenience they enjoyed from not being required to drive to campus, and plan their work and study at their own time. Flexibility with time was one positive experience found in this study. Students could log in to the online course at any time when they are available. "It allows me to take to log on at will and view my courses and assignments at will." "I don't have to worry about trying to find time to come to campus or a pointed pace to meet with the instructor." "One benefit of online course is that you don't have to worry about trying to find time to meet as a whole class". "I have very little time to dedicate to coming to a campus to pursue my education because I am a full time mom." "There is no hassle in trying to rush to get to class." "You're never late for class." One of the non-traditional students reported that he had a full-time job that was extremely demanding and the only option he had at that time was the online class. This student had strong emotions about the sacrifices that he perceived his family had made due to his pursuit of a higher education degree. He expressed anger towards the educational system for not making it easier to attend college. "More online courses would have been a huge benefit…less time away from my family."

Flexibility with self-paced study is another positive experience found in this study. The participants had full control of when to study the required knowledge content by instructor. It was considered as one remarkable advantage for the fulltime employee and the full time mother. "You can pace your work at your own time and you don't have to listen to lectures by the instructor." "Basically, I get to work around my own time schedule." "It helps me to manage my time." "You have time to sit back and reflect your initial reactions to the discussion topics."

Participants also perceived online education as an enjoyable experience when studying with no pressure from the instructor and the other students. The participants felt convenience was also important because "There is no distraction from your classmates", and "There is no one looking over your shoulder or checking your homework or forcing you to read." "You can pace your work at your own time and you don't have to listen to lectures by the instructor."

2. Cost-effectiveness

All the three participants agreed to the cost-effectiveness of online education. Although they have to pay extra for a fee so-called "Special class fee", compared to the automobile, gas, textbook, and meal cost, they would rather take online classes to save those extra expenses. "I think online courses save me money. I have less automobile cost because I don't drive come back and forth to campus." "I spend less on class materials, because I fell online courses require fewer books if any. I don't spend extra money on backpacks, notebook papers, parking decals or fines. I feel that I make more efficient use of my money while taking online courses."

3. Electronic research availability

Electronic research availability was the third positive experience had by the participants. When the graduate student was required to do some research work, the digital library was his first choice. The student perceived that the library provided a good support on the research activities in the online class. "As far as research support, our library did a good job. We can use online databases. If we have any questions, we can call the librarian, the librarian can help us to answer the questions." "If the book or article in not available in the library, we can use the library loan." "The online indexes and databases are open to all students."

4. Ease of connection to the Internet

The ease of connection to the Internet is the fourth positive experience found in this study. The easy access to computer and Internet stimulates students' interests to access their online courses quite often. Since they have access at home or at the dorm, they didn't need to drive to campus or school to access their online class. Some could receive discounts on Internet access due to the enrollment of online class. "With this online program available through internet, getting a degree is possible." "I have Internet access at dorm, I can access my course at any time, and it's so easy for me." "I am able to get dial-up Internet access cheap from university."

5. Easy navigation of the online class interface

The well-designed online course made it easy for students to navigate and find the information they were

seeking. Two kinds of courseware technology were utilized by different participant. Two participants' online courses utilized WebCT, and one participant who took the undergraduate course used Blackboard. Therefore, there were two different kinds of interfaces being used in this study. Two students stated the easy navigation for the whole class design. "The menus on the screen on the Blackboard are very easy to use. I can easily navigate my way around the screen." "The amount of links, information and navigation bar, everything is very simple and laid out on the homepage."

Automatic grading for tests by the courseware was perceived as a good experience by one participant. "I can receive the results for the tests immediately after I took it." A second participant also reported automatic grading by the courseware as a positive of the course. Stating that it was great to see not only your grade for a specific quiz or test, but to have a list of all grades received. Another participant did not receive automatic grading and reported long delays in reporting. The participant stated, "We've already taken three exams, but I still haven't gotten the result from my first test yet."

6. Familiarity with the instructor

One interesting phenomenon found in this study was the comfort level or familiarity with the instructor. One participant indicated that, "I feel good about this class, because I know the instructor pretty well." When asked if this familiarity brought any effect on his perceptions towards the quality of the online class, the participant answer, "I believe this familiarity make me feel more comfortable since I already knew how the instructor behaved and his way of teaching."

Negative experiences and contributed factors

1. Delayed feedback from instructor

The delayed feedback from the instructor was conceived as the main factor which shaped students' negative experience on the quality of online education. Students expect to receive timely feedback from instructors on discussion postings, exam or tests, and submitted assignments. "The feedback from the instructor is not immediate. So far, I haven't received any feedback yet. I think there is a huge need for improvements as regards to the feedback from the instructor". "You must have feedback on exams, discussion postings, and main sources of communication on the regular basis." Students also expect the instructor to reply to email messages or voice mail messages promptly. "She (the instructor) didn't reply to my calls, or my email. I had no way to contact her." It normally took students a day, or several days to wait for feedback from the instructor. "I have to wait for his responses, it normally takes a day or so." The document of discussion postings of one class showed that the instructor only replied to students' messages during the first and second weeks of the semester. The earliest posted answer by students was Jan. 19th. The earliest response posted by the instructor was Jan. 19th. The next response posted by the instructor was Jan. 29th. By that this time the total amount of messages that had been posted were 33, almost one third of Chapter 1 (89 messages). Among the 33 messages, the messages posted by the instructor were ZERO. No wonder the student complained that no feedback had been given to him.

When students did not receive feedback from the instructor, they felt frustrated, depressed, and less motivated. "This miscommunication killed my motivation and I almost cancelled the class." "Sometimes it was very easy for me to get frustrated when I encounter something that I don't understand." "He is probably busy, spending his day teaching traditional classes. Therefore, he doesn't have to read and respond to emails until after hours." Participants then perceived "Time and response time is a drawback in all aspects of online education." During the conversation, the interviewee mentioned several times about the frustration he experienced because of delayed or lack of feedback from the instructor, such as "I hate this class, no feedback, no response." He shook his head, and sighed deeply when giving the above comment.

2. Unavailable technical support from instructor

When students have technical problems, they need someone to help them. The person that came to their mind first was the instructor. Thus, when the technical support from the instructor was not available, negative experiences will be brought up. One participant mentioned that she and her classmates had no technology background, "Many students have little technical background knowledge of computers". It was even difficult for her to explain the problems she experienced with modern technology. "Some problems or gray areas are hard to sum up in words. It is also difficult for the instructor to always know what the student is trying to say or describe." Thus, she said "I have to seek advice from friends, who were computer literate about how to send and compose messages." They suggested that "A how-to-mini lesson would be ideal.", or "... some type of training or workshop on WebCT before class will be beneficial to us."

3. Lack of self-regulation and self-motivation

While online learners enjoyed the flexibility and convenience of online education, they also needed to keep in mind that they had to take some responsibility for their own learning. Due to the freedom and convenient nature

of online courses, self-regulation and self-motivation are highly expected for students to be successful. When students can't control him/herself, he/she might miss the due date for the assignments, or even the dates for the tests. One participant missed the deadline for one of his tests. He had to keep contacting the instructor for an opportunity to make up the test. However, he couldn't contact the instructor through any means, which also caused his negative experience due to this lack of connection. The participants stated, "You must be really self-motivated and focused". "I am easily distracted and I put off things until the last minute". Sometimes they even complained about the freedom and independence they had enjoyed, "Independence and freedom can get you in trouble." "It is so easy to not to complete an assignment." "You don't have a specific time to do your work, so it's very easy to get off track and lose focus." "If I were in a traditional class, at least I can talk to classmates, and we may remind each other about the due dates for assignments and tests."

Participants in this study spent their time on housework, babysitting, other coursework, or activities. Because the class didn't meet, sometimes they forgot that they were taking online courses. "Sometimes I will forget my assignments." However, the participant realized that he needed to control himself, and motivate himself, "If I could have spent some time in preparing for the test, I wouldn't have gotten such a bad score." He also realized that he spent too much time on other things, such as talking on the phone, and traveling. "Sorry, I talked too long (he spent 30 or more minutes talking on the phone." "I had too much travel this year, because I had to go for an interview."

4. Sense of isolation

There are a variety reasons that caused a sense of isolation for online learners in this study. One reason was the lack of interpersonal communication or interaction between instructor/student, and student/students. "You can't talk to teacher face to face on a regularly basis if at all." "You miss out hands-on experiences done in class, and you won't be able to interact with other students." The participant felt a strong isolation in the online class he was taking because he kept saying "I feel I am nowhere and live in a lonely island." Especially when there is no group work for online learners, they won't even have chance to talk to their group members. Consequently, students don't know the instructor, and don't know his/her classmates. "So far I don't know how many classmates I have, and who they are." "Although the instructor listed her number on the class page, but I can never reach her."

5. Monotonous instructional methods

Another reason that caused the feeling of isolation was the monotonous instructional methods used in the online class. Two participants in this study indicated that the message board was the only communication and interaction method used by their instructor. "We only communicated through discussion boarding. She (the instructor) won't reply to our email message. As far as the chatting room, we never used it in this class. If we can meet in the chatting room, it will be so much better." The monotonous instructional methods also included class materials the instructor prepared for students. Printed materials were solely used in the graduate level class. In the music appreciation undergraduate level class, sound files and graphics are also utilized as supplementary teaching materials. Comparing those two, the participant in the monotonous learning environment expressed his feeling and suggestion, "Everything is printed. If we could have different material, such as audio, video, or even let us rent some video and write a report on it, I will feel better for my learning."

6. Poorly-designed online course content

A well-designed course interface can improve students' use of class pages. But a poorly designed course interface will make students lose in seeking information. "I don't know where she (the instructor) put the page for... (a certain assignment), it was there two days, but now it is gone." The structure of one course design was not logic. They were the detailed syllabus and the extended syllabus. Under the extended syllabus, there are two links, one is the detailed syllabus, and the other one is the chapter outlines. But the chapter outlines were not linked. The interviewer also noticed the inconsistent design of the course from the archival data documents. This inconsistency caused students' confusion and frustration in finding information they need.

Participants' overall rating of the quality of online education indicated that they did not believe that they had received a good quality online education. In addition, from their experiences, the online courses they had taken did not meet the IHEP benchmark criteria. IHEP benchmarks states:

> Feedback to student assignments and questions is constructive and provided in a timely manner. Proper orientation is advised to students before starting an online program. Students are provided with supplemental course information about course objectives, concepts, etc. Students have access to sufficient library resources that may include "virtual library". Students are provided with support services, such as information programs, technical and proctoring requirements, training, technical assistance, student service personnel, and a structured system to address student complaint. (p. 2-3).

One positive thing indicated by all participants was that they all had access to electronic library resources.

However, they all expressed their dissatisfaction on the delayed feedback, frustration of helplessness, and no orientation before the online classes were given. Therefore, the participants did not perceive their online education to be of high quality.

Conclusions and Recommendations

The purpose of this study was to gain an understanding of students' perception of online learning. Qualitative research methods used in this study were well suited to achieve this goal. The depth of information gained through the analysis of interviews, observations and archival data have provided a level of understanding that quantitative methodology could not have.

While receiving online education, participants gained both positive and negative experiences, although their experiences tended to be more positive. Flexibility of class participation time and self-paced study, cost-effectiveness of online class, electronic research availability, well-designed course layout, ease connection of the Internet, easy navigation of the online class interface, and familiarity with the instructor contributed to participants' positive experiences. Factors that contributed to student' negative experiences were: delayed feedback from instructor; unavailable technical support from instructor, lack of self-regulation and self-motivation, sense of isolation, monotonous instructional methods, and poorly-designed course content.

These findings were supported by the majority of the research literature that was reviewed in this study. Reflection, flexibility, and convenience are reported as strengths of online education by several researchers (Petrides, 2002; Vonderwell, 2003; Poole, 2000; & Murphy and Collins, 1997). Some contributing factors as regards to participants' negative experiences could also be found in similar studies found in the literature. As Howland & Moore (2002) pointed out the level and quality of communication between students and between students and instructor was a critical issue. Petride (2002) revealed the immediacy in responses affected learners' experiences. Vonderwell (2003) and Song et al. (2004) also reported the lack of a sense of community in students' online learning experiences.

This study also found the feeling of familiarity with the instructor influenced students' learning experiences. When the online learner knows the online instructor, he/she may feel more comfortable while taking the instructor's online class. Based on this finding, a question may be raised as to whether or not an online class should be taught by first-year faculty? Further research may be conducted to examine the effectiveness of online teaching by first-year faculty and senior faculty.

When participants were asked to evaluate the overall quality of online education they received, their answers were moderate. Moderate quality of online education implies that they were not very satisfied with the education received, or they did not perceive that the online education they received as of high quality. The participants' personality may have some bearing on how responsible they felt for their own learning. Online learner may need to change their own behaviors such as lack of self-motivation, spending too much time on the phone, or not being an active and constructive learner. However, when their negative experiences were examined, all of the factors except the one related to learner characteristics (lack of self-regulation or self-motivation) are related to the online instructor.

Participant's in this study felt lost, frustrated, and isolated because there was lack of immediate response or no feedback from the instructor. When the course content was not organized, it increased the level of perplexity and nervousness of online learners. When participants encountered any technical problems, the instructors were not able to assist them. Even when the instructor could not help them, no other technical person could help the online learners either. When the instructional methods were only through textbooks, or discussion postings, students' learning was not effective. The learners just completed assignment and turned them in without transferring and assimilating the knowledge from textbook to their own.

The authors concluded that in the process of ensuring the quality of online education, the instructor plays a key role. Not only because the instructor "faces" the students directly, but also because more responsibility has been put on the instructor's shoulder. However, this does not mean that the administrator should be set aside in the quality assurance of online education. More importantly, the administrator should provide sufficient supports (training, administrative, monetary, and promotional), hire qualified faculty, and motivate faculty to provide effective online teaching.

This study was conducted with students from two universities and one community college in the south. Convenience sampling, rather than another sampling technique was used. If a different sampling technique had been chosen, the results could be different. Therefore, future research could be done with a homogeneous group of students, using a larger sample size; including more universities and colleges in the study.

This study has contributed to the literature in the area of on-line education. It has also provided valuable information from students that can serve both online instructors and administrators in providing more effective on-

line education. This study suggests that IHEP benchmarks should be adopted by every institution of higher education as a measure of the online programs each institution offers. When the online education programs do not meet the benchmarks, students won't perceive their online education to be of high quality. This study has also shown that more research need to be conducted in the area of improving communications and utilizing multi-media to enhance the on-line educational experiences of students in regard to both course content and social connectedness.

Appendix A
Interview Questions

1. As a student, how does your experience of online educational programs compare with traditional in-class instruction? How do you like or dislike it?

2. In what ways could online education programs serve your educational needs?

3. As a student, how do you feel about the communication between yourself and the instructor? Between you and other students?

4. As a student, do you think your learning outcomes could be achieved through online education? Why? How?

5. As a student, how do you view the feedback from instructor? Is it in a timely manner? Constructive? Please give some examples.

6. As a student, how do you think the technical support provided from university? Do you receive any other type of support, such as enrolling in online class, electronic database, and written information about the program? If you have any complain, is there anyone you can address to and solve your problem?

7. How do you view your online educational environment? E.g. Quality of graphics, layout, user friendly, navigation, etc.?

8. How does the amount of course work in your online education program compare with traditional in-class instruction?

9. As a student, what could you do to improve the quality of your online education?

10. What do you think are the important factors determining the quality of the online instruction you receive?

11. What factors would lead you to choose online educational programs rather than traditional in-class instruction?

12. As a student, how would you rate the overall quality of the online education you receive? Very good, good, moderate, not good? Why?

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