

**Attitudes Toward Interactivity in a Graduate  
Distance Education Program: A Qualitative Analysis**

by  
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Attitudes Toward Interactivity in a Graduate Distance Education Program:  
A Qualitative Analysis

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Capella University

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Doctor of Philosophy

ATTITUDES TOWARD INTERACTIVITY IN A GRADUATE  
DISTANCE EDUCATION PROGRAM:  
A QUALITATIVE ANALYSIS

by

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## Abstract

The study examined the attitudes of graduate students toward interactivity in computer-mediated classes. Students responded to 10 open-ended survey questions involving interactivity during their on-line classes. The 93 study participants were pursuing either master's (25) or doctoral (66) degrees.

The two research questions of this study were (a) what are the graduate student's attitudes toward interactivity (communication, participation, and feedback) with other on-line students and (b) what are the graduate students' attitudes toward interactivity (communication, participation, and feedback) with their on-line instructors. In answer to the first question, the study identified 44 students (47.3%) who felt that classmates who were late posting their weekly on-line comments had a negative impact on dialogue because a reduction in student contributions weakened the quality of discussion. In answer to the second question, the investigation found that 66 students (70.9%) had been offered or had received tutor assistance with their class work. A major overall conclusion of the study involved 84 students (90.3%) who related the importance of maintaining on-line communication throughout the course to enhance interactivity.

The investigation highlighted the need for further research into various aspects of computer-mediated interactivity, such as the three themes that emerged from the study: (a) students who were late posting weekly on-line comments, (b) tutor assistance with class assignments, and (c) maintaining on-line interaction.

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## Introduction

The rapid growth of distance education schools has captured the attention of today's college administrators who realize that they need to be more competitive. It has prompted administrators to have a greater sensitivity for market forces that are rapidly changing the educational landscape (Doucette, 1998). In fact, Jaffee (1999) commented that "educational institutions across the nation are currently scrambling to develop distance learning programs that will keep them in step with the competition" (p. 1). The advent of commercially operated distance education schools has created a new institutional concern: that traditional higher education schools do not miss the organizational and instructional benefits of using new technologies.

The technological revolution has produced a knowledge-based economy that demands competing on a global level, requiring workers who are able to acquire new types of knowledge quickly and to utilize computer technology effectively. Business writers are producing numerous books (e.g. Net Future; Martin, 1999) on how to prepare leaders for the new cyberage (Lipnack & Stamps, 1997). Additionally, college administrators are noticing that a growing number of people are living off campus, and adults who are 25 years or older are taking more tele-learning courses.

Unfortunately, conventional universities and colleges are primarily designed to meet the needs of young adults who can live on or near their campuses. Many adults who want to pursue educational goals are not able to attend campus-oriented classes because of their work and family responsibilities. The emergence of distance education occurred as educators tried to respond to modern adult learning needs. Contemporary demographic trends indicate that a growing number of adults are attending distance education institutions. These schools provide unique educational opportunities for adult students to pursue various kinds of professional advancements, such as certification or licensure and graduate degrees. In fact, six million adults are taking college courses while working at full-time jobs (Dubois, 1997).

Distance education schools have struggled with an assortment of challenging educational problems. While educators wanted to provide quality library resources for their

faculty and staff who were geographically separated, contemporary institutions faced library resource problems that complicated research work. However, advances in computer and Internet technologies largely resolved that academic problem. Today, university libraries demonstrate a real willingness to integrate computer-based technology into their basic information services (e.g. card catalogs), and libraries are making their information resources accessible to individuals and organizations through the Internet. It is a tremendous benefit for distance education students who want to do research for graduate classes. Students can use the Internet to search library resources as well as order books or journal articles to support their writing projects.

Recent advances in computer technologies and easy access to Internet databases are stimulating a new Information Age by transforming today's instructional delivery systems. Adult students are empowered to study more independently by participating in on-line classes that stress self-directed educational opportunities (Davie & Wells, 1991). Contemporary distance education schools are striving to have the most effective educational programs. The programs encourage a dynamic combination of flexibility, individualization, and personal and professional challenges.

As distance education schools grow in popularity, distance educators and their students are raising important instructional questions about the quality of these computer-mediated educational programs. A vital academic question involves the social interaction that occurs during online class work. Educators are wondering whether the on-line format provides adequate opportunities for genuine dialogue and social interaction, which are vital elements in the learning process (Hobaugh, 1997).

This research study focused on the issue of interactivity (communication, feedback, and participation) between the student and other students and between the students and their tutors in on-line courses in one distance learning program. The central research focus involved asking one question: what are student interactivity attitudes toward distance education (Guernsey, 1998; Kearsley, 1998)? Investigating that question involved gathering and analyzing survey data on the students' perceptions of and perspectives on interactivity as they related to their peers and tutors during their computer-mediated classes.

## Background

### Defining Interactivity

Distance educators have struggled with how to describe the concept of interactivity clearly. The term became popular in the mid-1970s as a buzzword that was intended to highlight learning information from computers and interactive video technologies.

Livengood (1987) related that “even though nearly everyone who designs and develops instructional products utilizing computer or interactive video technology uses the words interactive or interactivity constantly, no clear definition or understanding exists for what these words mean when applied to instruction” (p.28).

The search for a clear and practical definition of interactivity is complicated by the complex nature of the term and by the educators who stress certain aspects of learning. Classical instructional theory places a strong emphasis on the idea of feedback; instructors help students understand their subject matter by offering appropriate comments or marks on their written work. Teachers are encouraged to devote time correcting student mistakes and use opportunities for social interaction as a motivational tool. Research studies involving traditional classrooms have affirmed that increasing student-teacher interaction can improve both student achievement and enhance their educational attitudes (Kearsley, 1995).

Modern writers try to make several distinctions when referring to interactivity. Moore (1989) referred to three major types of interaction: student-content, student-teacher, and student-student. Each type of instructional interaction plays a role in the entire educational process. Historically, traditional classroom environments have stressed the student-teacher relationship and their daily instructional encounters. In sharp contrast, modern distance education schools that utilize correspondence studies involve students by having them interact with their subject matter through reading and written assignments. The emphasis is upon self-directed learning and represents a definite commitment by educators to affirm the autonomy and independence of adult students (Mason & Kaye, 1990).

The advent of computer-mediated distance learning stimulated even more attention to student-content interaction. During the 1990s, a host of educators, tele-learning experts,

and curriculum designers devoted time and energy to developing self-directed curricular materials and software that supported distance learning. The introduction of technology into the educational process added an entirely new dimension to the concept of interactivity. Levinson (1990) stated that “the impact of any technological system is a function not only of the technology itself but also of the web of social expectations and consequences that inseparably accompany and indeed make possible the operation of the technology” (p. 7).

Educators stress the technical dimension of learning. Distance education literature contains numerous journal articles devoted to a host of technology-related issues, such as creating Internet-based instructional programs. Yet Spitzer (1998) argued that an excessive fascination with technology has played a role in neglecting the social dimension of learning. His observations depict how distance education schools have gone out of business by failing to create an effective on-line communication system for students. Distance education represents a completely unique context for the teaching and learning process. Often, individuals do not appreciate the instructional changes that both tutors and students must undertake to make it a successful venture. Spitzer (1998) observed that “those involved in distance education grossly underestimate the difficulty involved in changing deeply entrenched teaching and learning habits, and consequently we grossly underestimate the difficulty of changing from a traditional classroom environment to a distance learning context” (p. 53).

The social dimension of learning by computer-mediated education has received little attention in literature. Sherry (1996) raised real concerns that students appreciated the accessibility of their distance education courses even though their on-line courses contained far less dialogue than the conventional face-to-face classes. Kearsley (1995) observed that computer-based instruction focused mainly on student-content, self-study lessons and materials. He believed that a greater emphasis in collaborative and cooperative learning and the growth of computer networks prompted educators to raise questions about the issue of social interaction. Because of studies like Kearsley's, the educational community has become more aware of the importance of promoting student interaction in on-line learning classes (Spitzer, 1998).

An important interactivity distinction involves interaction based on immediate (real time) or delayed (asynchronous) feedback and discussion. The traditional classroom usually involves immediate student and teacher dialogue. Today, computer-mediated distance education schools operate with instructional programs that offer a combination of immediate (e.g. teleconferences and chat sessions) and delayed learning experiences (e.g. e-mail and on-line discussion forums). The differences between delayed and immediate interaction have a major impact on the type of instructional delivery system offered and the students' perceptions of their on-line experience. Students who want an immediate educational experience require a fixed meeting time to interact with other students and instructors. The delayed learning format enables students to have greater freedom, scheduling flexibility, and control to establish when they will participate in the on-line class. Kearsley (1995) noted, "classes that involve immediate interaction often have a sense of excitement and spontaneity that is not present with delayed interaction" (p. 1).

Wagner (1994) argued that a functional definition of interactivity must acknowledge and investigate four educational contexts: learning theory, instructional theory, instructional design, and instructional delivery. He challenged distance educators to avoid speculating about the role and impact of interactivity and to pursue more rigorous studies that could provide more operationally sound definitions. In fact, Wagner (1994) believed that "interaction functions as an attribute of effective instruction, while interactivity functions as an attribute of contemporary instructional systems, particularly those that use telecommunications technologies" (p. 7).

This researcher offers a practical definition of interactivity that affirms the human dimension of this term. For the purposes of this study, interactivity refers to communication, participation, and feedback (Appendix A). Interactivity involves participation by the learner in on-line communication with other learners and with their class tutors. Additionally, interactivity among students can be immediate (e.g. by phone call) or a delayed personal encounter (e.g. a discussion forum). The definition highlights the personal nature of sharing information during a graduate distance education class. Naturally, students interact with their course materials through reading their textbooks, journal and discussion forum comments from other students and their tutors. The subject

content provides an academic foundation for meaningful dialogue within a distance education class.

### Adult Learning Theory

Contemporary distance education does provide insights into the importance of interactivity in the educational process. Verduin's and Clark's (1991) definition of distance education specifically mentioned the concept of communication. Their definition included:

[a] the separation of teacher and learner during at least a majority of the instructional process; [b] the influence of an educational organization, including the provision of student evaluation; [c] the use of educational media to unite teacher and learner and carry course content; [and (d)] the provision of two-way communication between teacher, tutor, or educational agency and learner. (p. 11)

Verduin and Clark used the phrase “educational agency” to indicate that communication was an institutional concern and operated as a source of accountability for the entire educational process. The authors acknowledged that theirs was a minimalist definition of distance education, but it did highlight the value that educators place on communication.

Contemporary distance educators support a new educational paradigm. Educators realize that computer-mediated education requires developing a new contemporary vision of learning. Adult educators, such as Sherry (1996), affirm a new teaching and learning model that stresses student-centered instruction. Ultimately, it will demand changing the traditional role of teachers from information transmitters to guides who arrange meaningful learner-centered experiences (Salomon, 1992). The term education describes a teaching and learning concept that transcends mere sharing of factual information. It assumes that a capable teacher will know where he or she is going (is goal-oriented). The wise teacher seeks to guide his/her students toward greater maturity, preparing them to adapt effectively to a rapidly changing world (Cantor, 1996).

Traditionally oriented teachers might have some fears about becoming useless or insignificant by using computers and facilitator-oriented instructional methods. In reality, the facilitator model raises academic standards and expectations, requiring educators

capable of equipping students to be independent learners. Educators are still considered knowledge experts who have a clear understanding of their subject matter. Yet their new role involves promoting more self-directed learning activities that cultivate the achievement of knowledge objectives through personal study. Teachers are challenged to design instructional activities carefully that guide their students into on-line learning situations promoting personal acquisition of knowledge. Educators strive to encourage positive learning habits that foster both self-directed learning styles and genuine collaboration with other classmates. It requires planning creative on-line instructional assignments that intellectually stretch students but do not confuse or overwhelm them. For instance, teachers should not consider sharing a lecture transcript unless there were specific questions and class discussion that supported the reading of their lecture material. Mason and Kaye (1993) stated that "information should be designed for a particular medium to best exploit its unique advantage" (p. 16).

The distance education format challenges teachers to develop a learning environment that places more responsibility on the student to accomplish academic tasks with minimal teacher assistance. Students are treated as adults who are capable of effectively learning new ideas and academic disciplines (Kasworm & Bing, 1992). It requires having teachers who design relevant lesson plans and are willing to experiment with innovative educational methods (i.e. on-line quizzes). It is an open-ended learning model that will bring some anxious moments to the best on-line teachers. For instance, educators who are used to having a tightly controlled classroom might feel somewhat uncomfortable monitoring on-line discussion forums. The discussion format has an unpredictable dimension that makes student-centered learning dynamic but less easy to control. Teachers appreciate the lively debates that characterize most on-line classes. Frequently, students offer thought-provoking dialogue because they have time to reflect on the posted comments before sharing their thoughts (Lewis, Treves, & Shaindlin, 1997).

### Interaction in Adult Education

As educators refine their philosophy of distance learning, they are concerned about sustaining interactivity in their educational process. Today's adult learning theories are built upon the premise that teachers will assist their students in becoming self-directed and independent (Moore, 1989). Students must assume responsibility for their educational experiences, but independent study has natural limitations. If students do not receive adequate teacher feedback and reinforcement, students will not always know whether they possess an accurate knowledge of their subject matter. A primary goal of adult education is to promote self-directed attitudes and behavior while discouraging excessive dependency upon the instructor (Milheim, 1993).

Effective communication between teacher and student is essential to truly empower students for more sophisticated learning experiences. Academic collaboration is a vital integrating factor that helps students successfully negotiate graduate school. Distance learners must cultivate a host of faculty relationships. Rossman (1995) related that students must devote significant time communicating with professors about their degree programs, class assignments, comprehensive exam questions and responses, thesis or dissertation ideas, and completed dissertations.

Computer-mediated education creates unique risks for both tutors and students. Tutors can face heavy workloads from large, on-line classes that require large amounts of personal e-mails, phone calls, and discussion forum comments. If teachers become overwhelmed by constantly having to deal with large classes, the quality of on-line interactivity with students can suffer. Yet, students can become discouraged by fellow classmates who appear to offer more intelligent discussion comments, which have a negative impact on the quality and quantity of their discussion postings. As students devalue their personal knowledge and life experiences, their on-line contributions can become more driven by an obligation to get through the experience (Rowntree, 1995). Rowntree (1995) noted that:

Distance learning has always favoured the highly motivated, well-organized and already accomplished learner. Computer conferencing may look like a very open and democratic medium; but it demands a kind of textual sophistication and a capacity to carry in mind the twists and turns of what may be a prolonged and

challenging chain of contributions that will sorely tax the patience and understanding of less sophisticated learners. For them the learning may seem only too closed. (p. 214)

Research literature on teaching and learning in higher education does affirm the importance of interactivity within the educational process. Adult educators integrate academic communication into their learning theories as an essential feature of their educational models. Collis (1998) shared the following six vital instructional principles that should characterize adult education:

- [1.] Both learner and educator play an active and unique role in the educational process.
- [2.] The process of creatively acquiring knowledge involves human interaction and learner competence that are developed and evaluated within a communication-oriented educational model.
- [3.] Contemporary models of learning support learner-centered instruction that encourages self-assessment, personal reflection, and elicits learner articulation of their ideas.
- [4.] The learning environment should maximize meaningful and reflective interactions while providing a variety of opportunities for feedback.
- [5.] Creating instruction that promotes learner self-regulation and individual responsibility is the product of educators who are academically well prepared and monitor the quality of student work.
- [6.] Adult educators recognize that “students want to move efficiently through their studies, in both time and energy; students do not automatically have good study skills, discipline, or motivation.” (p. 375)

#### Interactivity in Distance Education

The growth of distance education schools continues while today’s educators and students raise serious concerns about the reduced levels of human interaction during their on-line classes. Educators are fearful that computer-mediated education will reduce human interaction, and writers are stressing the need to devise strategies that bridge the communication gap between physically isolated on-line students (Jaffee, 1999; Tinker, 1997). Interactivity is an issue that concerns students, teachers, administrators, and instructional designers who want to promote independent learning without losing social interaction. Saba (1998) stated that “the success of distance education, to a greater degree, will depend on the ability of educational institutions to personalize the teaching and learning process” (p. 1).

Distance education literature makes frequent references to students being

independent and self-directed. Yet, the goal of being self-directed is considered a life-long process that involves the element of social interaction. Knowles (1990) advocated fostering student competencies by having a positive psychological climate built upon trusting human relationships. Academic collaboration should be pleasant and supportive of authentic sharing between students. Knowles stated that “learning is a very human activity. The more people feel they are being treated as human beings---that their human needs are being taken into account---the more they are likely to learn and learn to learn” (p. 129).

Distance educators view computer-mediated education as an excellent format to encourage a variety of adult learning styles while serving an ethnically diverse student population. Genuine interactivity should empower students to cultivate both self-directed instructional skills and develop enriching dialogue with other students. Livengood (1987) stressed that on-line classes should give the student the opportunity to have enough control to influence the educational process. Obviously, the degree of personal control varies in every learning situation. Teachers give students instructional influence based on factors such as their knowledge of the subject matter and the type of learning assignment. Computer-mediated education is self-paced and students are usually given the freedom to create relevant and interesting work. Unfortunately, Livengood placed too much emphasis on the technology and instructional materials, thus neglecting the human side of on-line education.

Computer-mediated instruction involves a unique form of educational communication. Students use their computers to communicate with other students and their tutors through e-mail, discussion forums, chat sessions, and conference sessions. Harasim (1990) outlined computer conferencing with the following five primary attributes or characteristics:

1. Many-to-many communication - students can easily share with numerous people on-line.
2. Place-independent communication - students are not bound by geographical location and can relate to others on a global scale.
3. Time-independent communication - students can freely respond to written comments without having to compete for instruction attention.

4. Text-based communication - students mainly communicate through written narratives that permit reflective thinking and thoughtful responses.

5. Computer-mediated learning - active participation and interactivity are encouraged as students process information individually and within the on-line class.

On-line education is a text-based communication interaction. Students use written comments to share conceptual knowledge with their fellow students and professors, while the process of reading and writing on-line promotes cognitive and metacognitive skills (Hannafin, Hill & Land, 1997). Students gain practical experience by translating their ideas into narratives that effectively communicate with other students. It is a structured format that offers students the opportunity either to respond immediately to a class forum or to reflect on the subject matter before interacting with other students. Harasim (1990) observed that the absence of any apparent social discrimination among students was a real benefit because it enabled students to share their views and ideas freely on-line.

However, text-based instruction creates potential problems due to students' feelings of textual "vulnerability" (Harasim, 1990, p. 50). Students sometimes feel inhibited about making on-line discussion comments because they are concerned about their words being stored in a database. Students who are in large on-line classes can sometimes feel overwhelmed by having to read numerous discussion threads and textbook materials, and the information overload can have a negative impact on the quality of interaction with other students. Distance educators recognize that students need individual mediation and support to complete on-line degree programs successfully (Rossman, 1995). Students need assistance in a variety of areas, such as establishing meaningful goals, identifying appropriate resources for term papers, and monitoring their comprehension of subject matter.

What is the profile of a successful on-line student? Distance education literature reveals a strong emphasis on students who are motivated, have good time-management skills, and are self-reliant. Ben-Jacob (1997) observed that "it is someone who understands time commitment and will keep pace with the course work. This personality type will be successful and will appreciate the lack of time constraints in a distance learning without abusing them" (p. 212).

Prospective distance learners often wonder whether they can effectively work on-line. It is important that potential on-line students make some form of personal assessment that honestly recognizes their learning habits and preferences. Nunn (1998) devised a practical checklist of the following eight learning characteristics of productive students who enjoy on-line learning:

- [1.] You like time (a day or more) to think about a question before answering it.
- [2.] You don't mind your classmates reading your answers ( which are posted to the whole class).
- [3.] You find it hard to speak out in a physical class, but definitely have thoughtful opinions.
- [4.] You can motivate yourself to get on line two or three times a week for a half hour or so.
- [5.] You are comfortable at an isolated computer keyboard.
- [6.] You like a degree of anonymity (only a degree: your name will appear on every posting you make!).
- [7.] You like working at home.
- [8.] You don't mind writing and can do it reasonably well. (p. 9)

Contemporary students often have legitimate instructional needs and vary greatly in their academic abilities. Hannafin, Land, and Hill (1997) related concerns that most students lack the substantial self-monitoring skills that distance education requires. They suggested that students need more academic support from their peers and teachers. Students must be empowered through thoughtful interaction to acquire the necessary skills to work effectively in an open-ended environment. Distance education places fewer restrictions on students (e.g. often no set time to learn), and students must take greater responsibility for their educational experiences. For instance, an important set of skills involves knowing how to locate research resources quickly for term papers and on-line group activities. Frequently, students are under major time constraints with work and family obligations and being efficient with their graduate studies is an important issue.

Distance education contains a natural learning curve for students as they adapt to working in a computer-mediated educational setting. Students were questioned by their tutor about their views regarding what skills are necessary for today's on-line students. Rowntree (1995) shared the following four primary competencies for students:

1. Computer skills - students should be able to effectively handle word processing and communications software that enables them to make contributions to on-line

discussions.

2. Literacy/discussion skills - students should be able to read and respond critically to complex and sometimes lengthy messages. The student must be able to use relevant written comments to develop ideas, raise questions, challenge student thoughts, and share their feelings.

3. Time management skills - students must have a flexible educational plan that assists them in completing assignments in a timely manner. The student should have the necessary skills to read, comprehend, and discern written course materials and a host of on-line discussion messages.

4. Interactive skills - students must have the cognitive ability to create alternative ideas or illustrations while encouraging other classmates by being patient and by respecting their needs to share on-line (net etiquette). Students must display respect for others by being flexible in the amount of and frequency of their on-line comments. Students should be willing to work with other students and help foster a dynamic learning group.

Distance education provides students with on-line courses that are highly flexible. Students are given the freedom to make critical choices about their course work, and educators encourage students to select classes and activities that best meet their needs. On-line courses are ideally driven by the students' needs and not bound by curricular materials. As the course progresses, tutors identify student needs through e-mails, discussion forum comments, and phone calls. For instance, it is helpful to identify foreign students who struggle with the English language, so the teacher can offer additional support to help the students feel more comfortable sharing on-line (Kearsley, 1998).

Instructor-guided interaction during the course provides tutors with useful student information that can help instructors get a clear picture of student needs. The first week of the on-line course is a good time for students to share with their classmates and teacher their personal and professional backgrounds. Teachers can use the data to refine their learning objectives, assignments, and discussion forum questions to better meet adult learning needs (Rowntree, 1995).

Distance learners are not always aware of their teachers' professional duties and responsibilities. Instructors must operate within definite limitations, such as not having

time to constantly modify student instructional plans. Collis (1998) stated that “instructors cannot give personal feedback on an on-call basis to individual students. An instructor can maintain an intensive focus on a particular class and its students, but only within set time periods, not indefinitely” (p. 376).

### Instructors and On-line Interaction

Distance educators play a key role in establishing the “emotional tone” for computer-mediated interaction. The literature continually refers to instructors establishing a framework that enables students to be active, on-line participants who share freely with both peers and professors. Educators are challenged to create an interactive learning climate compatible with a diversity of students who differ greatly in their level of cognitive maturity and computer skills (Hillman, Willis, & Gunawardena, 1994). Students who are highly self-directed and computer-oriented are capable of expressing a host of critical thinking skills, e.g. problem solving, and their intellectually rich, on-line commentary often highlights their narrative abilities. Self-directed students often prompt teachers to develop more innovative assignments that stimulate lively dialogue in their individual work, group activities, and discussion forums. Individuals who possess fewer cognitive and computer skills represent a different set of challenges for instructors. Seaton (1993) stated that “students who are cognitively immature are not as likely to be active participants in [Computer-Mediated Communication] CMC learning situations. They are likely to want faculty to provide the ‘right answer’ viewing knowledge not as critical thinking but as a collection of information” (p. 51).

Distance educators promote a philosophy of teaching and learning that integrates social interaction into a learner-centered environment. Instructors are encouraged to become facilitators who guide their students into using proactive instructional strategies that cultivate both self-initiated activities and interactivity experiences (Milheim, 1996). Distance education literature reveals a strong concern for interactivity because of the lack of face-to-face encounters. On-line students are faced with a medium that can foster communication anxiety because people miss social cues such as facial expressions. The act of posting

comments for an on-line class discussion forum involves a certain amount of personal risk. Students who send messages wonder how others will receive their written thoughts. The combination of anxiety and fewer social rules for interaction can create a certain casualness about communication. Feenberg (1987) stated that “as a result, messages are frequently left unanswered without the embarrassment we would feel if, for example, we were greeted by an acquaintance on the street and failed to respond” (p. 175). This potential interaction problem is magnified among students who lack confidence in their learning abilities, which impacts their capacity to make on-line contributions. Naturally, it requires giving some individuals more student support to reduce their personal learning barriers.

Allen (1997) suggested the following four ways that educators can promote learning effectiveness and enhance the educational experience: empowering students, keeping current on new knowledge, offering wise feedback and encouragement, and being a humble role model. The goal of empowering students encourages them to take personal responsibility for their education. Yet empowerment depends upon students feeling that they can share their ideas (e.g. course materials) which can become part of their class curriculum. When students are given the opportunity to operate as partners in the learning process, it increases their motivation to work and make on-line comments. Additionally, educators who communicate in an open and friendly manner help their students feel less isolated. Unfortunately, some teachers are more emotionally detached from their students, which greatly increases the possibility for student misunderstandings because feedback becomes distorted by being too formal. In contrast, transparent teachers encourage on-line class participation by affirming student talents and abilities. The level of student confidence has a direct bearing on student willingness to take risks and share knowledge with others. Allen (1997) recommended the following three instructional tactics to enhance active participation: (a) asking questions that guide the discussion and empower students to ask each other questions; (b) requiring relevant group interaction that has a focused topic with short-term responsibilities; and (c) assisting peer learning through a class structure that gradually places more responsibility upon students to direct their own on-line learning experience.

A second principle to increase class participation involves teachers keeping current on knowledge developments. The modern era is known as the Information Age because knowledge is rapidly growing and people can quickly access data through the Internet and computer technology. Distance educators can update their understanding of intellectual trends by regularly reading books, journals, magazines, and newspapers, as well as by talking to other faculty members. Additionally, wise teachers learn from their on-line students who might have more expertise on certain issues (Allen, 1997).

Teachers empower their students by giving them appropriate feedback during on-line classes. A misconception of self-directed learning is that educators are spectators of students engaging in enriching interpersonal conversations. Nunn (1998) related that “when I comment briefly on the ideas in student answers it is usually to focus further questions and solicit further response (‘What do others think of the statement...?’ ‘How do you react to the statement that...?’ ‘What alternate views to...are out there?’)” (p. 4). Additionally, people want to be noticed as individuals and are encouraged by tutors who demonstrate a continual presence in their discussion forums (Tagg & Dickinson, 1995). Teachers who consistently share compliments with their students enable them to feel free to take risks and embark on innovative research projects. Then, if students do make any mistakes, they can learn from them because they do not fear being embarrassed by their teacher. Caring teachers who share constructive suggestions are helping adult students improve their skills and face new academic challenges. The removal of fear helps students take charge of their own educational experiences and makes the entire process more meaningful for both teachers and students (Allen, 1997).

Distance educators are challenged to maximize interactivity as a communication tool to enhance the entire teaching and learning process. Instructors must develop strategies that validate student development and offer consistent feedback and encouragement. Jaffee (1999) observed that students who came from traditionally oriented degree programs needed assistance adjusting to the physical absence of teachers and classmates. Today, many of the on-line students have a traditional educational background; therefore, their learning needs require instructors to develop strategies that validate students' current academic development while helping them pursue their personal and professional

educational goals. Instructors must develop a teaching and learning philosophy that offers the necessary class structure to stimulate social interaction and promote independent learning skills. Saba (1998) related that “students should be given a chance to access their comfort level of structure while learning at a distance and deciding to what extent they need direct contact with the instructor. The learner’s ability to engage in ‘dialog’ with the instructor is an essential feature of distance education systems” (p. 1).

### Instructional Competencies for On-line Professors

The instructor's role in distance education is extremely important because of potential communication barriers created by the physical separation of teacher and student. Distance education classes require instructors who are able to create a structured learning climate that fosters meaningful interactivity. Kearsley & William (1996) said that the degree of course structure varied according to factors such as the type of learning activities and maturity of the on-line students. Therefore, it affirms the educational principle that relevant teaching is both an art and a science. According to Shank (1998), distance educators must have skills in the four major areas of administration, facilitation, technology, and evaluation. Each of the competencies reflects an important element in the teaching and learning process and plays a vital role in creating and sustaining on-line social interaction. Additionally, the four competencies are based on the assumption that graduate distant educators are highly knowledgeable in their subject areas and are willing to enhance their understanding about the nature of adult learning (Berge, 1998).

### Administrative skills.

The administrative function is vital because it provides structure to courses by establishing clear policies and procedures for student work. Students can sometimes become anxious about their course assignments if educators fail to offer them appropriate guidance. Often, students come from traditionally oriented undergraduate and graduate schools that have highly specific curriculum guidelines for every degree program. Students do have academic choices, but they have fewer curriculum options, such as a selection of