Student Perceptions of Social Presence and its Value in an Asynchronous Web-based Master's Instructional Program

by

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(Abstract)

This study examines the theory of social presence and its relevancy to distance learning. Short, William, and Christie (1976) originally designed social presence to evaluate the difference between types of dyads (one-to-one interactions) and the quality of the communication media used for those interactions (Rafaeli, 1988; Rice, 1984; Walther, 1992). However, the theory of social presence was not design to explain mediated communication between multiple individuals. Although studies have investigated the effects of social presence in computer-mediated conferencing, little field research exist on the importance of social presence with multiple individuals communicating together within a Web-based instructional program. Moreover, it is evident from the body of literature that a universal meaning of social presence is lacking. For this reason, social presence in this study referred to the degree to which adult learners perceived that they had established some form of rapport with members of an online community. This includes interactions with other learners and support personnel (i.e., faculty, staff, technical support, graders, etc.).

Social presence has emerged as an important social factor in the field of distance learning (Gunawardena & Zittle, 1997; Rourke, Anderson, Garrison, & Archer, 1999). Recent field studies emphasize the importance of examining social and psychological factors that affect student satisfaction, impact learning, and influences the way people communicate in distance learning environments (Blocher, 1997; Gunawardena, 1995, Gunawardena & Zittle, 1997; Hackman, 1990, 1996; Hiltz, 1997; Rourke, 1999; Walther, 1992). Researchers in the fields of education and human interpersonal communication have identified "interactivity" (i.e., interaction), "intimacy", and "immediacy" as attributes that enhance social presence (Christophel, 1990; Gunawardena & Zittle, 1997; McIsaac & Gunawardena, 1996; Mehrabian, 1989; Moore, 1989b; Short et al., 1976). Although social presence has been characterized as an important construct in distance learning (McIsaac & Gunawardena, 1996), little existing field research describes the value adult learners place on it, and whether it affects their satisfaction within a mediated learning environment. This descriptive study examined the adult distance learners' perceived value of social presence (based on interactions, intimacy, and immediacy), in addition to whether it existed within an asynchronous Web-based instructional program.

DEDICATION

In loving memory of my brother Ruben who took pride in all of my academic endeavors. May his memory and wishes continue to live on in future family members who desire to further their education.

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CHAPTER ONE

Introduction

This study examines the theory of social presence and its relevancy to distance learning. Social presence has emerged as an important social factor in the field of distance learning (Gunawardena & Zittle, 1997; Rourke, Anderson, Garrison, & Archer, 1999). Recent field studies emphasize the importance of examining social and psychological factors that affect student satisfaction, impact learning, and influences the way people communicate in distance learning environments (Blocher, 1997; Gunawardena, 1995, Gunawardena & Zittle, 1997; Hackman, 1990, 1996; Hiltz, 1997; Rourke, 1999; Walther, 1992). However, lacking in this body of literature research regarding the role of social presence as perceived by the learners and its cultivation within an asynchronous Web-based learning environment. Gunawardena and Zittle (1997) justified the need to assess perceptions of social presence in computer-mediated conferencing environments by explaining that such environments are more group-oriented instead of instructor-led. Even though asynchronous Web-based instruction can take many forms, it also can represent approaches to instruction that are independent and less group-oriented in nature.

It would also be worthwhile to examine the factors considered to promote social presence in an asynchronous Web-based learning environment. These factors may provide insightful information to instructional designers and distance educators. Information gathered from this examination would contribute to the design and development of future asynchronous Web-based instructional programs.

Context of the Study

The Instructional Technology Master of Arts (ITMA) degree program, designed and developed by faculty in Instructional Technology (IT), was made available in the1998 fall semester. The ITMA program, originally conceived as an online degree program for educational practitioners, consists of 30 credit hours of study offered over a three-year period. The educational practitioners involved in the program typically take up to three credit hours each semester per academic year and six credit hours provided in the summer.

The program's current instructional development team consists of six IT faculty and four IT doctoral students. Since its inception in 1998, the ITMA program has gone through three different iterations. The first iteration involved a limited number of on-campus and remote-site course meetings combined with online courses. In addition, because some instructional tasks required specialized equipment, geographic centers were operated in regions of Abingdon, Franklin, and Northern Virginia (NOVA). The students in each of these regions were considered a cohort based on their location. All members of the three cohorts enrolled in identical courses each academic term. This first group of students completed the ITMA program in the spring semester of 2001.

The second iteration commenced in the fall semester of 2000. Students were again, grouped by geographic areas with cohorts located in the areas of Abingdon, Roanoke, and Virginia Beach (i.e., Tidewater). With the exception of a face-to-face orientation meeting that was held on campus, these three cohorts conducted all of their coursework and interactions online. As with the first iteration, all students enrolled in identical courses each academic term.

The third iteration of ITMA involved several major changes from the earlier iterations. First, the restrictions based on geography were eliminated in the fall of 2001; the program became available to potential learners residing in all parts of Virginia, as well as out-of-state residents. Second, geographic centers and cohorts were eliminated. As a result, students had no face-to-face contact with the support personnel. Third, students were allowed to enter the program at the beginning of any academic term rather than starting in the fall term with other members of a cohort. Finally, students in any given term were not required to take the same courses and number of hours as all other students. More courses were offered during each term and students were able to complete program requirements in less time.

Given that the program is serving more students from various locations, the design team is working towards implementing a more self-directed approach to learning at a distance. The ITMA program uses instructional facilitators (e.g., support personnel, technical support, graders, etc.) to provide feedback to students and conduct the grading for each of the available modules. The learners can ask questions of the IT faculty, but often rely on the ITMA support personnel and each other for assistance with assignments.

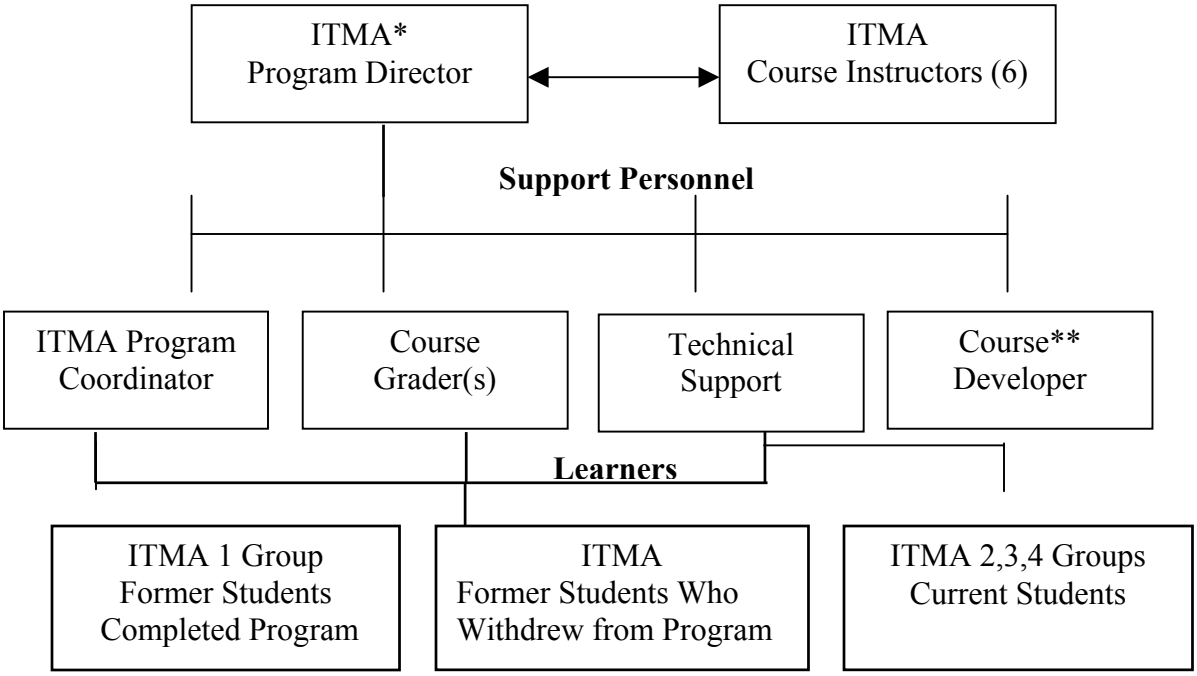
Although face-to-face (F2F) collaboration is minimal, the adult learners involved in this self-directed learning approach have opportunities to interact with support personnel as well as with other students via e-mail, threaded discussions, chat rooms, and a listserv. Most assistance-related concerns are directed to either the ITMA program coordinator or technical support (both doctoral IT students). Communication between the students and these members of the support staff typically takes place via the listserv and e-mails. Figure 1 illustrates the ITMA program organizational chart and the team members associated with it.

This study seeks to determine the existence of social presence as perceived by adult distance learners and their value of it in an asynchronous Web-based instructional program.

Instructional Technology Master of Arts (ITMA)

Web-based Degree Program

Instructional Design and Development Team



* ITMA Program Director oversees the development and implementation of the ITMA degree program.

** Students have minimal contact with member in this role.

Figure 1. ITMA organizational chart.

CHAPTER TWO

Review of Literature

The review of literature examines the definition of social presence and the identifying components that enhance it. In addition, this review encompasses the theory of interpersonal communication, social factors, and concerns exclusive to distance learning and instructional design. Three constructs identified in the literature as closely related to social presence are intimacy, immediacy, and interactivity (i.e., interaction). Therefore, a review of these three constructs, their indicators, and their association with social presence is included.

The body of literature in distance education recommends fostering a sense of learning community among distance learners by considering the role of social presence. Few studies in the field lend themselves to understanding fully the importance of social presence from the perspective of the adult distance learner. Therefore, exploring the adult distance learner's value of social presence in a distance learning community is worth exploring.

Finally, this review explores the role of social presence in an asynchronous Web-based instructional program, specifically, how the role of social presence might offer insight into effective instructional strategies for interpersonal communication and interactions among adult distance learners. In conclusion, the summary of literature makes recommendations and suggestions for future research on social presence.

Defining Social Presence

Social psychologists Short, Williams, and Christie (1976) were the first to introduce the concept of social presence. They based this concept on previous research that addressed interpersonal communication between dyads, that is, one-to-one communication. Short et al. (1976) defined, social presence as the "degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships…" (p. 65). Though not clearly defined some researchers have suggested (Collins & Murphy, 1997; Gunawardena & Zittle, 1997) that Short et al. implied this to

mean the degree to which individuals perceived each other as "real" within the context of their mediated communication.

Short et al. (1976) evaluated and compared the affects of different types of communication media on social interactions. These investigations led them to infer that different types of communication media vary in their degree of social presence. Consequently, Short et al. (1976) further surmised the importance of defining social presence "as a quality of the medium itself" (p. 65). However, some researchers in the field of communication (Rafaeli, 1988; Rice, 1984; Walther, 1992) argued that the concept of social presence, as proposed by Short et al. (1976) is unclear. For instance, Rice (1984) not only disapproved of the way social presence was defined, but he also questioned how Short et al. (1976) determined that social presence was a quality of the medium. He further questions whether the communication channel, individual, or the individual's communication experiences conceive social presence. Rafaeli (1988) is also critical of the manner in which Short et al. (1976) defined social presence. He criticizes Short et al. for not providing a clear explanation of the qualities of the medium that embodies social presence.

Theory of Social Presence

Research on the theory of social presence, as conceived by Short et al. (1976), exists in the field of distance education. However, it is evident from the literature that different interpretations of the theory have emerged. For instance, some researchers (Collins & Murphy, 1997; McLeod, Baron, & Marti, 1997) defined social presence as the degree to which individuals perceive a sense of others through their mediated interactions. Blocher (1997) describes social presence as the "degree to which the delivery medium can provide a conduit for interactive communication that supports feelings of being present for reciprocal social interactions" (p. 33).

Meanwhile, McLeod et al. (1997), interprets social presence as the degree of "tangibility and proximity" of other people within a communication situation. Further, Walker and Hackman (1991) maintained that social presence includes the ability of the media and the participants to approximate the characteristics of face-to-face interactions.

Some researchers (Gunawardena & Zittle, 1997; Lombard & Ditton, 1997) concur with Short et al. (1976) in that the qualities of the medium may have an effect on the

degree of social presence. Gunawardena and Zittle (1997) describe some of these media qualities as sociable, warm, and sensitive. According to Short et al., the quality of the medium used to communicate depends on its capabilities to convey a number of socio-emotional cues.

It is evident from the body of literature that a universal meaning of social presence is lacking. Because the definition of social presence proposed by Short et al. (1976) is so vague, the meaning of the concept seems to be open to interpretation. For this reason, the term social presence in this study will refer to the degree to which adult learners perceive that they have established some form of rapport through their online interactions. Rapport is characterizes as "A function of the perceived closeness among participants; it increases as the perception of closeness (that is, less perceived interpersonal distance), there is more intimacy between individuals" (Wolcott, 1996, p. 24). Imel (1988) equally adds that rapport, the familiarity or similarity between individuals, is important to establish especially among adult learners in a learning community. Additionally, Wolcott (1994) claimed that, "the key to group identity and cohesion is to establish and maintain a rapport between teacher and students and among the students themselves" (p. 147).

In this study, learners have an opportunity to establish rapport through their interactions with the instructor, other learners, and support personnel. Wolcott (1996) claims that that "both teacher-to-student rapport and student-to-student rapport, is crucial in creating a sense of community among learners" (p. 24).

Measurement and Degrees of Social Presence

Short et al. (1976) maintained that the measurement of social presence is subjective and involves an attitudinal dimension of the user towards the medium. The main method of measuring social presence is by the semantic differential technique (Short et al., 1996). This technique, as used by Short et al., contained 17 five-point bi-polar scales. These bi-polar scales measured social presence factors ranging from personal-impersonal, sociable-unsociable, and immediate-non-immediate.

In a study conducted by Short et al. (1976), 72 managerial civil servants were directed to use three types of media - audio system, closed-circuit television, and face-to-face - to engage in one-to-one conversations. The participants evaluated and compared how they felt about the use of one medium over another. The researchers then compared

the subjective perceptions of the managerial civil employees, towards the three types of media used for engaging in their conversations. This type of media comparison study measured individual's perceptions and attitudes towards the media, rather than the effects of the media on learning, achievement, or performance.

The findings from the comparison study on the three types of media, conducted by Short et al, indicated that the dimensions of sociable-unsociable and sensitive-insensitive specifically measure social presence. Further, the results suggested that in comparison to audio and closed circuit television, face-to-face communication was the most preferred mode of communication. Short et al. (1976) claimed that the capability of the medium to transmit verbal and nonverbal cues contributes to the degree of social presence of the medium. Media perceived to have a higher degree of social presence were described as warm, personal, sensitive, and sociable. Conversely, media perceived to have a lower degree of social presence were described as cold, impersonal, insensitive, and unsociable. Moreover, Gunawardena and Zittle (1997) claim that the capability of the communication media to convey such personal information regarding dress, gaze, posture, and eye contact adds to an individual's sense of social presence. Therefore, the perceived degree of social presence the media projects is associated with the number of social cues the communication media is capable of transmitting.

In addition, the degree of social presence includes how well the media is able to conduct interpersonal interactions. Two types of interpersonal interactions, mentioned by Short et al. (1976), are task and social orientation. As mediated communication becomes more task-oriented the interaction moves from informal to formal. This supposedly decreases the degree of social presence. Likewise, as mediated communication becomes more social-oriented the interaction moves from formal to informal. A social-oriented event supposedly increases the degree of social presence. The type of interpersonal interaction affects an individual's perception of the mediated interaction and the attitude towards the medium (Short et al., 1976).

Short et al. (1976) asserted that different types of communication media differ in their ability to convey a degree of social presence. The ability of the media to transmit socio-emotional cues (i.e., verbal and non-verbal) determines the degree of social presence. Short et al. further claimed that it is important to consider how the user

perceives the medium based on his/her feelings and 'mental state' (p. 66) during the mediated interaction. To illustrate Short et al.'s claim regarding the different types of media, Table 1 depicts the continuum of the degree of social presence based on six media types.

Table 1 *Degree of social presence by media type*

Degree of Social Presence	**Media Type**	**Communication Cues**		**Interpersonal Interactions**	
		Nonverbal Cues	Verbal Cues	Task Oriented	Social Oriented
Highest ↕ Lowest	Face-to-Face	x	x	x	x
	Telephone		x	x	x
	Closed-circuit television	x	x	x	
	Audio system		x	x	
	Personal Letter				x
	Business Letter			x	

According to the media listed in Table 1, face-to-face communication has the highest degree of social presence. Rice (1984) agrees that face-to-face is the media with the highest degree of social presence because of its ability to convey socio-emotional cues, use natural language, and provide immediate feedback. The telephone was perceived to have a lower degree of social presence than face-to-face interactions because of its inability to convey the proximate physical distance of individuals or their facial expressions. Just the opposite of face-to-face, a business letter was identified as having the lowest degree of social presence. This is due to the inability of a letter to convey non-verbal and verbal cues and its preference for tasks low in interpersonal involvement (Argyle & Dean, 1965; Wiener & Mehrabian, 1968). Consequently, the varying degree of social presence affects the nature of the mediated communication between individuals and their perception of the type of media used to communicate.

Current Field Research on Social Presence

Current field studies conducted on social presence include the traditional classroom and computer-mediated conferencing settings. The results from these studies revealed

that students perceived differences between face-to-face and mediated communication. The findings from these educational field studies further indicated that the perceived media differences affect student satisfaction along with their perceptions of the mediated learning experience (Blocher, 1997; Gunawardena & Zittle, 1997; Hackman & Walker, 1990).

Blocher (1997) examined a face-to-face one-hour weekly lecture course that used computer-mediated communication tools to augment student-to-student interactions. Using a survey, he elicited college students' feelings and attitudes on their use of computer-conferencing communication tools (i.e., e-mail, listserv, and bulletin boards). His findings suggested that females perceived feelings of social presence when using e-mail, and they engaged less often than males in mediated communication. Conversely, males demonstrated a preference for using listservs because they perceived them to have a higher degree of social presence. However, because students met regularly in class and had opportunities to interact with the instructor and each other, they felt that face-to-face interactions were more meaningful and personable. As a result students perceived face-to-face communication as having the highest degree of social presence.

In another study, researchers Gunawardena and Zittle (1997) examined the effectiveness of social presence as a predictor of learner satisfaction in a computer-mediated conferencing environment. The context consisted of an inter-university teleconferencing course called GlobalEd. In order to solicit reactions to the computer conferencing experience, the participants were administered a pencil and paper survey upon completing the semester course. The survey consisted of 61 Likert-scale items (i.e., "5" = negative reaction to "1"= positive reaction), only one item measured social presence. Gunawardena and Zittle reported that by using quantitative data analysis they were able to obtain overall reactions to the learners' mediated experience. However, missing in this article was a clear explanation of the data analysis.

The literature on social presence indicates that an interrelationship exists between social presence and communication cues (verbal and nonverbal) associated with the constructs of intimacy, immediacy, and interactivity. The prior work of communication researchers and social psychologists has contributed several important concepts relevant to distance learning (Argyle & Dean, 1965; Short et al., 1976; Wiener & Mehrabian,

1968). Communication is just as essential in the learning process, especially in distance learning environments (Moore & Kearsley, 1996). In this learning context, not only is communication mediated, but also may not take place simultaneously or in close proximity. Distance educators stipulate that interpersonal communication is central to the teaching and learning process because of the separation of the teacher and the learners (Holmberg, 1989; Keegan, 1996; Moore, 1989).

Theory of Interpersonal Communication

There is not a widely accepted definition of communication, although probably the body of literature includes every element, function, or effect of the communication process. Short et al. (1976) described communication as the physical signals whereby one individual can influence the behavior of another. Their definition integrates a social and psychological view of communication, which lends itself to a discussion of the effects of communication media on social interaction. As a discipline communication studies includes human interpersonal communication as well as, group, organizational, mediated, and public communication (Logan, 1995).

The communication process is complex and can occur in many different modes. It involves receiving, processing, and sending messages in the exchange of thoughts, feelings, needs, information, and ideas (Tardy, 1988). Heath and Bryant (1992) expressed elements of communication as having a looping effect: what one person does or says affects the other, which in turn produces a counter effect, making patterns of communication behaviors redundant. According to Logan (1995) combinations, and patterns of communication, are organize using touch, sight, hearing, smell, speech, gestures, writing, and reading. Speaking and listening are the most common methods of communicating (Mehrabian, 1969, 1989).

Other important components used to convey closeness or distance when communicating include verbal and nonverbal behaviors. In any communicative exchange, verbal and visual nonverbal cues are described as codes that play an important role in the communication process (Heath & Bryant, 1992; Rubin et al., 1994). Most speech cues are labeled as verbal behaviors, where as most body language behaviors are visual and are described as nonverbal behaviors. Wiener and Mehrabian (1968) theorized that the use of language (i.e., verbal behaviors) has the power to include or exclude others.

Studies conducted on human interpersonal communication during the 1960's identified "intimacy" and "immediacy" as attributes that enhance social presence. Researchers in the field of distance education and communication (Christophel, 1990; Gunawardena & Zittle, 1997; McIsaac & Gunawardena, 1996; Mehrabian, 1989; Short et al., 1976) contend that these two constructs are important to educational settings. These researchers suggest that the constructs of intimacy, immediacy, and interactivity (i.e., interactions) play an important role in forming interpersonal relationships in the communication process. The relationship between intimacy, immediacy, interactions, and social presence is therefore worth examining.

Intimacy and Immediacy Defined

Intimacy reflects the sense of close connection one feels in a close relationship. The depth of self-disclosure between individuals in a relationship determines the level of intimacy. A greater level of self-disclosure characterizes a relationship with a high level of trust (intimacy). Close acquaintances, associations, and familiarity are indicators of high levels of intimacy (Rubin et al., 1994; Tardy, 1988). Communication researchers Heath and Bryant (1992) described intimacy as one person using another for self-confirmation. This is in reference to the level of attachment or depth in a relationship based on the degree of intimacy. The lower the degree of intimacy the less familiarity between the communicators.

Both proximity and physical closeness have been associated with intimacy (Argyle & Dean, 1965). Accordingly, an individual permits another to enter their personal space based on the degree of intimacy present. Argyle and Dean (1965) argued that eye contact plays an important function in synthesizing information that relays levels of intimacy, friendship, attraction, aggression, and attentiveness. A higher degree of intimacy enhances familiarity, self-disclosure, and trust, whereas, a lower degree of intimacy is just the opposite. Voice tone, pauses, and inflection of speech can also convey intimacy (i.e., trust) and project a higher sense of presence than text alone

Another concept associated with establishing closeness with others, by using words and language, is immediacy. The spoken word can also convey trust and adds to the establishment of rapport. For instance, such terms as "aloof," "reserved," "distant," or "cold-shoulder" describe nonverbal behaviors that are likely to project a degree of

detachment and emotional distance. Immediacy, as conceptualized by Wiener and Mehrabian (1968), is a measure of the psychological distance that a communicator places between him/her and the object of his/her communication. In other words, an individual can transmit socio-emotional behaviors, which can convey closeness (immediacy) or distance (non-immediacy) by speech and voice intonation. Originally, Wiener and Mehrabian (1968) applied the concept of immediacy to understanding speech and communication patterns. They claimed that the use of language, specifically, pronouns in speech such as "you" and "I", explicitly portrays separation from another, conveying non-immediacy. As opposed to the use of the pronoun "we," this relays immediacy, that is, a sense of closeness.

Wiener and Mehrabian (1968) further claimed that the use of language has the potential of conveying non-immediacy to indicated psychological distance between the communicators. Non-immediacy behaviors, verbal or nonverbal, project being indifferent and are just the opposite of immediacy behaviors. For instance, raising one's voice in anger or frustration is an example of a verbal behavior that projects non-immediacy (Bradac, 1979; Heath & Bryant, 1992; Short et al., 1976). For example, addressing a person by his/her first name suggests immediacy and conveys a sense of intimacy and perceived familiarity. Immediate behaviors supposedly communicate liking, whereas non-immediate behaviors communicate disliking (Rubin et al., 1994).

Findings from immediacy studies conducted in educational settings (e.g., Gorham, 1988; Hackman & Walker, 1990) suggested that students view more favorably teachers who employ verbal and nonverbal immediacy behaviors. These two types of immediacy behaviors convey closeness. Examples of verbal immediacy behaviors used by classroom teachers included praising students or calling students by their first name. Nonverbal immediacy behaviors include the teacher smiling making eye contact when talking to the students. The results from these studies indicated that intimacy and immediacy are positive predictors of student learning outcome and student satisfaction, and that they contribute to social presence (Christophel, 1990; Gorham, 1988; Walker & Hackman, 1991). Moreover, findings from these studies, conducted in educational environments, revealed that students perceive immediacy as a positive effect, just as Wiener and Mehrabian's theory (1968) suggested.

Affects of intimacy and immediacy.

Studies on face-to-face communication have demonstrated that eye contact is an important nonverbal behavior in interpersonal communication. Eye contact, an element of intimacy, evidently enhances immediacy by contributing to the fostering of relationships and physical closeness. The closer a person feels to another, the greater the depth of disclosure and trust (Argyle & Dean, 1965).

In a preliminary study, Gorham (1988) identified specific teacher behaviors that contribute to the student's perception of immediacy. Students recruited from traditional classrooms were instructed to "think about the best teachers they had had throughout all their years of school and to list the specific behaviors which characterized those teachers" (p. 43). Based on the results, Gorham expanded the list of immediacy behaviors identified earlier by Wiener and Mehrabian (1968). She then consolidated the students' list of teacher behaviors to form the *Verbal Immediacy Behavior Scale* (Gorham, 1988).

This *Verbal Immediacy Behavior Scale* included 34 items of effective teacher verbal and nonverbal immediacy behaviors, as well as non-immediacy teacher behaviors. The set of teacher verbal immediacy behaviors consisted of 20 items, including use of humor, praises student, addresses students by first name, and refers to class as "our" class and to activities as to what "we" are doing. The nonverbal immediacy behaviors consisted of 17 items including looks at class while talking, smiles, and has a relaxed body position while talking to class. This 17-item scale has consistently demonstrated high reliability. Alpha and split-half reliabilities for learners' assessments ranged from .83 to .94. Results from studies conducted on immediacy behaviors indicate that verbal immediacy behaviors correlate positively and significantly with affect learning (Christophel, 1990; Gorham, 1988; Rubin et al., 1994).

Similarly, Hackman and Walker (1990) investigated the effects of social presence, in the form of teacher immediacy behaviors in the context of an instructional televised classroom. Their findings revealed that the effects of teacher immediacy behaviors, both verbal and nonverbal, contributed to student learning and satisfaction, and promoted social presence. Student satisfaction with the course correlated with teacher immediacy behaviors displayed, specifically encouraging involvement, offering individual feedback, and promoting interpersonal relationships. Overall, teacher qualities considered important

to student learning, included: a teacher who is perceived as caring, concerned, confident, experienced; comfortable with the technology; creative with the media; and who maintains a high level of interaction with the students. Hackman and Walker (1990) claimed that these qualities in a teacher are important in both traditional and distance learning settings.

Immediacy, as it relates to written speech (text), has relevancy in distance learning environments due to the use of text-based transactions in mediated communication. In a mediated learning context, the use of immediacy strategies may positively affect the learner's perception of feeling included in the learning community. Such strategies might include acknowledging the individuals' first name, praising individuals for their ideas electronically posted, and the use of the term "we" all of which are forms of nonverbal immediacy. It is possible to convey nonverbal immediacy behaviors in text-based communication platforms in order to convey closeness, as opposed to distance. Lombard and Ditton (1997) claimed that it is possible to achieve real immediacy within mediated interactions and conversations. Ditton further claims that communication media has the potential for conveying immediacy in written form.

Interactivity/Interactions

Another concept associated with social presence is interactivity. Short et al. (1976) described as those media attributes that are capable of transmitting communication cues. Interactivity therefore enhances social presence. Correspondingly, Wagner (1993) contended that interactivity is an attribute of the technology systems, used in the distance learning environment. She explains interactivity as "real time exchanges of audio, video, text, and graphical information." (p. 19). These real time interactions may occur among learners, or between learners-instructors, in a mediated environment, or between the learners and the technologies used to delivery the instruction (Wagner, 1997). Moreover, Gilbert and Moore (1998) view interactivity or interaction as either a social or an instructional component.

Gunawardena and Zittle (1997) viewed social presence as a quality of both media and interactivity. Social interactions augment the relationship between learners-teachers and learners-learners in the learning environment. Instructional interactions are the

learner-content exchanges that occur in the learning environment such as getting and providing feedback and information.

Rafaeli (1988) examined the concepts of interactivity and social presence and in accordance with the Short et al. (1976) model. He surmised that social presence exists only when the participants engaging in a mediated environment notice, or sense, an awareness of engaging in a quality exchange. Furthermore, he considered interactivity as a natural attribute of face-to-face communication (interaction) and a quality of the mediated communication setting. In this study, the term interactivity refers to the interactions between the learners and the instructors (includes support personnel), learners with other learners, and learners with the content as defined by Wagner (1994).

Types of interactions in distance learning.

Most references to the concept of interaction in the distance education literature cite three types of interactions, as identified by Moore (1989b) learner-to-content interaction, learner-to-teacher interaction, and learner-to-learner interaction. Moore described these three types of interactions in the following as:

> Learner-content interaction is the interaction between the learner and the content. Learner-instructor interaction is the interaction between the learner and the subject matter expert (e.g., teacher), or some other expert acting as the instructor. Learner-learner interaction is the interaction between one learner and other learners, individual, or within group settings with or without real-time presence of an instructor. (p. 3)

Moore and Kearsley (1996) suggested that distance educators "ensure maximum effectiveness of each type of interaction, and ensure they provide the type of interaction that is most suitable for the various teaching tasks" (p. 132). Moore (1989b) further recommends that distance educators use the expertise of media experts, educators, and communication specialists to assist with selecting communication media that will effectively enable each of the three types of interaction.

In addition, Hillman et al. (1994) introduced a fourth type of interaction, which they termed "learner-interface" interaction, adding to the three types of interaction proposed by Moore (1989b). Learner-interface interaction is the interaction between the learner and the technology required for interacting with the teacher, students, and content. In the past, there has been a lack of consideration for the effects of high-technology devices on

interactions within distance learning environments. Hillman et al. (1994) maintained that learner-interface interaction is as crucial as the other three types of interactions described by Moore (1989b). Furthermore, it is important to demonstrate to students how to interact with the technology, such as demonstrating submission of assignments through e-mail as attachments. Learners who do not have the required necessary skills to use the communication media spend much time learning how to interact with the technology. The time spent on learning the technology affects the learner's time to concentrate on interactions with the teacher, other students, course content, including their personal responsibilities.

Lauzon (1992) argued in favor of multiple patterns of interaction in the learning process. He supports the idea of combining computer conferencing with computer-based instruction. His rationale was "that greater dialogue and less structure is necessary because human interaction with the instructor and other learners is essential for facilitating the integration of newly acquired knowledge…" (p. 44). Moore (1989b) and Hillman et al. (1994) emphasized the importance of including strategies for successfully implementing these four types of interaction when designing a distance course. They recommend designing activities that allow learners an opportunity to interact with the teacher, other learners, content, and technologies.

Interaction is a key factor in distance education and is an important component of a successful instructional program. Whether students are interacting face-to-face or at a distance, their success may be a result of well-orchestrated built in instructional strategies that provides them an opportunity for interactions. Absence of student interactions and participation could lead some students to feel isolated from the learning community.

Interrelationship between social presence and three constructs

The constructs intimacy, immediacy, and interactivity have a mutual relationship with social presence. If a high degree of social presence exists then high degrees of intimacy, immediacy, and interactivity also exist (Gunawardena & Zittle, 1997; Hackman & Walker, 1990). Figure 2 depicts the interrelationship between the three constructs that enhances the degree of social presence as well as the participants interacting with each other within a mediated environment.

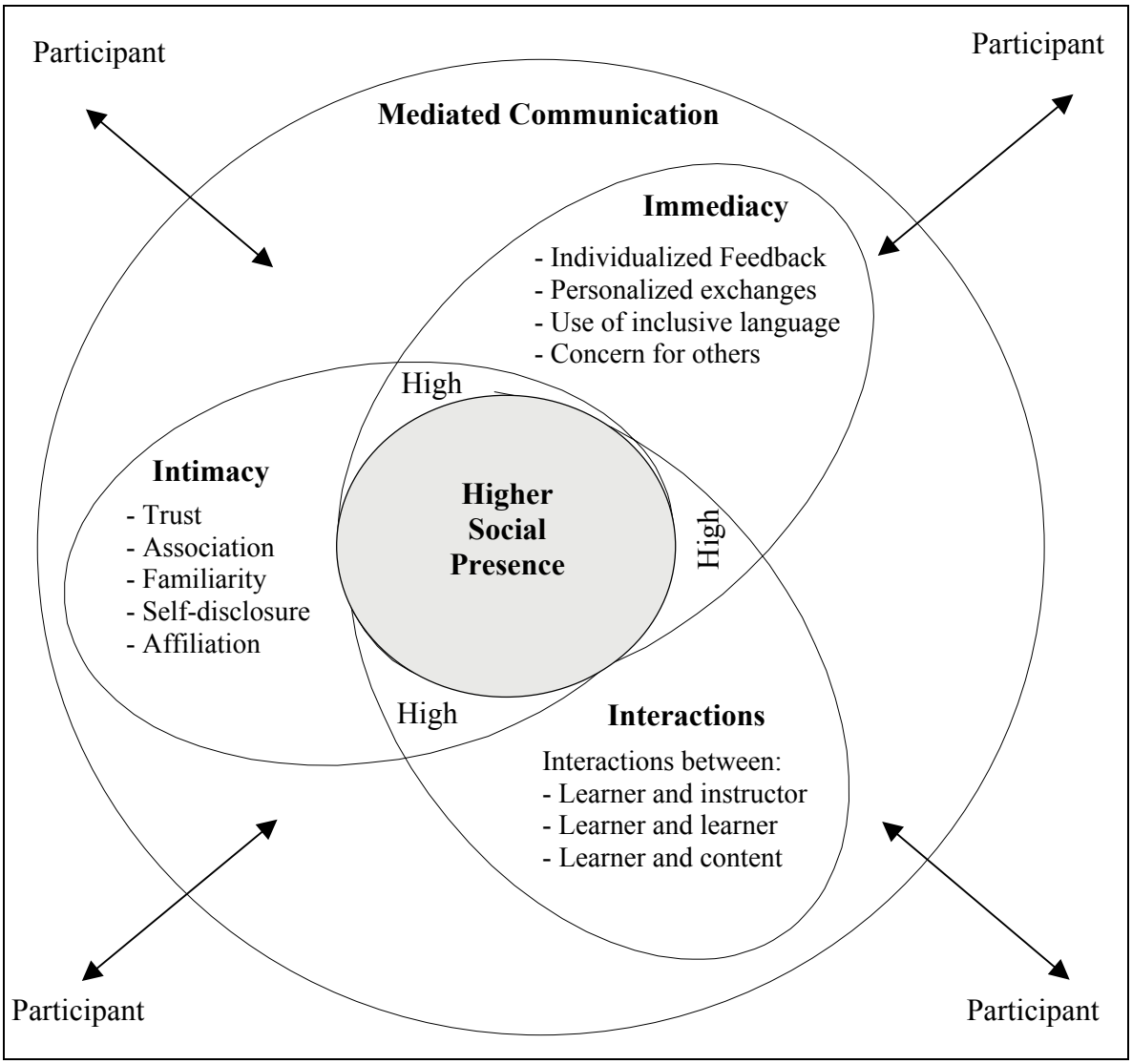


Figure 2. Constructs and indicators that comprised social presence.

In addition, figure 2 contains the indicators associated with each of the three constructs in accordance with the literature. The shaded area depicts those segments of the three constructs that overlap, resulting in a higher degree of social presence. Lower degrees of social presence are present in the construct areas not overlapping. Social presence is dependent on the degree of intimacy and immediacy, and these two constructs are contingent on the quality of interactivity (Mehrabian, 1989; Short et al., 1976). Likewise, the level of intimacy is dependent on the level of immediacy, and the degree of social presence correlates with all three variables.

Walther (1992) explored communication patterns in computer-mediated communication environments; he noted that with the increased use of communication technologies, new patterns in text communication were emerging. In addition, findings from a study conducted by Gunawardena and Zittle (1997) also revealed that it is possible for students to relay certain social contextual cues associated with intimacy and immediacy in text-based interactions. Subsequent sections discuss the use of computer-mediated communication systems and studies indicating individual adaptation to media attributes.

Computer-Mediated Communication (CMC)

Computer-mediated communication, as defined by Romiszowski and Mason (1996), is "a generic term now commonly used for a variety of systems that enable people to communication with other people by means of computers and networks" (p 438). A unique property of computer-mediated communication is its capability of integrating asynchronous and synchronous communication technologies, such as e-mail, discussion lists, computer conferencing, and bulletin boards.

Results from exploratory studies conducted on the effects of social presence in computer-mediated conferencing indicated that it is possible to relay certain social-emotional behaviors, associated with intimacy and immediacy, using the text-based features in computer-mediated communication technologies. However, these exploratory studies did not describe how the data were gathered (Freitas, Myers, & Avtgis, 1998; Gunawardena & Zittle, 1997; McIsaac, Blocher, Mahes, & Vrasidas, 1999).

New patterns of communication are developing, and studies indicate that individuals seem to be adapting to the media to compensate for missing socio-emotional expression (Collins & Murphy, 1997; Hiltz, 1994). In text-based communication, written statements such as "Howdy all!" or "I'm mad!" are techniques being used by individuals to demonstrate expressions and emotions. Researcher Kuehn (1993) and Walther (1992) maintained that these communication techniques not only add to the richness of the communication transactions and establishing personal connections, but also provide affective information, and convey informality.

In his study, Kuehn (1993) explored communication adaptations users employ to make computer-mediated bulletin communication more personal. The findings from this

study revealed that character symbols with letters or words incorporated in text conversations convey nonverbal expressions. For example, letters displayed in brackets such as "<g>" were used to represent a grin, and words in brackets, "<humph> <sigh>", implied vocalized pauses. These keyboard character symbols, mostly commonly known as 'emoticons' also enable transmission of such expressions as a smiley face "8^)"or a sad face "8^{" (Gunawardena & Zittle, 1997).

Similarly, Gunawardena and Zittle (1997) studied the use of emoticons in a distance learning environment, students reported a higher degree of social presence when using emoticons to convey nonverbal emotions in their messages. The results indicated that it is possible to convey verbal and nonverbal behaviors across text-based communication by manipulating the media's capabilities. Distance learning environments that apply the use of written communication should consider promoting individuality and personal expressions by applying some of the symbol techniques commonly used in computer-mediated communication systems.

According to Gunawardena (1995), it is particularly important to examine social factors in distance learning settings that mediated the communication process. It is also important where social climates created are different from that of traditional learning environments. Furthermore, given that technology facilitates the communication and interaction process in distance learning settings, it is essential to examine distance learning in detail. Since communication characterizes social presence more than any other factor, effective communication strategies employed by distance educators are considered.

Distance Education

Distance education is a system that encompasses all aspects of the distance teaching and learning, communication, instructional design, funding, administrative issues, and "even such less obvious components as the history and institutional philosophy" (Moore, 1996). McIsaac and Gunawardena (1996) described communication, social presence, and social factors in mediated communication are important to distance education. There is a consensus among distance educators that the central viewpoint of distance education is the physical separation of the teacher and students in place or time (Holmberg, 1989; Keegan, 1996; McIsaac & Gunawardena, 1996). Moore and Kearsley (1996) formulated

a definition of distance education that provides an overview of its functions as an educational system:

> Distance education is planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional technique, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements. (Moore & Kearsley, 1996, p. 2)

The term distance education is often used synonymously with distance learning by many researchers and educators. In effect, distance learning is a result of distance education (Moore & Kearsley, 1996).

Distance education is not a recent development in educational modalities. This means of alternative education has been traced to Europe as far back as the 1700s, with the introduction of shorthand correspondence courses (Sherry, 1996). Correspondence courses became available in the United States around the 1800s. During this time instruction was delivered by the postal service and print was the available media (Holmberg, 1989; Keegan, 1996; Willis, 1994).

Since its introduction in the United States in the1800's, distance education has not diminished as evident from the exponential increase in enrollment described in a 1999 report released by the National Center for Education Statistics (Lewis, Farris, Snow, & Levin, 1999). Data collected from surveys sent to two-year and four-year post-secondary institutions, between 1997 and 1998, revealed the enrollment of distance learners to be approximately 1,661,100. While the estimated enrollment for college level institutions was at 1,363,670 during the period between 1997 and 1998 (Lewis et al., 1999). The percentage of higher education institutions offering distance courses has increased by one-third (National Center for Educational Statistics, 1999). Considering that enrollment has multiplied the number of higher education institutions designing distance education courses in the United States has also increased.

There are four important aspects to consider when designing any distance education course: a) learner attributes, b) media, c) modes of delivery, and d) location (Connick, 1999; Dick, Carey, & Carey, 2001; Moore & Kearsley, 1996).

Distance Learners' Attributes

In designing a distance course, the learners' attributes are essential to assessing the needs of these nontraditional learners, of which the majority are adults between the ages of twenty-five and fifty; married, employed full-time and have family responsibilities (Hardy & Boaz, 1997; Wolcott, 1996). Moreover, approximately 60 percent are female and 40 percent males. Distance learners are also characterized as autonomous. Their desire to further their education ranges from first-time students, returning students, mid-career professionals seeking continuing education, employees obtaining credentials for change of job, students with physical and learning disabilities, as well as students geographically isolated (Connick, 1999).

In addition, these adult learners have to consider other roles and responsibilities, such as that of employee, spouse, sibling, and/or parent. Knowles (1973) advised that teachers consider the time constraints and pressures placed on the adult learner's studies by these different roles and responsibilities. Imel (1988) adds that another consideration includes adult learners whose learning experiences have been only in structured and teacher-centered learning environments. These types of learners may need guidance and assistance in accepting responsibilities for their own learning.

Since distance learner's characteristics, needs, and learning preferences differ; those teaching and designing instruction at a distance need to carefully consider the selection of media and instructional method (Moore & Kearsley, 1996). Not only do students need to have access to the particular media selected for the distance learning instruction, but also they need to have the necessary skills to use the selected technology (Care, 1996; Hillman, Willis, & Gundawardena, 1994).

Media

Moore (1989) claims that no specific media is appropriate for all types of learners. Each media varies in capability when providing different forms of knowledge, accommodating different learner needs, personalities, and learning styles, as well as serving different instructional processes. Consequently, these factors should be kept in mind prior to selecting the media for instruction, but above all it is important to meet the learner's needs (Dick et al. 2001; Moore, 1987; Moore & Kearsley, 1996).

Currently, the personal computer facilitates the two-way communication between the teacher and students. The integration of the computer and modem enabled distance learning systems to utilize the World Wide Web (WWW) (Trentin & Benigno, 1997; Willis, 1995). In addition, distance education programs are making use of computer networking and conferencing media to facilitate further the communication process. As an example, the British Open University, considered a pioneer in distance education, first used computer conferencing in order to manage enrollment of over a thousand distance learners (Harasim, 1995). Likewise, the American University implemented computer conferencing to supplement learner-tutor interactions.

The advent of computer-mediated conferencing made it possible for the distance teacher and multiple groups of learners to communicate. However, with a greater number of learners interacting, Harasim (1993) cautions that distance educators need to rethink how to manage multiple electronic interactions.

Modes of Delivery

As evident from the body of literature in distance learning, the integration of computers and telecommunications is transforming communication. In any educational setting, two-way communication is crucial. Two-way communication becomes even more important in the distance teaching and learning process due to the mediated communication between teacher and students, and students with other students. Distance learning environments make use of two modes of communication, asynchronous and synchronous (Romiszowski & Mason, 1996; Wolcott, 1994) to facilitate the communication process between the teacher and students.

Asynchronous mode.

Asynchronous communication has been defined as communication that does not occur at the same time, or simultaneously: it is equivalent to writing a letter or leaving a message on an answer machine in terms of time frames. To facilitate communication, asynchronous learning settings integrate the computer with various communication technologies, such as electronic messaging systems (i.e., e-mail), threaded discussions, and listservs. Correspondence with the teacher and fellow students occurs at different times and places (McIsaac & Gunawardena, 1996; Rourke et al., 1999). In an asynchronous distance learning environment, students may exchange messages with their

classmates and the instructor at any time, submit assignments, and post contributions to a topic on a threaded discussion to be viewed by other learners at their convenience. Traditional asynchronous media such as books, videotapes, and audiocassettes are still used.

Synchronous mode.

In contrast, synchronous communication occurs between two or more people in real-time (similar to classroom instruction), face-to-face interactions, and telephone conversations. Synchronous learning environments allow the teacher and students to participate in real-time communication, but not necessarily in the same place. Currently, the computer makes it possible to integrate other synchronous communication technologies such as online chat rooms, instant messaging systems, or interactive audio/video desktop conferencing. The combination of these technologies permits distance learners to communicate with the teacher and other students at the same time and from any location with a network connection (Romiszowski & Mason, 1996; Willis, 1994).

Asynchronous and synchronous modes of communication facilitate the learning and interaction processes between the distance teacher and the students. Additionally, both modes offer students an educational alternative that is time and place independent, and one which supports multiple interactions (Harasim, 1995).

Collins and Murphy (1997) have concerns regarding communication technologies utilized in distance learning environments. They are concern that most asynchronous and synchronous communication media requires a substantial amount of typing and time to communicate effectively. For instance, text conversation may move too quickly for a non-native speaker. Of course, this is not unique to non-native speakers; this also occurs with beginning students new to the text communication format. Such students need time to reflect, frame questions, and compose responses before feeling confident to post their remarks.

Location

The location that students choose to access and interact with the teacher, learners, and their courses is gradually changing. Harasim (1996) claims that distance learning makes it possible to distribute learning to more locations and time zones. In some cases,

distance students are not required to be present within an educational institution. Distance learning is becoming even less place-bound, as personal computers grow to be more pervasive in homes and Web-based instruction becomes more prevalent (Hiltz, 1997; Sherry, 1996). The location where students may access and complete their course assignments varies from a computer networked at home, the work place, or even in a different country.

Communication Technologies

The advent of the radio and television in the middle of the 20th century enabled the global delivery of broadcast instruction. The integration of radio, television, and computer media also enabled other technologies to distribute instruction across distance (McIsaac & Gunawardena, 1996; Willis, 1994). In their review of technologies in distance learning, McIsaac and Gunawardena (1996) reported that prior to telecommunications, two-way, real-time communication did not exist in distance education. However, the development of two-way communication and real-time technologies now make it possible to connect the teacher and learners who are geographically unable to participate in the traditional classroom setting. Moreover, because the delivery modes used for specific communication may influence the degree of social presence, asynchronous and synchronous technologies require further discussion.

Mixing both asynchronous and synchronous modes can better serve different instructional strategies, such as combining two-way interactive video conferencing, e-mail, online real-time chats, and threaded discussions. It can also be advantageous to integrate voice and video technologies with print resources to accommodate different learning styles and preferences (Keegan, 1996). These are just a few examples of integrating different modes of communication in which to accommodate learner's learning styles and preferences.

Another advantage of combining these technologies is that it supports the types of interactions proposed by Hillman et al. (1994) and Moore (1989b). Integrating technology permits distance learners to communicate with the teacher and other students, as well as to interact with the course materials and the technology. However, the integration of these communication technologies also impacts the manner in which participants in distance learning settings communicate with each other.

Studies conducted in distance learning and organizational settings have found that communication applications such as computer-mediated conferencing are capable of impeding communication and affecting social presence. Walther (1992) claimed that studies indicating that computer-mediated conferencing was less socio-emotional or impersonal in comparison to face-to-face communication were based on incomplete measurement. He cautions that researchers need to take into account the different social processes, settings, rate of time, and purposes of using computer-mediated communication.

Harasim (1996) speculated that intellectual and social benefits are associated with text-based communication. Interactive text-based messaging offers additional benefits to distance learners, which include the chance for improving writing, reading, and analytical skills. Additionally, text-based communication offers students the opportunity to formulate and make corrections on their messages prior to sending. Harasim (1996) asserts that text-based communication positively affects distance learner's confidence as communicators, as well as develops their writing communication skills.

According to Harasim (1993) and Hiltz (1997), text-based communication is often referred to as the "great equalizer" because familiar face-to-face discriminatory variables, such as gender, ethnicity race, age, socioeconomic status, and physical appearances are absents in mediated communication. Participants in mediated communication are provided equal footing (Harasim, 1995; Hiltz, 1994; Rice & Love, 1987). A concern of some communication researchers and distance educators is the lack or absence of social cues in mediated communication. The lack of social cues impairs the communication process by limiting the exchange of information about the communicator's self-image, attitudes, moods, and reactions (Hiltz, 1994; Rice, 1984; Wolcott, 1994). Sproull and Kiesler (1986) agree that the lack of social cues affects interactions, sometimes making it difficult to resolve complex problems or deal with angry individuals in work groups.

Sproull and Kiesler (1986) analyzed the effects of e-mail use in work groups within organizations. They found that some individuals in mediated communication tend to feel less socially constrained. This, in turn, leads frustrated or angry individuals to send "flaming" messages that are described as an argumentative or a confrontational response to a communicative message. Flaming messages, usually directed at members of an

electronic discussion community, tend to make other participants in the discussion group feel uncomfortable and hesitant to participate in the discussion (Sproull & Kielser, 1986). Although their studies focus on organizations' work groups in particular, much of what they examined is equally relevant to mediated communication settings in the context of distance learning.

Similarly, McLeod et al. (1997) explored the opinions of quiet and reserved individuals in face-to-face groups compared with individuals in anonymous computer-based group decision support systems. They concluded that as the degree of social presence decreased, the easier it was for the quiet and reserved group members to contribute their opinions without feeling hurried. Likewise, the easier it was for individuals to be argumentative and confrontational. In contrast, as the degree of social presence increases, one is more likely to be attentive and to participate in the communication process.

These studies focus on organizations' and work groups in particular, much of what they examined is equally relevant to mediated communication settings in the context of distance learning.

Issues and Concerns

Geographically dispersed students not only lack contact with the instructor and other students, they also lack the support of a peer-learning group (Wolcott, 1994). Wolcott (1996) urges distance educators to make greater attempts in attending to students "who though distant, will not be distanced." It is probable that distance educators add to students' feelings of isolation by not learning about them (i.e., their names), their experiences, and their needs. A main function of immediacy behaviors is minimizing the distance between people, either by reducing actual physical and/or psychological distance (Mehrabian, 1969; Wiener & Mehrabian, 1968). Two issues in distance learning, directly related to the learners feeling of isolation are psychological and transactional distance.

Psychological Distance

Wolcott (1996) refers to psychological distance as a "mental dimension of separateness or dissimilarity between people" (p. 23). There is the potential for students to feel isolated, as well as feel like they do not count due to the separation from other

students, the instructor, and the learning community. This lack of interaction and communication may reinforce the feeling of separation and isolation.

Wolcott (1996) further adds that perceived psychological distance is not exclusive to distance learning formats, but rather it can also exist in the conventional classroom. However, considering the separation of the instructor and learners there should be concern for potential psychological distance between distance learners. For the beginning distance learner, the distance learning setting and interaction with the communication media may prove to be a difficult adjustment. As an example, Dickie (1999) explored the experiences of three adult distance learners through interviews. One of the learners commented:

> "I did feel so isolated, I needed to know that there were other people there, to draw from and to talk to. I do think you do tend to reach out a bit more…In a classroom setting you 're all together [instructor, students], you've gotten together, and everything is organized. Whereas when you're studying on your own, you need some support, you have to pursue it yourself. They physically [instructors and students] aren't there, so I think you do tend to do that naturally." (Dickie, 1999, p. 98)

Wolcott (1996) asserts that "psychological distance contributes to learners' feelings that they are not part of the learning community. Failure to identify or affiliate with the group or establish a rapport with an individual adds to the sense of distance felt by the learner. This perceived dissimilarity adds to keeping learners at a distance socially, psychologically, and interpersonally" (p. 25).

According to Harasim (1996), there are indicators as to whether a learner is "present" in a text-based discussion based on the number of submitted responses to a topic. The number of responses to messages submitted from other learners stimulates consideration of interacting with further messages. Discussion and interaction of the ideas presented often leads to motivating the learner to refine, expand their ideas, correct, or possibly change their ideas. Wegerif (1997) recommends that distance teachers examine how students phrase their electronic messages to each other during chats, listservs, and threaded discussions. Observing students' electronic messages would provide insights to whether students are conveying a sense of association or disassociation with each other (Hiltz, 1997).

Another recommendation proposed by Hiltz (1994), is for distance instructors to encourage students to work as a "group" in the form of a "we," which leads to promoting a supportive learning environment and minimizing the feeling of isolation. This use of pronoun and language follows the concept of immediacy first proposed by Wiener and Mehrabian (1968). Wolcott (1996) asserts, negative attitudes and behaviors can distance students within any learning context, let alone when there also is physical separation. In a manner of speaking, when the instructor and students do not make an effort to include other learners in the learning environment, they are essentially excluding that learner from the learning community. Finally, Wolcott (1996) stipulates that it is time to "work around the distance in its physical sense, to how to keep from further distancing learners in a psychological and social sense" (p. 23). Aside from the concept of psychological distance, another related concept caused by the lack of proximity is transactional distance.

Transactional Distance

Transactional distance refers to the distance perceived by the student when interacting in a mediated conversation and is based on the number of transactions. Moore (1993) describes transactional distance as "a psychological and communications space to be crossed, a space, or potential misunderstanding between the inputs of an instructor and those of the learner" (p. 22). Distance here does not imply geography, but rather the relationship between the dialog and structure built in a course. Dialog refers to the communication that occurs between the learner and teacher, and structure refers to program design. When there is no teacher, learners, or mediated communication, then transactional distance cannot exist (Anderson & Garrison, 1995; Care, 1996; McIsaac & Blocher, 1998; Moore, 1993).

As an example of transactional distance, an excerpt from an exploratory study conducted by Wegerif (1997) in an asynchronous environment is relevant. His study explored factors affecting the construction of a sense of community with learners enrolled for three months in an Open University. He participated in their online discussions in the role of associate tutor and interviewed some of the students, capturing their voices. Following is a paraphrase from Wegerif's interview field notes with one of the students:

> It is a cold medium. Unlike face-to-face communication, you get no instant feedback. You don't know how people responded to your comments; they just go out into silence. This feels isolating and unnerving. It is not warm and supportive. Perhaps smaller groups would have helped (p. 6).

Eventually, the student dropped the course. Reflecting on the student's lack of participation, Wegerif (1997) realized that the lack of messages the student posted in the online discussions should have been a sign that she was struggling. Overall, the level of transactions between the other students in the course was high. For instance, one student in the course had posted 122 messages during a three-month duration, while the student who withdrew had posted only four messages. Examination of the transactions between students may be helpful in identifying those students who are struggling due to their low frequency of messages posted in an online discussion.

Wegerif (1997) further recommended that tutors, facilitators, and moderators could demonstrate good online communication skills in order to draw in nonparticipating students. However, he does not provide further details to this model for good online communication, which could prove useful in distance learning environments. Harasim (1996) specifically emphasized the importance of monitoring distance learners' interactions (i.e., transactions) to ensure that all students get to participate. Students' contributions should not go unnoticed and unacknowledged. Immediate response from the teacher is highly valued in learning, as well as a teacher who maintains a high level of interaction and a supportive nature with the students (Palloff & Pratt, 1999).

Likewise, it is possible that students themselves contribute to other students feeling excluded from the learning community. Instructors should consider using those immediacy behaviors found to minimize actual psychological distance and transactional distance. Some of these immediacy behaviors include calling students by their first name, praising students for work well done, showing concern, and referring to the learning community as "we" (Gorham, 1988; Wiener & Mehrabian, 1968). Others agreed that this is essential to minimizing psychological distance (Gunawardena, Lowe, & Anderson, 1997; Sherry, 1996; Wolcott, 1996).

In conclusion, the body of research shows that to minimize a sense of isolation instructors should consider creating a learning environment that fosters inclusion of all students. Such an environment might contribute to the perception of the presence of others and foster a sense of connectedness.

Another factor that contributes to feelings of isolation is the communication technologies selected for the delivery of the instruction. Wolcott (1996) claimed that the lack of two-way communication between the teacher and students could lead to students feeling “isolated” in their learning environment. The role of communication technologies in distance learning merits further discussion.

Other concerns are the lack of physical presence, the absence of verbal and nonverbal cues, and the inability to provide immediate feedback, requiring learners to adapt to different communication skills (Gunawardena, Lowe, & Anderson, 1998). McIsaac and Gundawardena (1996) argue that the use of emerging communication technologies, even ones that transmit facial expressions and gestures as in two-way video, create different climates in contrast to the communication that occurs in the traditional classrooms. Distance educators have a variety of options to choose from in their selection of technologies to mediate communication. However, Hillman et al. (1994) advised that distance educators must consider whether the learners have access and the required skills to use the selected technology. The instructor's main role is to guide learners to useful resources, assess learning outcomes, and provide continuous responses to any questions and concerns learners may have on the technology (Cyrs, 1997).

Hardy and Boaz (1997) collected information from distance learners in order to obtain a clearer picture of student development. The lack of quality communication was the most common complaint submitted by distance learners. On one survey, a learner commented: "Sometimes, I think they don't know that I'm alive. Do they care if I completed this course or not?" (p. 44). These types of complaints have the potential for several problems, including lack of motivation and students dropping out of the course.

Recent literature emphasizes the need for further research to determine predictors of attrition in distance education. Moreover, the literature lacks research on whether the nonexistence of social presence contributes to distance learners dropping out of a distance course or program.

Attrition

According to Parker (1994), one reason the issue of attrition is of importance is that attendance determines funding to higher education institutions. In comparison to dropout rates in conventional classes, attrition rates in distance education are far greater. Many factors contribute to attrition in distance learning. Baynton (1992) conducted an exploratory study to identify factors contributing to attrition in distance learning. She speculates learner-control might be a possible predictor for explaining attrition. However, the data from her study suggested other possible factors affecting learner control. Since that study was primarily exploratory, McIsaac and Gunawardena (1996) call for research that will examine the complex interaction between teacher and learner within the distance teaching and learning context.

Keller (1999), argued that the attrition rate among distance learners is an indication of motivational problems. According to Keller (1999) distance learners have serious challenges to overcome, such as feeling isolated, feeling they are not making progress, and self-doubt about completing the course due to time constraints placed on them from personal and employment responsibilities. Most researchers that examine distance learner attrition do not provide practitioners with prescriptive advice. Providing distance educators with information about motivational strategies for engaging the students in a distance learning environment would be beneficial (Blocher, 1997).

Motivation

Contributing motivation factors active in classroom settings such as the teacher influence, peer, and group pressure, familiarity of learning context and social factors are often lacking in distance learning environments (Zvacek, 1991). Studies on motivation conducted in traditional classroom settings have revealed motivational factors and strategies that may prove useful to distance learning environments. Christophel (1990) investigated the relationship between teacher immediacy behaviors, student motivation, and learning outcomes within a classroom setting. Her main interest was the effect these factors had on learning and motivation. The results from this study revealed that a significant relationship exists between the factors of immediacy, motivation, and learning. Teacher immediacy behaviors appeared to increase learning by modifying

motivation through verbal and nonverbal behaviors such as praising a student (verbal immediacy), or smiling at a student (nonverbal immediacy).

The role of motivation in distance learning environments cannot be overemphasized. Student-to-teacher and student-to-student interactions are crucial to engaging distance learners in discussions and providing the needed motivation, especially for students who may feel isolated from the rest of the class (McIsaac & Gunawardena, 1996; Wagner, 1994; Wolcott, 1996). However, groups can affect an individual's motivation through their acts of encouragement and support, or they can smother motivation through discouraging comments or by demonstrating behaviors that show lack of concern (Riel, 1996). Given that distance learners are adults, their motivation for further pursuing an education differs from that of traditional students.

Knowles (1973) posits that adults pursue their education with a problem-centered orientation to learning. The adult learner wants to apply tomorrow what he has learned today. In other words, when the content is meaningful, purposeful, and relevant, adult learners tend to be very motivated. If adult students do not perceive the relevancy of the content, they may be less motivated to complete their assignments, which in turn will negatively affect their learning. Knowles added that it would also reduce the adult learner's sense of community and empowerment.

Keller (1999) advocates his model that incorporates four dimensions of motivation, termed the ARCS (Attention, Relevance, Confidence, and Satisfaction) model. The ARCS model is a systematic approach to designing motivational strategies into the instruction. According to Keller, these four dimensions of motivation were derived from a synthesis of research on human motivation. Various types of learning environments including classroom, computer-based and self-paced instruction have implemented the ARCS model. Keller asserts that most importantly the learners must perceive relevancy and purpose in the course materials in order to be motivated.

Social presence has also been associated with motivating learners in computer-mediated conferencing environments. The feeling of being "socially present" is associated with positive attitudes, social interaction, and a feeling of social equality (McIsaac & Gunawardena, 1996; Tammelin, 1998). Additional studies have found that teacher qualities and teacher immediacy behaviors strongly impact student motivation,

learning, satisfaction, and achievement (Gorham, 1988; Hackman & Walker, 1990, Walker & Hackman, 1991).

Instructional Design Factors Influencing Social Presence

Due to the physical separation of the teacher and students in distance learning environments, designers of distance learning environments are advised to consider the distance learner's needs, instructional goals and objectives, course design and development, as well as support services. In addition, consideration for the strengths and weaknesses of the selected communication media comes prior to selecting the delivery mode (Dick et al., 2001; Moore & Kearsley, 1996; Saba, 1999; Wolcott, 1996). Experts in the field of distance education and instructional design stipulate that it is important to address the characteristics of the distance learners prior to the instructional design. Consideration of the distance learners' characteristics will provide insight to their needs specific to their instructional expectations. To examine these expectations within the context of a distance education program it is advisable to identify these learner needs (Dick et al., 2001; Gunawardena & Boverie, 1993; Moore & Kearsley, 1996; Saba, 1999). Once the various course essentials are developed, Moore (1989) advised integrating these elements with different media. The use of different media maximizes the achievement of the program goals, Moore further claims that it is impossible to meet all of the learner's expectations and needs through any one medium.

In addition, Moore (1987) pointed out how distance learners are usually alone in their studies without any social contextual cues from either instructor or other learners. Consequently, it is important to consider different types of feedback when responding to the distance learners on the value of their ideas. Learners in face-to-face learning environments receive verbal and nonverbal feedback on their contributions and performance, but distance learners may not have access to as many feedback types.

In designing and developing a distance course the number of students enrolled should also be a consideration. Harasim (1993) encourages instructional designers to apply a collaborative learning approach to managing large groups of distance learner interactions, especially if using computer-mediated conferencing. Another suggestion for managing students is to establish protocols for mediated communication to avoid having any student insulting the teacher or other students. Harasim (1993), Palloff and Pratt

(1999) claimed that it is important to establish "netiquette," guidelines for considerate online behavior, at the beginning of the course. Students should contribute to formulating the norms for behavior and conduct for online discussions.

Saba (1999) further adds four other course design recommendations. They include: explaining the goals and learning strategies, setting deadlines and due dates, including more than one type of media, and explaining the use of each selected media. As with any instructional design effort, decisions about how to develop effective learning environments are based on the nature of the instructional goals, as well as specific learner needs and characteristics.

Personality Characteristics

Houle (cited in Knowles, 1973), categorized adult learners into three groups: goal-oriented, activity-oriented, and learning-oriented. Houle based these categories on the purposes and values the adult learners possessed with respect to continuing their education. The *goal-oriented* learner uses education for accomplishing clear-cut objectives. These individuals usually do not make any real start on furthering their education until their middle twenties and sometimes much later. The *activity-oriented* learners begin their education at a point when their problems or their needs become sufficiently pressing. Adults in this category tend to be group-joiners and they actively seek social contact. Essentially, the selection of activity is dependent on the amount and type of human relationships it would concede. Finally, the *learning-oriented* learner is the type of individual who seeks knowledge for its own sake. Unlike the other two types, learning-oriented types have been involved in learning for a long time. Usually, these types of adult learners are life-long learners.

Instructional designers should consider these types of learner orientations participating in a distance learning experience. This would facilitate instructional designers in making the best possible decisions about such issues as motivation, types of social support systems, and types of instructional strategies and activities to structure.

Social Context of Learning

One of the recurrent criticisms of distance education is the lack of collaborative projects, products, and artifact development among distance learners. In any organization, even in education, being able to work in groups is an important social skill (Bruffee,

1993). Collaboration, consultation, and teamwork are the norm, not the exception, in work environments. Conducting transactions with others separated by time and place is a current growing phenomenon among professionals (Romiszowski & Mason, 1996). It is essential for individuals to possess skills in the work place to be able to collaborate at a distance.

Historically, formal group work or collaborative learning was rare in distance education (McIsaac & Gunawardena, 1996), though there have been attempts to facilitate group activities at a distance. It is possible to conduct group work in distance learning environments. Although unusual, group work or joint collaborative efforts have been conduced at local study centers. Bruffee (1993) recommends strategies such as assigning students to plan and carry out long-term projects in research teams, tutor each other, and analyze and work on problems together. Distance learners can also assist each other with editing and reviewing research reports and term papers. Such decision-making tasks simulate the work place, and may prove to be meaningful and purposeful to the adult distance learner.

However, many students do not have the interpersonal communication skills to work effectively in-groups or teams. For this reason, Palloff and Pratt (1999) emphasize that interdependence skills need to be learned and taught through active learning.

Interdependence

Johnson and Johnson (1996; 1999) have conducted extensive research on variables that influence and define successful computer-supported collaborative groups. Cooperative learning, a model termed by Johnson and Johnson (1996) includes two fundamental elements associated with forming collaborative groups: positive interdependence and negative interdependence. These two basic elements are worth examining to see if they may contribute to the establishment of a sense of community within the context of a distance learning environment.

Positive interdependence promotes interactions in which group members encourage and facilitate each other's efforts in order to obtain the goals of the group. Research on cooperative learning underpins a good deal of thinking for establishing learning communities. To ensure interdependence, Johnson and Johnson (1999) recommend assigning roles to each group member because “roles may be assigned that help students

ferment each other's thinking. It is at this point that cognitive and social roles merge" (p. 25).

Overall, positive interdependence seems to foster a community of learners who are caring, cooperative, supportive, and committed towards each other's success and well being. In this type of learning environment, learners share responsibility for their joint efforts and outcomes (Palloff & Pratt, 1999; Wells, 1999). Each member of the learning community is responsible for contributing their individual efforts toward accomplishing the group's stated goals, as well as promoting each other's success. Conversely, when students work competitively and independently from each other, they promote a negative and untrustworthy climate. Johnson and Johnson (1999) termed this "negative interdependence"; members in this type of learning environment cultivate discouragement, obstruct efforts to achieve the group's goals and success, as well promote competitiveness and feelings of distrust.

Palloff and Pratt (1999) consider interdependence to be a critical factor to establishing a online learning community. In addition, they advised instructors to guide students in the direction of establishing shared goals by allowing them to negotiate guidelines. In addition to posting introductions and learning expectations, encourage students to comment on other participants' contributions, and to post guidelines of the teams performance. Bruffee (1993) agrees that students should have the opportunity to learn the necessary skills and process of interdependence to be effective in any collaborative learning endeavor.

Collaborative efforts are beneficial in that students work on focused, open-ended tasks where they can converse on issues in small consensus groups. Examples of distance collaborative strategies adapted from traditional teaching methods include seminars, learning partnerships, team presentations, and role plays, peer counseling, and self-help groups (Romiszowski & Mason, 1996).

Cultivating a Sense of Community

The process of forming a community of learners is an important issue in distance learning because it can affect the learners' satisfaction and performance (Misanchuk, Anderson, Craner, Eddy, & Smith, 2000). In the body of literature, there is much discussion on creating and maintaining online learning communities, but this is mainly

restricted to computer mediated communication (i.e., computer conferencing). These new technological innovations raise concerns and questions for "how do we form social community, how do we work, and how do we learn"? How is communication affected when it is mediated by technologies?" (Harasim, 1993, p.17). Exploration of the process of establishing a community in distance learning within different modes of delivery merits further discussion.

Retallick, Cocklin, and Coombe (1999), who have studied classroom environments, describe a learning community as a "community whose culture is characterized by commitment and professionalism" (p. 28). He cautions that forming a community should not be confuse with the terms groups or teams. Wenger (1998) agrees that the term "community" is not synonymous with groups or teams, but rather community building is based on the concept that teacher and students share the same ideas.

Moreover, within a classroom community teachers and students have common goals and share values and meanings that bond them together, and, as a result creating a sense of belonging (Retallick et al., 1999). Wells (1999) emphasizes the importance of allowing each participant to contribute to the planning of a task, the setting of norms for interactions, and make decisions in order to foster a safe and trustworthy environment. She warns that if one member is left out of this process then the community becomes compromised.

Based on Wenger's (1998) work on community building among members in organizations, he states that three characteristics important to establishing an effective community of practice within an organization are mutual engagement, negotiation of joint enterprise, and a shared repertoire. Wenger describes practice as the source of coherence within a community. The first characteristic, mutual engagement," defines community as requiring interactions and sustaining close relationships regarding members' functions. However, geographical proximity is helpful to establishing mutual engagements, talking on the phone or exchanging e-mail makes engagements more likely to occur.

The second characteristic, negotiation of joint enterprises, is a collective process of negotiation defined by the participants. According to Wenger (1998) negotiation of joint enterprises create relations of mutual accountability among participants that become an

integral part of the community practice. The third characteristic, a shared repertoire is a product created by the community members or a practice that the community adopts during its existence. “A shared repertoire may include routines, words, tools, and actions or concepts” (Wenger, 1998, p. 82).

Though these ideas focus on classroom and organizations, they have insightful implications for establishing an online learning community. Perhaps in the context of distance learning, these ideas can help promote and establish a community of life-long distance adult learners.

Strategies for Promoting Online Learning Communities

Distance educators, based on their distance teaching experiences, recommend strategies considered effective to promoting a community of learners. Unlike more traditional instructional design tasks, developers of distance learning environments should consider including the definition and cultivation of learning communities in the early stages of the course design process (Wagner, 1997; Palloff & Pratt, 1999). Wagner (1997) suggests first considering the course goals and objectives in order to effectively design an interactive learning community this includes traditional and distance learning instruction. Strategies for design considerations as proposed by Wagner (1997) include: Group work (small and large), self-study, discussion, forums, seminars, and problem solving (consideration for different learner styles). She further proposes planning and selecting among these strategies and tactics during the course design process in order to develop an effective learning community.

Aside from applying these strategies and tactics, Wager (1997) suggests maintaining the learners' involvement, encouraging student cooperation and collaboration providing timely feedback, and implementing various instructional strategies in consideration of different learner styles.

Walker and Hackman (1991) recommended that teachers be trained to use immediacy behaviors, such as using the pronoun “we” or “us” to convey inclusion of all members of the learning community. They further stated that:

> “As professionals we need to be more diligent and stringent about our use of language, especially as it pertains to our own learning about learning together. The establishment of common terminology, even if the meanings are group specific is

> essential for common dialogue and the prevention of later experiences of confusion and division." (Walker & Hackman, 1991, p. 135)

Another beneficial strategy is to have face-to-face meetings with the learners such as an orientation. These face-to-face sessions would permit students to work in pairs, as well provide an opportunity to interact with as many students as possible prior to moving interactions to online discussions (Hillman et al., 1994; Keegan, 1996; McIsaac et al., 1999).

Communication technologies can help establish a rapport among distance learners. In some cases, educators can make use of computer-mediated communication to form small-group interactions in conjunction with face-to-face strategies. This not only establishes rapport among students but also creates an online support structure among students (Romiszowski & Mason, 1996). Other suggestions include providing students with the opportunities to lead or monitor discussions, and providing time for students to reflect on what they have learned. Likewise, course introductions should include social activities, which permit informal interactions to ensure students are acquainted and have opportunities to establish rapport with each other (Palloff & Pratt, 1999).

Harasim (1996) claims that, in any educational setting, social communication is essential in forging social bonds that have important socio-affective and cognitive benefits. She recommends that distance educators consider forming a primary space for students to congregate, such as a "virtual café". This space should be analogous to a campus student union provided for students to congregate and socialize. According to Harasim, in this virtual café, "students can exchange personal issues or concerns, and interests, this contributes to fostering a sense of community within the group" (p. 137).

In order to foster a community or a sense of belonging, the online teacher's role must change to that of a facilitator. The more traditional role of the teacher as the complete mediator of an instructional experience must change. In typical distance learning experiences, the teacher's primary role should be one of facilitator and supporter rather than dispenser of information (Harasim, 1995; Hiltz, 1994; Gunawardena, 1992; Jonassen, 1995). Learning and development then becomes a social activity and it is during this process that the teacher acts as a facilitator. The facilitator is responsible for creating a social environment. A trusting, social environment permits students to feel comfortable to engage with their peers and to feel a sense of involvement. This is crucial

to building a "sense of community" (Collins & Murphy, 1997; Gunawardena, 1992; McIsaac & Blocher, 1998; Palloff & Pratt, 1999).

Summary of Literature Review

As evident from this literature review, there are various combinations of media and delivery systems that allow opportunities for students to experience different learning environments in various times and places. Students can communicate in different temporal modes, either asynchronous or synchronous. Studies conducted on social presence, for the most part, have been in traditional classrooms. Results from these studies indicated that social presence is a significant factor in instructional effectiveness, positively affecting learning, student satisfaction, achievement, and motivation (Blocher, 1997; Christophel, 1990; Gunawardena & Zittle, 1997; Hackman & Walker, 1990; Rourke et al., 1999).

However, very few studies have examined social presence in the context of a Web-based instructional program. Findings from the studies presented in this literature review have shown that the variables for each instructional format varies, as do the students, teachers, methods, modalities, media, time, and place of teaching and learning (Gunawardena, 1995). Therefore, these findings should to be generalize to all distance learning delivery modes.

Overall, the limited number of articles written about social presence does not cover the scope of how distance adult students perceive that social presence contributes to their learning process, motivation, or instructional design. In addition, research must address the affects mediated communication has on group dynamics, and the establishment of a sense of learning community. Distance educators provide plenty of recommendations for future research based on their experiences with teaching distance courses. Likewise, the ample literature on collaboration and group work provides several strategies that may contribute to promoting a sense of an online learning community.

Experts in the field of communication and social psychology recommend considering the interrelationship between the communication constructs of intimacy immediacy, and interactivity (i.e., interactions) and their indicators. According to Tardy (1988) in order for individuals to establish a rapport, a certain degree of intimacy has to be present. In her study, Gorham (1988) provided evidence that teacher immediacy

behaviors are good predictors of student satisfaction and motivation. According to Mehrabian (1989), language also plays an important role in conveying inclusion or exclusion of individuals (i.e., immediacy and non-immediacy). This also has implications in distance learning since the most common form of communication is the written language (i.e., text-based). According to the literature, the written language has proven to be capable of manipulation so individuals do not feel excluded but rather included.

Several opinion and conference papers written about social presence provided recommendations on strategies that might enhance social presence within a computer-mediated conferencing context (Boverie, et al., 1997; Harasim, 1996; McIsaac et al, 1999; Tammelin, 1998). In addition, experts in the fields of education, communication, sociology, and instructional design have provided strategies for increasing the perception of closeness between and among students and instructors. Recommendations for future research are also included.

The Need for Further Research

Given the lack of social presence research in distance education, McIsaac and Gunawardena (1996) voiced the need for additional studies on the dimensions of social presence comprised of intimacy, immediacy, and interactivity. Further, there is a need for research that examines the effects of these dimensions on student learning, motivation, attitudes, achievement, and attrition. Presently, the limited studies on social presence in distance education do not lend themselves to fully understanding the effects it has on the learning process.

According to the literature, studies have shown that computer-mediated conferencing has the potential for learners to engage learners in discourse and establish a learning community (Blocher, 1997; Gunawardena & Zittle, 1997; McIsaac et al., 1999). However, Walther (1992) claims that several of the studies on social presence conducted on computer-mediated conferencing measure the effectiveness of the media by asking individuals to rate the media. Instead, the learners' performance and satisfaction in using the media should be measure.

Kuhn (1997) recommends the need for research grounded in theory that demonstrates the richness, not paucity, of socio-emotional cues in computer-mediated communication. Similarly, Walther (1992) proposed that future researchers should take

into account different social processes, settings, and purposes of using computer-mediated communications. Markham (1998) concurs that mediated communication research in other settings might offer insights to effective text conversations based on her online experience as a researcher/participant in a virtual community.

Previous research in distance learning suggests the importance of understanding social presence from the learners' perspective (Boverie, et al., 1997; Gunawardena & Zittle, 1997; Hackman & Walker, 1990; Harasim, 1996; McIsaac, Blocher, Mahes, & Vrasidas, 1999). Other recommendations include the need for future studies with a larger and more demographically diverse population and innovation in media capabilities of manipulating text; and communication and distance learning temporal effects. Walther (1992) recommends that researchers consider the effects of time restrictions on social interactions where time is a determinant for whether participants are restricted or unrestricted in their opportunity to exchange messages. Finally, there is a need to examine the effect that social presence has on distance learners, instruction, the teachers, and the forms of communication and interactions (Moore & Kearsley, 1996).

Rationale for Study

Short et al. (1976) originally designed social presence to evaluate the difference between types of dyads (one-to-one interactions) and the quality of the communication media used for those interactions (Rafaeli, 1988; Rice, 1984; Walther, 1992). However, the theory of social presence was not design to explain mediated communication between multiple individuals. Rather, Short et al. (1976) paired participants to evaluate and compare the quality of the media and their interactions. Although studies have investigated the effects of social presence in computer-mediated conferencing, the direction of future research should be towards the importance of social presence with multiple individuals communicating together.

Moreover, Short et al. (1976) confined their tests to a laboratory experiment, giving their participants a restricted time to interact. The short duration of time contributed to inconsistencies in findings from studies conducted in computer-mediated conferencing. Although conducted studies on social presence have explored semester long courses (Gunawardena & Zittle, 1997), missing are studies that determine the existence of social

presence in asynchronous Web-based instructional programs as well as participants' perceived value of social presence.

The body of literature is also lacking studies investigating social presence and the value placed on it by self-directed distance learners involved in an asynchronous Web-based instructional program. The distance education literature places great emphasis on the importance of instructor-learner interaction. However, to promote a more convenient, flexible approach to teaching at a distance, a popular design strategy is to create courses that are self-directed, greatly limiting the role of the instructor. How might this strategy affect the existence of social presence within a course or degree program?

Also needed is the examination of social presence and its perceived importance within different distance learning environments and with different applied communication technologies (Anderson & Garrison, 1995; McIsaac & Gunawardena, 1996). Moreover, studies are lacking that focus collectively at the three constructs that enhance social presence: intimacy, immediacy, and interactivity. Few studies on social presence have studied a Web-based instructional program, specifically within the context of a self-directed, asynchronous Web-based degree program. Student perceptions of social presence and its value in relation to participation in such an instructional program could provide pertinent information. This information would then provide insight as to whether asynchronous programs have the capability to convey social presence and whether or not its existence is necessary for adult learner satisfaction. As evident from the literature review regarding social presence, the lack of research has guided the rationale and need for this study.

CHAPTER THREE

Methodology

The methodology is organized accordingly to the following topics: (a) statement of purpose (b) research design, (c) design and procedures, (d) selected participants, (e) instrumentation, and (f) data collection.

Statement of Purpose

The purpose of this study was to determine the existence of social presence and to elicit the learners' perceived value of it within an asynchronous Web-based instructional program. Although social presence has been characterized as an important construct in distance learning (McIsaac & Gunawardena, 1996), little existing field research describes the value adult learners place on it, and also whether it affects learner's satisfaction within a mediated learning environment. Therefore, this descriptive study examined learners perceived value of social presence, from the adult distance learners' perspective, guided by the following research questions:

1. To what extent does social presence (SP), which is comprised of interactivity, intimacy, and immediacy, exist within the context of an asynchronous Web-based Master's degree program?

   a) To what extent do the indicators of interactivity (i.e., interaction) exist within the context of an asynchronous Web-based Master's degree program?

   b) To what extent do the indicators of intimacy exist within the context of an asynchronous Web-based Master's degree program?

   c) To what extent do the indicators of immediacy exist within the context of an asynchronous Web-based Master's degree program?

2. What value do adult distance learners place on the construct of social presence (as defined in this study) within the context of an asynchronous Web-based Master's degree program?

Design and Procedures

A descriptive research method was used in order to understand the importance of social presence from the adult learners' perspective based on their previous learning experiences in an asynchronous Web-based degree program. Descriptive research draws

elements from both quantitative and qualitative methodologies. It includes collecting data through interviews and survey methods in order to determine the way things are or to describe 'what is' (Gall, Borg, & Gall, 1996). The information from this type of study can yield rich data possibly leading to important recommendations can be gatherer through a variety of methods. Surveys are one way of collecting data regarding the characteristics, experiences, knowledge, or opinion of a selected population (Fink, 1995; Fowler, 1988; Gall, Borg, & Gall, 1996).

Selection of Participants

The participants for this study were adult distance learners recruited from the Web-based Instructional Technology Master of Arts (ITMA) degree program offered through the Department of Teaching and Learning at Virginia Tech. The ITMA program was designed for practicing educators located throughout various counties in Virginia as well as out-of-state. These learners' professional experiences formed the basis for most of the projects submitted for assessment. Based on the year they began the ITMA program, the participants were enrolled in one of four different groups. The start years for each of the groups included 1998, 2000, 2001, and 2002.

In order to conduct the study, the researcher obtained IRB exemption approval from the human subjects Institutional Review Board (see Appendix A). The initial number of the ITMA population was 221 adult distance learners of which 214 were eligible to participate. Both current and former ITMA students participated in this study. Current participants consisted of learners between their first and final year of the ITMA program. Former participants consisted of those learners who had completed all 30 hours of the ITMA degree program and those who withdrew from the program.

Instrumentation

Common techniques used for gathering data in education include surveys. They are a means of gathering information that describes the nature and extent of a specified set of data ranging from physical counts and frequencies to attitudes and opinions" (Issac & Michael, 1990, p. 128). Surveys are also a key research instrument for gathering both quantitative and qualitative data from a selected group of individuals (Creswell, 1994; Fink, 1995; Fowler, 1984).

The survey instrument used in this study was developed using SurveyMaker® and designed by the researcher. SurveyMaker® is a web-based research tool used to create and run online surveys for data collection. Due to the participants' different statuses in the ITMA program two versions of the survey were developed and respectively labeled Survey A (Appendix B) and Survey B, (see Appendix C). The only notable difference between the two instruments was the usage of tense (present/past); both contained the same questions and number of survey items. Because the 1998 group had more opportunities to interact with the faculty in face-to-face courses as well as online, Survey B included faculty as part of the support personnel. The other three groups did not have the same opportunities.

Survey A was designed for those participants currently enrolled in the ITMA program and Survey B was designed specifically for former ITMA participants. The term social presence was unmentioned in either of the surveys or the student introductory letter that was sent to current (Appendix D) and former students (Appendix E). This was to prevent the potential for a source of bias when responding to the survey items. Moreover, there was some concern that some of the participants would not have an understanding of the term social presence and therefore might get confused.

The basis for the design of this instrument was the body of literature in the fields of education, communication, and social psychology. These three fields of discipline provided background information on the theory of social presence, components that enhance it, and indicators of the components (Gorham, 1988; Gunawardena & Zittle, 1997; Rubin et al., 1994; Short et al., 1996; Wiener & Mehrabian, 1968). Experts in these fields identified interactivity, intimacy, and immediacy as constructs that enhance social presence (Argyle & Dean, 1965; Bradac, 1979; Gorham, 1988; Hackman & Walker, 1990; Heath & Bryant, 1992; Mehrabian, 1968; Moore, 1989b; Short et al., 1976; Wagner, 1994; 1997). Moreover, the indicators for interaction, intimacy, and immediacy served as the basis for each of the survey items (Gorham, 1988; Miller, 1991; Rubin et al., 1994; Short et al., 1996).

Survey Instrument

The eight-page *Electronic Learning Environment Survey* consisted of fifty-two Likert scale items divided into three main parts. The participants were asked to explain

some of their responses, following each of the scale questions. The three parts in the survey included:

Part I: Background Information. The background section contained ten items and served to gather demographics such as age, gender, and the completion of credit hours, the start program year and cohort location. Other items included the number of hours devoted to studying, employment status, and teaching level. For those participants who were not K-12 teachers, an open text-box prompted them to enter their current job title. This second part of the survey applied 29 mixed typed Likert scales. Miller (1991) describes the nature of Likert scale as consisting of a series of items to which the respondent answers by indicating agreement or disagreement with each item on an intensity scale.

Part II: Student Perceptions of Interactions within the ITMA Program. Response options included: strongly disagree (1) to strongly agree (4); very dissatisfied (1) to very satisfied (4). Items were between 4-point to 5-point Likert scales. In addition, twelve open-ended questions were included, which attempted to capture the learners' perceived value of either the presence or absence of interaction, intimacy, and immediacy within the ITMA program. Part two, divided into five sections that included:

Section 1: This section consisted of thirteen survey items. Participants were directed to think about their interaction experiences with support personnel (e.g., faculty, program director, program coordinator, technical support, etc). Examples of both types of questions include*, "How satisfied are you with the interactions you have had with the ITMA support personnel?"* Following this scale item was an open-ended question*, "If you have experienced positive (or negative) interactions with the ITMA support personnel provide an example."*

Section 2: This part of the survey also included thirteen items. Participants were prompted to consider their interaction experiences with the other ITMA students before answering each of the thirteen items. Sample questions included: *"How satisfied are you in your interactions with other ITMA students?"* This Likert scale response item was follow by two open-ended questions. The first question asked *"If you have experienced positive (or negative) interactions with the ITMA students*

that influenced your satisfaction with the ITMA program, provide an example." This was followed by *"If you have experienced negative interactions with the ITMA students that influenced your satisfaction with the ITMA program, provide an example."*

Section 3. The three survey items in this section focused on learner-to-content interactions. In this third section, participants were directed to think about their interaction experiences with the ITMA course content before answering the three items in this section. One of the items asked, *"How satisfied are you with the ITMA instructional strategy of creating projects for the purpose of assessment?"* Followed by an open-ended item asking *"If there is an instructional strategy (e.g., group discussion) used in the ITMA program that stimulates your sense of interaction with the course content, provide an example."*

Section 4: Seven items were contained in this section. The participants were asked to think about their listserv interactions with other students prior to answering the seven questions. An example question included: *"The ITMA students often use the pronoun "we" in the listserv discussions (e.g., "Who do we contact for questions on our assignments?")*. This Likert scale item was also follow by an opened form question *"Aside from your listserv interactions do you initiate personalized communication (e.g., telephone calls, individualized e-mail, etc.) with other ITMA students? If so, please list other ways in which you communicate."*

Section 5: This last section contained five items that dealt with the learners overall interaction experiences with the ITMA members and the content. An example question included, "*As a result of my interaction experiences with the ITMA support personnel, students, and course content, I would consider taking other web-based courses.*" Followed by an open ended question which asked: *"If you would NOT consider taking other web-based courses as a result of your interaction experiences with the ITMA support personnel, other students, or course content, briefly explain."*

Part III: Student Input. The last part of the survey included an open-ended question. The question asked students to "*contribute additional comments regarding their*

perceptions of their interaction experiences in the ITMA online degree program, with support personnel, other students or course content."

Construct validity.

To established construct validity the indicators (as determined by the literature) for each of the three constructs (i.e., intimacy, immediacy, and interaction) were used to form each of the survey questions (Argyle & Dean, 1965; Bradac, 1979; Gorham, 1988; Heath & Bryant, 1992; Mehrabian, 1968; Moore, 1989b; Short et al., 1976; Wagner, 1994; 1997). The indicators for each of the constructs represented in the *Electronic Learning Environment Survey* established their face validity from previous studies conducted in the areas of education, communication, and social psychology.

The immediacy indicators establish face validity during studies in college classroom settings, established by Gorham's *Verbal Immediacy Behavior Scale*, whose alpha and split-half reliabilities for learners' assessments ranged from .83 to .94 (Rubin et al., 1994). Researchers (Christophel, 1990; Hackman & Walker, 1990) have reported using Gorham's instrument in their educational studies. Table 2 identifies the corresponding indicators for each construct, research questions, and the survey items that target each of the indicators pertaining to each construct that comprises social presence.

Table 2 *Constructs, Indicators, Research Questions, and Survey Items*

Constructs	**Indicators**	**Research Questions**	**Survey Items**
Interactivity: Interaction or communication exchanges (Moore, 1989b; Wagner, 1994; 1997):	Interaction exchanges a. Between learner and instructor facilitators (support personnel) b. Between learner and learner c. Between learner and content (instructional strategy)	1. To what extent does social presence, which is comprised of interactivity, intimacy, and immediacy, exist within the context of an asynchronous Web-based Master's degree program?	
		a. To what extent do the indicators of interactivity (i.e., interaction) exist within the context of an asynchronous Web-based Master's degree program?	See items #'s 11-14,21-27, 36-40
Intimacy: A sense of closeness through established relationships (Argyle & Dean, 1965; Heath & Bryant, 1992; Short et al., 1976)	Indicators include: - Trust -Personalized communication - Self-disclosure - Association - Familiarity,	b. To what extent do the indicators of intimacy exist within the context of an asynchronous Web-based Master's degree program?	See items #'s 17-19,30-32, 41,43
Immediacy: *A* measure of the psychological distance that a communicator places between him/her and the object of his/her communication. (Mehrabian, 1969; Wiener & Mehrabian, 1968)	Indicators from *Immediacy Behavior Scal*e (Gorham, 1988; Christophel, 1990; Hackman & Walker, 1990): - Individualized feedback - Use of inclusive language (i.e., "we" vs. "I") - Concern for the individual - Presence of positive feedback - Positive/negative constructive feedback	c. To what extent do the indicators of immediacy exist within the context of an asynchronous Web-based Master's degree program?	See items #'s 15-16,20, 28-29,33-35, 42, 44- 46
		2. What value do adult distance learners place on the construct of social presence as defined by the author) within the context of an asynchronous Web-based Master's degree program?	See items #s, 47-49, 50,51,52

Pilot test.

The pilot test served as a formative evaluation to test the effectiveness of the *Electronic Le arning Environment Survey* so that the resulting measurements would be accurate and reliable (Gall et al., 1996). In addition, this formative evaluation stage served to test the effectiveness of the overall methodology of the research design. Eight IT graduate students employed by the ITMA program participated in the formative evaluation process. The pilot test participants are approximately the same age with similar educational background (instructional technology) as the initial selected participants. In addition, one of the eight graduates had participated in the 1998 ITMA group and completed the program.

The feedback gathered from the formative evaluation stage provided suggestions on rewording of some of the survey questions for the purpose of clarity and correction of misspelled words. Following the formative evaluation and based on the feedback, the necessary revisions were made. The selected participants were administered the revised survey and given approximately a two-week period to submit their responses (includes follow-up period).

Data Collection

Data were collected using SurveyMaker®. A data log was maintained on the date the surveys were submitted and a response identification number for each of the returned surveys was assigned. The ITMA program director provided the researcher with a list of all of the selected ITMA participants and their e-mail addresses. An e-mail message was sent to all current and former students in the ITMA program in the middle of February 2002. Participants' e-mail addresses were inserted into the blind carbon copy (i.e., bcc) header so as not to disclosed anyones e-mail address. The e-mail message contained a paragraph written by an IT faculty member supporting the study, along with the introductory letter to the students explaining the purpose of the study (see Appendix D & E).

Both of the surveys website address and specific directions for submitting the survey were contained in the introductory letter. The participants were directed to select their ITMA status, current (Survey A) or former (Survey B) student. Participants were provided with instructions to submit their survey results via the website within a two-

week period. A follow-up message was sent via e-mail (see Appendix F) after the initial deadline for submitting the survey.

Data Analysis Procedures

Because the data were both quantitative and qualitative in nature, different analyses for each research method were conducted. One common analysis method used in surveys is descriptive statistics (Fink & Kosecoff, 1998). This type of statistical methods usually includes the numbers of frequencies, tabulations, and percentages. Appropriate data analyses were conducted for the quantitative and qualitative questions.

Qualitative analysis was conducted on the participants' responses submitted from the open-form questions. This form of questioning provides insight not available through the closed-form survey items (Best & Kahn, 1993, Creswell, 1994; Rossman & Rallis, 1998). According to Rossman and Rallis (1998), after gathering qualitative data, the researcher should generate categories, identify themes, and look for recurring patterns among the responses to the open-form items. In addition, interpretation and tabulation of the open-form items, and summary should be included in the research report.

Survey Analysis

The quantitative data were imported from SurveyMaker® into SPSS® version 10.1. SPSS® is a computer software package design for analyzing statistical data. Initially, the two designed surveys were sent to 221 participants, of those, seven were undeliverable due to incorrect e-mail addresses, leaving an eligible sample of 214. The initial mail out phase generated 76 six returned surveys, while the follow-up generated 19 returned surveys, for a total response rate of 95 (44.4%) of the eligible sample. Table 3 displays the number of returned surveys during the initial and follow-up phase.

Table 3 *Number of Returned Surveys during Initial and Follow-up Phase*

Returned Rate of Surveys				
	Number Sent	Undeliverable	Deliverable	**Total Returned**
Distribution:				
E-mailed Survey	221	7	214	76
Follow-up:				
E-mailed Survey	214	0	214	19
Total Returned	214	0	214	95
Percentages				44.4%

Data collected from the close-form survey items were tabulated, also the frequencies and percentages were obtained.

Qualitative Data Analysis

The qualitative data gathered was imported from SurveyMaker® into Microsoft® Word and Excel 2000. The majority of the open-ended questions were in the second part of the survey. Twelve of the twenty-eight survey items in part two called for an open-form approach to questioning and designed to elicit responses in the participant's own words. These open-ended questions attempted to capture the learners' perceived value of either the presence or absence of interaction, intimacy, and immediacy. According to Best and Kahn (1993), the open-form provides for a greater depth of response from the participants.

Part three of the survey also contained an opened-ended question that asked the participants to submit their contributions regarding their overall interaction experiences with either the support personnel, students, or course content, within the ITMA Web-based program. In addition, participants were asked to contribute any other factors related to their interactions that the researcher may not have not addressed.

The qualitative data gathered was analyzed for common categories, themes and patterns using Microsoft® Word. First, the questions, along with the pertaining responses, were categorized by each of the three constructs: intimacy, immediacy, and interaction. A second category consisted of the indicators of each construct. Several printouts of the open-ended responses were used to color code different themes (i.e., satisfaction of

interactions, support from faculty, support personnel and other students, etc.). In addition, the analysis of the qualitative data resulted in common categories and themes that emerged. A code number was assigned for each category and recurring theme (see Appendix G). This coding process guided the researcher in coding all of the open-ended responses submitted based on the recurring themes (Appendix H).

Limitations of Study

The results of this study are limited to a small population of adult learners. Therefore, generalization should only be made about the specifically targeted population for this study. The group is homogeneous; most of the participants are educational practitioners. This descriptive study focuses on one asynchronous Web-based master's degree program, so outcomes may not be generalized to all asynchronous Web-based master's degree programs.

CHAPTER FOUR

Results

The results of the data analysis for this study are presented in three sections. The first section includes a description of the respondents. The second section focuses on the results organized according to the two primary research questions. Following each of the research questions are the survey results related to each of the three constructs, interaction (i.e., interactivity) intimacy and immediacy used in this study. The descriptive data is presented by frequency counts, cross tabulations, and percentages, and incorporates tabulation of the qualitative survey questions. In addition, direct quotes extracted from the qualitative data were incorporated with the descriptive data. Finally, the third section reports the results of the respondents' input concerning their perspective of their overall experiences within the ITMA program pertaining to social presence.

Accordingly, the description of the demographics information precedes the results for each of the research questions.

Demographics

The initial selected population consisted of 214 adult distance learners in the ITMA program; of these, 95 (44.4%) participated in this study. The respondents began the ITMA program in the fall of either 1998, 2000, and 2001, and January 2002. The highest percentage, 34.7% of the respondents (33 out of 95), began the ITMA program in the year 2000. Thirty of the respondents (32.6%) began the program in the year 2001, and 17 (18%) began in 1998 (included two that indicated 1999). Approximately, 14.7% of the respondents (14 out of 95) began the program in spring of 2002 semester.

Ages ranged from younger than 24 to 45 or older. The majority of the respondents (42.1%) indicated their age as 45 or older and 28.4% were 25-35 years of age. Table 4 shows the breakdown of the respondents' age by the year that the students started the ITMA program.

Table 4 *Respondents Age by the Year Students Started ITMA Program*

Age	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
24 or younger			3		3.1% (3)
25-35	3	11	9	4	28.4% (27)
36-45	6	7	7	5	26.3% (25)
45-older	8	15	12	5	42.1% (40)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* (**95**)

**Note:* Total percentages may not equal 100.0%* based on rounding.

The majority of the respondents (76.8%) were females, while 23.1% were males. Table 5 shows the breakdown of gender by the year that the learners started the ITMA program.

Table 5 *Gender by Year Respondents Started ITMA Program*

Gender	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Male	3	10	7	2	23.1% (22)
Female	14	23	24	12	76.8% (73)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* (**95**)

* *Note:* Total percentages may not equal 100.0%* based on rounding.

Ninety-eight percent (98%) of the respondents indicated their employment status as full-time. The majority of those working full-time indicated they were K-12 teachers, with 30.5% teaching elementary level, 20% middle school, and 27.4% high school. In addition, survey question nine asked participants to indicate job title if not teaching K-12. Nineteen (20%) of the respondents submitted other job titles as shown in Table 6. One respondent indicated "other" but did not submit a job title.

Table 6 Job *Titles Indicated other than K-12 Educational Practitioner*

Other Job Titles Indicated	
1. Computer Art & Design Educator	10. College Adjunct Teacher
2. Audio Visual Media Coordinator	11. Instructional Designer
3. Customer Support Manager	12. K-12 Specialist
4. Instructional Computer Specialist	13. Technical Writer
5. Community College Teacher	14. Training Coordinator
6. Learning Specialist Senior	15. Webmaster
7. Program Coordinator, International Center for Excel	16. Director of Technical Support Services/Teacher adjunct
8. Senior Programmer/Analyst	17. Public Affairs
9. Senior Training Coordinator	18. Grant Writer – Newark Campus

* *One Missing*

Ninety-four respondents reported their ITMA program status. A higher number of respondents 71 (75.5%) indicated currently in the program, 15 (15.9%) completed the program, while eight (8.5%) withdrew from the program. The majority of the respondents who withdrew (seven out of eight) did so during the year 2000 and one withdrew in 1998. For the number of hours completed in the ITMA program, out of 95 respondents, 47 (49.4%) indicated completing between 0-6 hours, 23 (24.2%) completed between 13 to18 hours and five (5.2%) completed between 19-24 program hours. Table 7 contains the number of program hours completed by the year the respondent began the ITMA program.

Table 7 *Number of ITMA Program Hours Completed*

Program Hours Completed	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
0-6		4	29	14	49.4% (47)
7-12		3	2		5.2% (5)
13-18	1	22			24.2% (23)
19-24	1	4			5.2% (5)
25-30	15				15.7% (15)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* (**95**)

**Note:* Total percentages may not equal 100.0%* based on rounding.

The survey item asking for cohort location applied only to those who began the ITMA program in the fall of 1998 and through the fall of 2001. Participants in the 2002 group were not part of the cohort regions. Table 8 contains the results per cohort location.

Table 8 *Cohort Locations*

Cohort Region	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Abingdon	9	4			25.0% (13)
Franklin	5				9.6% (5)
Roanoke		15	2		32.7% (17)
NOVA	3				5.8% (3)
VA Beach		14			27.0% (14)
Total	32.7% (17)	63.5% (33)	3.8% (2)	(0)	100.0%* **(52)***

**Note:* Total percentages may not equal 100.0%* based on rounding and 43 missing.

Question six, "*Estimate how much time per week you devote to the ITMA program studies*", 95 responded. Forty-four (46.3%) of the respondents reported devoting 11-20 hours per week, 36.8% indicated 0-10 hours per week, while 3.2% specified 31 or more study hours. Out of all four groups, the 2000 group had the most respondents (43.2%) who reported 11-20 hours.

Research Questions

Two research questions guided this study: the first question focused on the extent to which social presence, which is comprised of interaction, intimacy, and immediacy, exists within the context of an asynchronous Web-based Master's degree program. The second question focused on the value distance learners placed on the construct of social presence, within the context of an asynchronous Web-based Master's degree program.

The responses to the quantitative research questions used one of four scales that measured frequency, satisfaction, degree of agreement, or importance of each construct. Refer to Table 2 for the construct indicators and the survey questions pertaining to each of the research questions. For the full text of the survey questions, refer to the survey

instrument (Appendix B). Also, to reference the codes assigned to each theme, refer to the *Assigned Theme Codes for the Qualitative Survey Questions* (Appendix G).

Research Question One

Research question one "To what extent does social presence, which is comprised of interactivity, intimacy, and immediacy, exist within the context of an asynchronous Web-based Master's degree program?" was designed with three subsequent research questions to ascertain:

Sub-question 1a.: To what extent do the indicators of interactivity (i.e., interaction) exist within the context of an asynchronous Web-based Master's degree program?

Interactions

Three types of interactions were used, learner-to-support personnel, learner-to-learners, and learner-to-content, to address question 1a. These three types of interactions served as indicators to determining whether the learners perceived the existence of interactivity/interaction within the context of the ITMA program. The support personnel (S-P) consist of the faculty, ITMA program director and coordinator, technical support, and the graders. Thirteen of the fifty-two (25%) survey questions focused on addressing research question 1a.

Learner-to-support personnel interactions.

On question 11 for frequency of *"learner-to-support personnel interactions within an average semester*," 95 responded. Forty-one percent (41%) of the 95 respondents indicated *rarely*, 40% reported *occasionally*, 2.1% indicated *very frequently*, while 16.8% indicated *frequently*. Table 9 contains the results for the frequency of the learners' interaction with support personnel within an average semester by the year the respondents started the ITMA program.

Table 9 *Frequency of Learner-to-Support Personnel Interactions*

Frequency within a semester	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very Frequently	2				2.1% (2)
Frequently	6	6	2	2	16.8% (16)
Occasionally	5	13	15	5	40.0% (38)
Rarely	4	14	14	7	41.0% (39)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* **(95)**

**Note:* Total percentages may not equal 100.0%* based on rounding.

Table 10 contains the results for question 12 on "*satisfaction of learner-to-support personnel interactions."* Of the 94 responses, 88.3% respondents indicated being *very satisfied* to *satisfied* and 11.7% of the respondents were *very dissatisfied* to *dissatisfied*. As shown in Table 10 overall all four groups seem satisfied with the support personnel interactions.

Table 10 *Student Satisfaction with Support Personnel Interactions*

Satisfaction Interactions	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very Satisfied	9	5	11	4	30.9% (29)
Satisfied	8	23	16	7	57.4% (54)
Dissatisfied		4	2	1	7.4% (7)
Very Dissatisfied		1	2	1	4.2% (4)
Total	18.1% (17)	35.1% (33)	33.0% (31)	13.8% (13)	100.0% **(94)**

**Note:* Total percentages may not equal 100.0%* based on rounding and one missing.

For question 13 *"If you have experienced positive interactions with the ITMA support personnel, provide an example"*, 71 responded. In addition, question 14 asked, *"If you have experienced negative interactions with the ITMA support personnel, provide an example",* 41 responded. The responses from these two open-ended questions generated several comments that revealed different themes. Table 11 contains the number of occurrences for each theme that emerged with regard to both positive (+) and negative

(-) exchanges experienced between the learner and support personnel as indicated by the respondents. The assigned theme code is located next to each of the recurring themes.

Table 11 *Positive and Negative Interactions Experienced with Support Personnel*

Occurrences	*1.2. Learner-to-support personnel interactions*
10	1.2.7. Questions on grades/feedback (+3, -7)
18	1.2.8. Administrative issues (all positive)
19	1.2.6. Questions on assignments/due dates (+6, -13)
25	1.2.3. Timeliness of grade posting-untimely (-25)
27	1.2.5. Technical support (+26, -1)
59	1.2.9. Satisfaction
82	1.2.2. Timely responses (+65 and –17)
	1.3. Learner-to-faculty interactions
1	1.3.1. Untimely response
4	1.3.3. Assignments (unrealistic deadlines and course load)
7	1.3.4. Satisfaction (4+, -3)
11	1.3.2. Timeliness of responses

Overall, a greater number of respondents indicated experiencing positive interactions with support personnel compared with those who indicated experiencing negative interactions. The majority of the comments on positive interactions related to the immediate response and timely support from the support personnel, including the ability of the support personnel to resolve problems quickly. Examples of some of the comments indicating positive interactions with support personnel included:

> "They are always helpful and try to meet my needs quickly"; "They responded quickly to all questions…"
>
> "Very helpful and have quickly helped me to resolve any problems or difficulties that I have."

Several of the comments noted the exemplary support and solutions provided by the technical support, for example: "Good technical support from the technical support

graduate"; "Technical support graduate, was especially supportive and helpful." "Best yet, he always had solutions…"

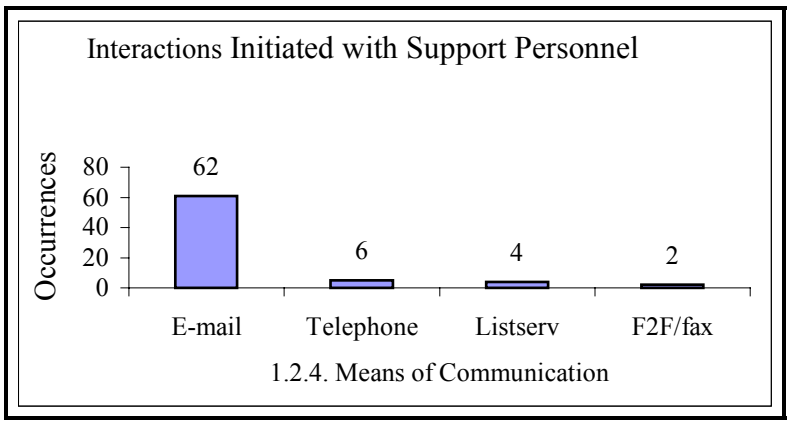
In regards to the negative comments and based on several of the respondents comments, the untimely posting of grades and the lack of feedback or no feedback on course assignments were perceived as negative interactions. Comments referring to negative interactions included:

> "Grades have also been slow to be recorded in one of my classes - work I completed a month ago is still not grade."
>
> "Untimely turn around for grades. Not enough feedback on assignments," and
>
> "Poor or very little feedback on course assignments."

The open-ended survey question 21 "*In what ways did you initiate interaction with the ITMA support personnel,"* resulted in 81 responses. The intent of this question was to elicit responses in which participants communicated with the ITMA personnel. However, this question generated two sets of responses: one set included comments regarding the reasons for contacting support personnel and included whether the contact was positive or negative. Similar to the interaction comments referenced previously in Table 10. Examples of comments submitted were: "I had problems registering for a class…"; "I had questions regarding course information and grading,.." and "I needed an extension because I was a little behind on a module…" This set of responses, coded accordingly, is included with the responses in Table 11.

Aside from reasons for contacting the ITMA support personnel, the respondents also provided the means in which they initiated communication (i.e., listserv, e-mail, and telephone). Overall, the majority of the respondents indicated that they communicated through e-mail (62 occurrences), including a few who telephone long distance (6 occurrences), listserv (4 occurrences), and face-to-face (F2F) and facsimile (2 occurrences). Chart 1 illustrates the ways in which the respondents initiated communication with support personnel as well as the number of occurrences.

Figure 3 Communication Between Learners and Support Personnel



Learner-to-learner interactions.

Survey question 24 asked, "*Approximately how often do you interact with the other ITMA students in an average semester",* resulted in 93 responses. The majority of the respondents, 37 (39.7%), specified *rarely,* 34(36.5%) expressed *occasionally*, 16 (17.2%) *frequently*, and the lowest number 6 (6.4%) indicated *very frequently*. Table 12 contains the results for the learner interactions and the frequency within an average semester by the year respondents started the ITMA program.

Table 12 *Learner-to-Learner Interactions within an Average Semester*

Interactions within average semester	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very Frequently	4	2			6.4% (6)
Frequently	9	4	3		17.2% (16)
Occasionally	4	13	10	7	36.5% (34)
Rarely		14	17	6	39.7% (37)
Total	18.2% (17)	35.5% (33)	32.2% (30)	14.0% (13)	100.0%* **(93)**

* *Note:* Total percentages may not equal 100.0%* based on rounding and two missing.

Table 13 contains the results for question 40 "*In an average week how frequently do you interact with other ITMA students on the listserv",* 93 responded. From the 93 respondents, 56 (60.2%) indicated *rarely*, 24 (25.8%) responded *occasionally*, 11

(11.8%) *frequently*, and two (2.1%) indicated *very frequently* to the listserv interactions within an average week.

Table 13 *Student's Listserv Interactions within an Average Week*

Average week-listserv interactions	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very frequently	2				2.1% (2)
Frequently	7	4			11.8% (11)
Occasionally	5	9	9	1	25.8% (24)
Rarely	2	20	22	12	60.2% (56)
Total	17.2% (16)	35.5% (33)	33.3% (31)	14.0% (13)	100.0%* **(93)**

* *Note:* Total percentages may not equal 100.0%* based on rounding and two missing.

For survey question 25 "*How satisfied are you in your interactions with other ITMA students,"* 93 responded. The majority of the respondents 72 (77.4%) indicated they were *very satisfied* to *satisfied*, while 21 (22.6%) were *very dissatisfied* to *dissatisfied*. Table 14 displays the results of the learner's satisfaction in interacting with other learners by the year respondents started the ITMA program.

Table 14 *Satisfaction with Learner-to-Learner Interactions*

Satisfaction of interaction	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very Satisfied	10	2	3	3	19.3% (18)
Satisfied	7	21	19	7	58.1% (54)
Dissatisfied		8	7	2	18.2% (17)
Very Dissatisfied		2	1	1	4.3% (4)
Total	18.2% (17)	35.5% (33)	32.2% (30)	14.0% (13)	100.0%* **(93)**

* *Note:* Total percentages may not equal 100.0%* based on rounding and two missing.

Table 15 contains the results from survey question 26 that asked "*If you have experienced positive interactions with other ITMA students that influenced your satisfaction with the ITMA program, provide an example"*, 60 responded. In addition,

question 27 asked, "*If you have experienced negative interactions with other ITMA students that influenced your satisfaction with the ITMA program, provide an example"*, 30 responded. Both positive (+) and negative (-) themes that emerged from the results and the number of occurrences for each theme are contained in Table 15.

Table 15 *Positive and Negative Interactions Experienced among Students*

Occurrences	*1.1. Learner-to-learner interactions experienced*
4	1.1.2. Timeliness of response
6	1.1.3. Built-in interactions needed
8	1.1.4. Assignment and general questions (+8)
8	1.1.5. Share ideas/knowledge (+8)
20	1.1.6. Lack of face-to-face meetings, desire
12	1.1.8. Satisfaction with program reported (+12)
11	1.1.9 Lacking community –need interactions
	1.4. Learner-to-content interactions
20	1.4.5. Suggested group activity/ assignments

As shown in Table 11, a recurring theme was the means in which students are required to communicate which emerged mostly from comments from question 26. Students reported on their interactions with other learners through e-mail, followed by the listserv. A few respondents mentioned having had chat sessions (used mainly to conduct a group assignment). Most were satisfied using e-mail and chat sessions for encouraging other students or exchange ideas on assignments. Other students had positive interactions during face-to-face sessions that they initiated. Most of the students seem to consider support and concern from other students as positive interactions that positively influenced their satisfaction with the program.

However, in regards to the negative experiences, a majority of the comments focused on the misuse of the listserv. Several commented that certain students do not know how to use the listserv and when they intend to send a message to an individual, or hit reply, they end up sending it to everyone on the listserv. This apparently causes some to received unwanted messages that have nothing to do with the content or assignments. Other students pointed out that some students tend to use the listserv as a platform for

complaining, this was perceived as a negative experience for some, as indicated by the comment, “It’s too complainy…”

The second most recurring theme, related to the means of communication, was the lack of face-to-face contact. Respondents indicated a desire to meet face-to-face “*at least once to place names with faces.”* Some of the respondents commented on how they had initiated their own face-to-face contacts with other ITMA members associated with their local cohort. Others mentioned the distance being problematic in meeting other ITMA learners face-to-face. The lack of face-to-face is one area in which some students indicated they were dissatisfied.

Moreover, some of the respondents suggested having “built-in” interactions, like instructional strategies as group assignments and online activities using a chat room for exchanging ideas with the instructor and other students. Several respondents included positive comments regarding the instructional strategy that entailed a group assignment. Examples of comments regarding the group activity included:

“Fun because it was personal, best assignment”,

“Great experience, thoughtful,” and

“I enjoyed finding out who was in my group.”

However, not all of those who responded agreed that the group assignment was positive. Some of the comments that indicated disappointment with the group work included these:

“Students in my group were rude and arrogant,” and

“ I dislike working with others who will not do their part,” and

“Depending on others was a pain.”

Thirty participants responded to open-ended survey item 21 “*Are there interactions with other ITMA students that you felt have been lacking but would be helpful to you?”* Ten out of the 30 respondents suggested a designated place where students can feel like they are part of a community. Additionally, 8 out of 30 indicated that opportunities to interact

with other students are currently lacking and suggested interactions that would be helpful to them as shown in Table 16.

Table 16 *Suggested Interactions that That Would Be Helpful to Students*

Occurrences	*1.1. Learner-to-learner interactions*
2	1.1.7. A bulletin board to post/read questions regarding assignments/course materials.
6	1.1.5. Sharing of ideas/expertise with other students.
6	1.1.6. F2F meetings
8	1.1.3. Need more interaction between students (e.g., group chats, assignments, projects, etc.)
10	1.1.9. Place for students to feel a part of a community, and strategies to provide learners to associate with one another and be able to ask questions of each other.

Learner-to-content interactions.

Learner-to-content interactions attempted to examine the participants' interaction experiences with the ITMA course content. Question 38 inquired "*The creation of projects in the ITMA course heightens my sense of interaction with the course content"*, 93 responded. Seventy-five (80.6%) of the respondents, indicated *strongly agree* to *agree* that the creation of projects heightens their sense of interaction with the course content, while 18 (19.3%) *strongly disagree* to *disagree*. Table 17 displays the results for question 38 by the year the respondents started the ITMA program.

Table 17 *Learner-to-Content Interactions through the Creation of Projects*

Learner-to-Content Interactions	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	5	2	8	3	19.3% (18)
Agree	10	22	15	10	61.2% (57)
Disagree	1	9	6		17.2% (16)
Strongly Disagree	1		1		2.1% (2)
Total	18.2% (17)	35.5% (33)	32.2% (30)	14.0% (13)	100.0%* **(93)**

* *Note:* Total percentages may not equal 100.0%* based on rounding, also two missing.

In addition, survey question 39 asked, "*If there is an instructional strategy used in the ITMA program that stimulates your sense of interaction with the course content."* Seventeen out of the 33 that responded indicated that using chat discussions, in conjunction with group assignments, stimulated their sense of interaction with the course content. Some respondents commented on a particular chat discussion used for a group activity in one of the earlier ITMA modules, examples included:

> "I would say that the group discussion was the best."
>
> "The only group discussion in which I was involved occurred during the first module. I loved it and long for more."
>
> "Last semester there was a live discussion to define principles as a group. It was very nice to exchange the ideas."
>
> "Even though I was skeptical at firs, the group project was one of the most rewarding projects I have completed."
>
> "The chat room requirement…created a sense of interaction with the course content. I was a good experience and made me feel like I was not online in taking this class. It provided a small sense of connection."

Three respondents specified group projects and assignments as strategies that stimulate their sense of content interaction. Seven expressed that the creation of their portfolios and web pages would allow them to showcase their professional work. Strategies only that occurred once were placed in the category of 'other strategies'; these included software evaluation, computer literacy projects, conducting research on the internet, and the use of varying software packages for presenting media components. Other instructional strategies included utilizing group chats to exchange ideas with other learners and instructors, assigning group projects and assignments.

Table 18 contains the themes resulting from the comments on instructional strategies that heighten the learner's sense of content interaction. The number of occurrences for each coded theme and the reference for each theme are also included.

Table 18 *Instructional Strategies that Stimulate Sense of Content Interaction*

Occurrences	1.4. Learner-to-content interactions
	1.4.5. Instructional Strategy
3	1.4.5.2. Group projects
6	1.4.5.4. Other strategies (e.g., Software evaluation)
7	1.4.5.3. Creating products (e.g., portfolio, web sites)
17	1.4.5.1. Chat/live discussions, group assignments to share ideas

A fourth construct that emerged from the qualitative data but was not a part of the survey instrument was learner-to-interface interaction (theme code 1.5.). The literature mentions that this type of interaction, introduced by Hillman et al. (1994), is the interaction between the learner and the technology required for interacting with the teacher, students, and content. Hillman et al. noted that learners who do not have the required necessary skills to use the communication media spend much time learning how to interact with the technology.

The results from the qualitative data indicate this to be true based on several comments made by the respondents. The results indicated problems with the software and hardware, or lack of skills for using the required program applications. The following are examples of these types of comments and the survey codes assigned to each:

> [1.5.1.Problems with technology - hardware/software] "Having difficulty with my old computer and getting it to complete the tasks that were required."
>
> [1.5.2. Lack of skills/knowledge of required program applications.] "Within my own cohort, I found myself supporting at least 4 other people with technical problems they encountered. They needed to have some basic skills before taking the ITMA classes, maybe beginning web-page design and web-based chatting and e-mail courses."
>
> [1.5.1. and 1.5.2.] "Some of the students in my group had problems connecting to his/her online service. Not because of service errors, but because of lack of computer knowledge. The same held true for MS Office applications that we were required to use. It bothered me that I spent more time teaching my cohorts than collaborating with them."
>
> [1.5.2.] "There was no place to comment about this, but I sometimes wonder if people realize their messages are going to the entire group, when their

Questions/conversations seem to be directed at one or two individuals." (2 occurrences)

Intimacy

Sub-Question 1b.: To what extent do the indicators of intimacy exist within the context of an asynchronous Web-based Master's degree program?

Ten of the 52 (19.2%) survey questions addressed this research question. In this study, the indicators of intimacy consisted of comfort level, establishing friendships, and affiliation with the ITMA program.

Learners comfort level in seeking assistance from support personnel.

For question 20, "*I feel comfortable seeking assistance from the ITMA support personnel*", 95 responded. The responses ranged from 87 (91.6%) of the respondents indicating *strongly agree* to *agree*, while eight (8.4%) of the respondents indicated *strongly disagree* to *disagree*. Table 19 contains the results of the responses for the comfort level of students seeking assistance from the support personnel by the year the respondents started the ITMA program.

Table 19 *Comfort Level in Seeking Assistance from Support Personnel*

Learner-to-support personnel comfort level	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	10	5	11	4	31.5% (30)
Agree	7	24	16	10	60.0% (57)
Disagree		3	4		7.4% (7)
Strongly Disagree		1			1.0% (1)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* **(95)**

* *Note:* Total percentages may not equal 100.0%* based on rounding.

Question 28 asked "*As a result of my interactions with other ITMA students, I feel comfortable seeking assistance from them,"* 92 responded. Table 20 shows that 68 (73.9%) indicated *strongly agree* to *agree* and the lowest responses, 24 (26.1%) expressed *strongly disagree* to *disagree*.

Table 20 *Comfort Level of Learners Seeking Assistance from Other Learners*

Learner- to-learner Comfort Level	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	7	9	4	2	23.9% (22)
Agree	9	18	12	7	50.0% (46)
Disagree	1	4	13	3	22.8% (21)
Strongly Disagree		1		2	3.2% (3)
Total	18.4% (17)	34.8% (32)	31.5% (29)	15.2% (14)	100.0%* **(92)**

* *Note:* Total percentages may not equal 100.0%* based on rounding and three missing.

Survey question 29 was open-ended and asked, "*If you do not feel comfortable seeking assistanc*e *from other ITMA students, briefly explain why*," resulted in 24 responses. The highest number of respondents indicated that they do not seek assistance from the other ITMA students because they view other students as "strangers" or they do not know them well enough to "trust" them or ask for their help. The second most occurring theme referred to negative interactions experienced between a few students during the group activity. Table 21 shows the number of occurrences for each theme, including the reference made for each theme.

Table 21 *Comfort Level in Seeking Assistance from Other Learners*

Occurrences	2.1. Learner-to-learner interactions
	2.1.1. Comfort Level (i.e., familiarity)
3	2.1.1.2. No sense of community
3	2.1.1.3. Do not trust other students
7	2.1.1.4. Negative interactions with other learners
17	2.1.1.1. Not knowing other students in the program

Establishing new friendships with other learners.

For question 30, *"As a result of my interactions with other ITMA students, I have established new friendships*", 92 responded. The majority of the respondents 47 (51.1%) indicated *strongly disagree* to *disagree*, while 45 (48.9%) indicated *strongly agree* to *agree*. Table 22 displays the results by the year the respondents began the program.

Table 22 *Established New Friendships with other ITMA Students*

Established new friendships	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	3	1			4.3% (4)
Agree	13	12	12	4	44.6% (41)
Disagree	1	13	11	8	35.9% (33)
Strongly Disagree		5	7	2	15.2% (14)
Total	18.5% (17)	33.6% (31)	32.6% (30)	15.2% (14)	100.0%* **(92)**

* *Note:* Total percentages may not equal 100.0% based on rounding and three missing.

This last survey item was followed by question 32 that asked participants to explain "*if it has been difficult for to establish friendships with other ITMA students.*" Table 23 shows the recurring themes that emerged from the results such as issues of time, lack of built-in interactions, newness to the program, and lack of F2F with other students.

Table 23 *Reasons for Difficulty in Establishing Friendships with Other Learners*

Occurrences	2.1. Learner-to-learner interactions
	2.1.2. Difficulties establishing friendships
1	2.1.2.5. No desire to make friends
4	2.1.2.4. No personal communication between students (e.g.,face-to-face orientation or gatherings)
9	2.1.2.1. Lack of time due to busy schedules
16	2.1.2.2. No interaction opportunities built into program to allow students to interact or meet other students
12	2.1.2.3. New to program, don't know anyone yet

Affiliation with the ITMA program.

Table 24 contains the results for question 47, "*Overall, I feel a sense of affiliation with ITMA program,"* 95 responded. The majority, 75 respondents (78.9%) *strongly agree* to *agree* while 20 (21.1%) *disagree* (none indicated strongly disagree).

Table 24 *Overall Sense of Affiliation with the ITMA Program*

Sense of affiliation With Program	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	4	4	4	2	14.7% (14)
Agree	13	19	20	9	64.2% (61)
Disagree		10	7	3	21.1% (20)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* **(95)**

* *Note:* Total percentages may not equal 100.0%* based on rounding.

Question 48 "*Having a sense of affiliation with the ITMA program influences my satisfaction with the overall program"*, resulted in 93 responses. Eighty-three (89.2%) of the respondents indicated *strongly agree* to *agree* and ten (10.7%) specified *strongly disagree* to *disagree*. Results for question 48 are contained in Table 25.

Table 25 *Affiliation with the ITMA Program Influences Satisfaction with Program*

Sense of affiliation Influences satisfaction	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	6	7	4	1	19.3% (18)
Agree	10	21	21	13	69.8% (65)
Disagree	1	4	5		10.7% (10)
Total	18.2% (17)	34.4% (32)	32.2% (30)	15.0% (14)	100.0%* **(93)**

* *Note:* Total percentages may not equal 100.0%* based on rounding and two missing.

Survey item 49 asked if "*As a result of these interactions, would they consider taking future web-based courses*", 93 responded. The majority of the respondents, 79 (84.9%), *strongly agree* to *agree*, while 14 (15.1%) *disagree* (none indicated strongly disagree) Table 26 contains the results for question 49 based on the 93 total responses.

Table 26 *Consideration for Taking Future Web-based Courses*

Would consider future Web-based courses	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	7	5	8	5	26.9% (25)
Agree	9	19	17	9	58.1% (54)
Disagree	1	8	5		15.0% (14)
Total	18.2% (17)	34.4% (32)	32.2% (30)	15.0% (14)	100.0%* **(93)**

**Note:* Total percentages may not equal 100.0%* based on rounding, and two missing.

The open-ended question 50 "*If you would NOT consider taking other web-based courses based on your interaction experiences with the ITMA support personnel, other students, or course content, briefly explain*", resulted in 17 responses. The most frequently recurring theme was the need for community; the respondents indicated that it was important for them to engage in learner-to-learner interactions. The second most recurring theme was disillusion with the ITMA program. Table 27 indicates the four recurring themes with the number of occurrences for each theme.

Table 27 *Reasons for Not Taking Future Web-based Based Courses*

Occurrences	2.1. Learner-to-learner interactions
	2.1.3. Affiliation
3	2.1.3.3. Learning Styles (e.g., want F2F interactions)
2	2.1.3.4. Don't need future courses
6	2.1.3.1. Disillusion with the ITMA program.
7	2.1.3.2. Need sense of community (e.g., no built-in interactions)

Examples of comments from the qualitative question included:

> [2.1.3.1.] "I have taken other web-based course that were graduate level and much better organized and prepared…I would, however, think TWICE before taking other ITMA courses."
>
> [2.1.3.1.] "The last course I took with the program left me feeling disillusioned with the ITMA program…Not a single comment on submitted assignments and work. As an educator, I find that unacceptable, especially in a distance learning environment."
>
> [2.1.3.2] "Like I've said earlier, there is little sense of community, I feel like I'm taking electronic correspondence courses…."

[2.1.3.3.] "I don't really have a need to take any other courses. If I did, I would prefer a visual learning experience…"

Finally, item 51 pertained to affiliation to the ITMA program. The question "*I would recommend the ITMA program to others as a result of my interaction experiences with the support personnel, students, and course content*," resulted in 93 responses. As shown in Table 28, 71 (76.3%) indicated *strongly agree* to *agree* and 22 (23.6%) indicated *strongly disagree* to *disagree*.

Table 28 *Recommendation of the ITMA Program to Others*

Recommend the ITMA Program to others	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	7	2	6	4	20.4% (19)
Agree	7	19	16	10	56.0% (52)
Disagree	3	10	7		21.5% (20)
Strongly Disagree		2			2.1% (2)
Total	18.2% (17)	35.5% (33)	31.2% (29)	15.0% (14)	100.0%* **(93)**

**Note:* Total percentages may not equal 100.0%* based on rounding and two missing.

Immediacy

Sub-question 1c: To what extent do the indicators of immediacy exist within the context of an asynchronous Web-based Master's degree program?

Thirteen of the fifty-two survey items attempted to address this question. The indicators for immediacy consist of personalized interchanges, individualized feedback, concern for the individual, the use of inclusive language (e.g., "we" vs. "I"), presence of positive feedback, and constructive feedback (i.e., positive and negative).

Personalized and individualized communication.

Survey item 17 inquired if "*the ITMA support personnel provided personalized communication (i.e., telephone, home calls, individual e-mail, etc.)*". From the 95 responses, 30 (31.5% indicated *always*, 46 (48.4%) responded *sometimes*, while 17 (17.8%) indicated *rarely* and two (2.1%) selected *never*. Table 29 contains the results for survey item 17 that pertains to personalized communication provided from support staff

to students. In addition, a cross tabulation shows the breakdown of the responses by the year that the respondents started ITMA program.

Table 29 *Personalized Communication Provided by Support Personnel*

Personalized Communication	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Always	12	5	10	3	31.5% (30)
Sometimes	4	22	12	8	48.4% (46)
Rarely	1	5	8	3	17.9% (17)
Never		1	1		2.1% (2)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* **(95)**

**Note:* Total percentages may not equal 100.0%* based on rounding.

Question 18 asked "*How satisfied are you with the personalized communication received from the ITMA support personnel,"* 94 responded. The highest percentage 82.9% indicated *very satisfied* to *satisfied* while the lowest percentage 17.0% indicated *very dissatisfied* to *dissatisfied*. Table 30 contains the results to question 18.

Table 30 *Satisfaction Level with Personalized Communication (P-C)*

Satisfaction with P-C received	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very Satisfied	9	4	9	4	27.7% (26)
Satisfied	8	19	17	8	55.3% (52)
Dissatisfied		9	2	1	12.7% (12)
Very Dissatisfied		1	3		4.2% (4)
Total	18.0% (17)	35.1% (33)	32.9% (31)	13.8% (13)	100.0%* **(94)**

* *Note:* Total percentages may not equal 100.0%* based on rounding, and one missing.

As shown in Table 31, the number of responses for question 22 that asked for "*the ITMA support personnel provide individualized feedback on my course assignments,"* resulted in 94 responses. Forty-seven (50%) of the respondents indicated *sometimes*, while 17 (18.9%) reported *always*, 21 (22.3%) *rarely*, and the lowest percentage 9.6% indicated *never*.

Table 31 *Frequency of Individualized Feedback on Course Assignments*

Frequency of Individualized feedback	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Always	8	2	4	3	18.9% (17)
Sometimes	9	21	12	5	50.0% (47)
Rarely		9	8	4	22.3% (21)
Never		1	6	2	9.6% (9)
Total	18.0% (17)	35.1% (33)	31.9% (30)	14.8% (14)	100.0%* **(94)**

* *Note:* Total percentages may not equal 100.0%* based on rounding, and one missing.

To inquire on whether students communicate with other students outside of the listserv discussions, question 43 asked, "*Aside from your listserv interactions, do you initiate personalized communication (e.g., telephone calls, individualized e-mail, etc.) with other ITMA students? If so, please list other ways in which you communicate*", resulted in 56 responses. Table 32 shows the themes and the occurrences for each.

Table 32 *Personalized Communication Initialized by Learners with other Students*

Occurrences	*3.1. Learner-to-learner interactions*
12	3.1.5. No personalized interactions initiated
22	3.1.2. Individualized personal /exchanges via e-mail
23	3.1.1. Personalized communication via phone, F2F

Sense of concern from the ITMA support personnel.

Survey question 15 sought to examine whether the learners perceive that "*the ITMA support personnel show concern towards them"*, 95 responded. The responses ranged from 79 (83.1%) of the respondents indicating *strongly agree* to *agree*, and 16 (16.8%) reported *strongly disagree* to *disagree*. Table 33 shows the results for concern shown from the ITMA members towards the students.

Table 33 *Sense of Concern from Support Personnel Shown towards Students*

Sense of concern from support personnel	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	5	1	9	5	21.1% (20)
Agree	11	22	17	9	62.1% (59)
Disagree	1	9	5		15.8% (15)
Strongly Disagree		1			1.0% (1)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* **(95)**

**Note:* Total percentages may not equal 100.0%* based on rounding.

Similarly, question 33 asked, "*The ITMA students seem to be concerned towards the success and well being of each other"*. Table 34 contains the results from the 90 responses ranging from 72 (80%) indicating *strongly agree* to *agree* and 18 (20%) indicating *strongly disagree* to *disagree*.

Table 34 *Students Concerned Towards the Success and Well-being of Each Other*

Students concern towards each other	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	5	8			14.4% (13)
Agree	11	23	20	5	65.5% (59)
Disagree	1	2	8	6	19.0% (17)
Strongly Disagree				1	1.1% (1)
Total	18.8% (17)	36.6% (33)	31.1% (28)	13.3% (12)	100.0%* **(90)**

**Note:* Total percentages may not equal 100.0%* based on rounding, and five missing.

In the comments submitted for survey questions 13and 14 the respondents gave several examples of the manner in which support personnel demonstrated concern towards them. Examples of excerpts from the respondent's comments include:

> "The grad student support has been exemplary. No matter what the issue or concern, the students who communicate to us are quick precise and express concern."

"Most personnel were very precise in their answers and did not answer down" because of my lack of experience."

"Respond quickly, seem to want to help us be successful give helpful advice and hints to make the experience a little better."

"My father has had open-heart surgery and a tractor accident, on both occasions-Dr. [faculty] worked with me to see that I was given extra time to complete my work. ITMA folk are really down to earth people, and will go out of their way to assist and help you be successful."

"There were many times I needed to seek advice from Drs. [faculty], and no matter what the questions may have been, I was always responded to with kindness, concern, and friendliness."

In addition, question 34 asked, "*If you have experienced a sense of concern from other from other ITMA students, provide an example",* resulted in thirty-eight (40%) responses. Table 35 shows the number of occurrences for each theme.

Table 35 *Learners Sense of Concern Experienced from Other Learners*

Occurrences	3.1. Learner-to-learner interactions
	3.1.3. Concern from others
21	3.1.3.2. Empathy
24	3.1.3.1. Support (all positive interactions)

Examples of respondents' comments indicating support from other ITMA learners personnel included:

*"*Supportive interactions from other students helped make the course work seem less frightening and helped a little in alleviating that feeling of isolation that I have frequently had."

"Over the listserv, there was a lot of encouragement and supportive comments from ITMAers to finish the modules. It was nice."
"After the events of 9/11, several students expressed concern for other students who had friends involved."

Survey question 44 "*I feel supported by the other ITMA students when they respond to my questions, by either e-mail or the listserv",* resulted in 88 responses. Table 36 contains the responses which ranged from 80 (90.9%) of the respondents indicating *strongly agree* to *agree* and eight (9.1%) indicating *strongly disagree* to *disagree*.

Table 36 *Feeling of Support from Other ITMA Students*

Response to e-mail, Listserv questions	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	7	8	2		19.3% (17)
Agree	9	24	21	9	71.6% (63)
Disagree	1		5		6.8% (6)
Strongly Disagree				2	2.2% (2)
Total	19.3% (17)	36.3% (32)	32.0% (28)	12.5% (11)	100.0%* **(88)**

**Note:* Total percentages may not equal 100.0%* based on rounding, and seven missing.

Additionally, question 45 asked, "*During my listserv discussions with other ITMA students I feel like I'm part of an online learning community*", 86 responded. Percentages ranged from 84.8% (73 respondents) indicating *strongly agree* to *agree* and 15.1% (13 respondents) indicating *strongly disagree* to *disagree*. Table 37x displays the results for question 45 by the year the respondents started the ITMA program. All four groups had a greater number of responding to *agree* to feeling like they were part of an online learning community during their listserv discussions.

Table 37 *During Listserv Discussions Students Feel like Part of a Community*

Listserv discussions sense of community	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	5	4	1		11.6% (10)
Agree	10	24	21	8	73.2% (63)
Disagree	2	2	6		11.6% (10)
Strongly Disagree		1		2	3.4% (3)
Total	19.7% (17)	36.0% (31)	32.5% (28)	11.6% (10)	100.0%* **(86)**

**Note:* Total percentages may not equal 100.0%* based on rounding, and nine missing.

Use of inclusive language.

Survey question 41, examined if students "*address each other by their first name during their listserv discussions",* 85 responded. Table 38 contains the results, 71 (83.5%) indicated *strongly agree* to *agree* and 14 (16.5%) *strongly disagree* to *disagree*.

Table 38 *Students Use of First Name during Listserv Discussions*

Listserv discussions - Use of first name	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	5	10	4		22.3% (19)
Agree	8	20	17	7	61.2% (52)
Disagree	2		7	1	11.8% (10)
Strongly Disagree	1	2	1		4.7% (4)
Total	18.8% (16)	37.6% (32)	34.1% (29)	9.4% (8)	100.0%* **(85)**

**Note:* Total percentages may not equal 100.0%* based on rounding, and ten missing.

Survey question 42 examined "*students use of the pronoun "we" (i.e., "we" vs. "I") in the listserv discussions"*, 80 responded. Table 39 shows the responses ranging from 63 (78.7%) indicating *strongly agree* to *agree* and 17 (21.2%) indicating *strongly disagree* to *disagree*.

Table 39 *Use of Pronoun "we" during Listserv Discussions*

Use of inclusive language	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	3	11	2		20.0% (16)
Agree	10	15	16	6	58.7% (47)
Disagree	2	4	9	1	20.0% (16)
Strongly Disagree			1		1.2% (1)
Total	18.7% (15)	37.5% (30)	35.0% (28)	8.7% (7)	100.0%* **(80)**

**Note:* Total percentages may not equal 100.0%* based on rounding, and 15 missing.

Additionally, the analysis of the qualitative data revealed the respondents made use of inclusive language in their responses submitted for the thirteen opened-ended questions. The use of the pronouns "we" (136 occurrences), "our" (28 occurrences), and

"us" (24 occurrences), suggests that participants' sense of inclusion with others (Wiener & Mehrabian, 1968). Also suggesting inclusion of others was the use of such phrases as, "*my cohort", "my colleagues", "my team", "my peers", "my group", and "my ITMAers"*, also suggesting inclusion of others.

Presence of feedback from support personnel.

For survey question 23 "*The individualized feedback received on my course assignments from the ITMA support personnel is constructive",* resulted in 88 responses. The responses ranged from the highest number of the respondents 68 (77.3%) indicating *strongly agree* to *agree*, while 20 (22.7%) indicated *strongly disagree* to *disagree*. Table 39 contains the results for survey question 23 by the year the respondents started the program.

Table 40 *Individualized Feedback on Course Assignments is Constructive*

Constructive Feedback	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Strongly Agree	6	2	6	3	19.3% (17)
Agree	10	23	12	6	58.0% (51)
Disagree	1	5	7	2	17.0% (15)
Strongly Disagree		2	3		5.7% (5)
Total	19.3% (17)	35.2% (31)	32.9% (29)	12.5% (11)	100.0%* (88)

* *Note:* Total percentages may not equal 100.0%* based on rounding, and seven missing.

Research Question Two

The second research question addressed "What value do adult distance learners place on the construct of social presence (as defined for this study) within the context of an asynchronous Web-based Master's degree program?" Six designed survey questions addressed the second research question that pertained to the value respondents placed on sense of concern, personalized communication, establishing friendships, and a sense of a learning community.

Importance placed on sense of concern from others.

Question 16 asked "*the importance of feeling a sense of concern from the ITMA support personnel,"* 95 responded. From the ninety-five responses, 85 (89.4%) of the

respondents indicated it was *very important* to *important*, whereas 10.5% indicated it was *of little importance* for them to feel a sense of concern from the ITMA support personnel. Table 41 contains the responses reported by all four groups, who overall placed importance to feeling a sense of concern from support personnel.

Table 41 *Feeling a Sense of Concern from ITMA Support Personnel*

Importance	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very important	8	8	8	6	31.6% (30)
Important	8	21	18	8	57.9% (55)
Of little importance	1	4	5		10.5% (10)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* (95)

* *Note:* Total percentages may not equal 100.0%* based on rounding.

Question 35 inquired on the "*importance of feeling a sense of concern from other ITMA students*", 91 responded. The majority of the respondents 58 (63.7%) reported it was *very important* to *important*, while 33 (36.2) indicated *of little importance* to *not important.* Table 42 shows the results for question 35, which indicates that the participants placed more importance on feeling a sense of concern from support personnel than they do from other students

Table 42 *Feeling a Sense of Concern from other ITMA Students*

Importance	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very important	3	4		1	8.8% (8)
Important	12	18	13	7	55.0% (50)
Of little importance	2	10	11	5	30.7% (28)
Not important		1	3	1	5.5% (5)
Total	18.6% (17)	36.2% (33)	29.6% (27)	15.3% (14)	100.0% (91)

* *Note:* Total percentages may not equal 100.0%* based on rounding and four missing.

Importance placed on personalized communication.

Survey question 19 inquired about "*the importance placed on personalized communication received from the support personnel",* 95 responded. Table 43 contains the results and shows 82 (86.3%) of the respondents indicated it was *very important* to *important* and 13 (13.7%) felt it was *of little importance*.

Table 43 *Importance of Personalized Communication from Support Personnel*

Personalized communication	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very important	10	11	10	7	40.0% (38)
Important	6	18	14	6	46.3% (44)
Of little importance	1	4	7	1	13.7% (13)
Total	17.9% (17)	34.7% (33)	32.6% (31)	14.7% (14)	100.0%* (95)

* *Note:* Total percentages may not equal 100.0%* based on rounding.

Importance placed on establishing new friendships.

Question 31 asked the participants for *"the importance placed on establishing friendships with other ITMA students"*; 93 responded. Table 44 shows the results with 51 (54.8%) indicating it was *very important* to *important*, whereas 42 (45.2%) indicated it was *of little importance* to *not important* to establishing new friendships with other students.

Table 44 *Establishing Friendships with other ITMA Students*

Importance	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very important	5	4			9.7% (9)
Important	10	13	12	7	45.2% (42)
Of little importance	2	11	14	5	34.4% (32)
Not important		4	4	2	10.7% (10)
Total	18.2% (17)	34.4% (32)	33.3% (31)	15.0% (14)	100.0%* **(93)**

* *Note:* Total percentages may not equal 100.0%* based on rounding, and two missing.

Importance placed on being part of an online learning community.

Question 46 asked *"How important is it to you to feel that you are part of an ITMA online learning community?"* Ninety-one responded of which 77 (84.6%) indicated it was *very important* to *important* and 14 (15.4%) expressed *of little importance*. Table 45 contains the results.

Table 45 *Feeling that Student is Part of an Online Learning Community*

Importance	Year Respondents Started ITMA Program				
	1998	*2000*	*2001*	*2002*	**Total**
Very important	3	8	5	5	28.6% (26)
Important	8	20	17	6	56.0% 51
Of little importance	1	3	8	2	15.4% 14
Total	18.6% (17)	34.0% (31)	32.9% (30)	14.3% (13)	100.0%* **(91)**

* *Note:* Total percentages may not equal 100.0%* based on rounding and four missing.

Additional contributions made by the participants.

Finally, participants provided input on their overall interaction experiences, within the ITMA program. The qualitative question 52 asked *"Is there anything else you would like to add regarding your interaction experiences with either the support personnel, students, or course content, that you have not been asked,"* resulted in 49 responses. A respondent who felt it was important to ask submitted the question, "What other communication option can be used to make your experience even more satisfactory." Additional input by students described their perceptions of what seems to be lacking in their current interaction experiences in the program. For example, for the recurring theme "lack of community" some of the respondents suggested occasional F2F meetings with other students that would help them to feel like part of a community. For "lack of interactions between students", suggestions included having more built-in activities which would allow students opportunities to interact with each other. Others commented that students be instructed on the use of the listserv, to avoid some students from hitting reply to all when the message is meant for a specific individual. Table 46 contains other recurring themes based on the responses elicited from question 52.

Table 46 *Additional Input from Students on their ITMA Interaction Experiences*

Occurrences	4.1. Learner Input
	4.1.1. Learner-to-learner interactions
4	4.1.1.1. Lack of interactions between students
7	4.1.1.2. Lack of F2F contact with other students
5	4.1.1.3. Listserv is misused, too much complaining
5	4.1.1.4. Lack of community
3	4.1.1.5. Lack of intellectual dialog (suggests use of chats)
17	4.1.1.6. Overall Satisfaction (12+, 5-)
	4.1.2. Learner-to-support personnel
2	4.1.2.1. Untimely grading
1	4.1.2.3. Unsatisfied with posting of grades
	4.1.3. Learner-to-faculty interactions
2	4.1.3.2. Lack of flexibility on due dates
5	4.1.3.1. Lack of communication/absence of faculty
	4.1.4. Learner-to-content interactions
5	4.1.4.1. Lack of structure/support
4	4.1.4.2. Unrealistic assignments/deadlines
8	4.1.4.3. No feedback on assignments
	4.1.5. Learner-to-interface
1	4.1.5.1. Lack of instruction on technical skills

From the data analysis conducted on question 52, recurring themes that emerged as a result of the learners' overall interaction experiences within the ITMA program were categorized accordingly. Eight of the respondents indicated that they were new to the ITMA program and, therefore, they did not know any of the other ITMA students. Additionally these eight new students were not aware that there was a listserv and, therefore, they reported that they had skipped the questions related to the listserv discussions.

Examples of excerpts from the comments submitted in response to survey question 52 are as follows:

"In one class, my class project (approx. 15 pages) was graded within 10 minutes of my submitting it. This makes me wonder how much effort is being put into the assignments being graded. Even if a paper is a 100.0%*, I'd like to get some feedback whether it is positive or negative."

"I would have appreciated some comments from the instructor instead of a grade posted weeks later. Also when assignments build upon each other, prompt feedback is critical. I became so frustrated last summer I seriously considered dropping out of the program."

"In general I think because the amount of interaction is so limited (student-to-student, student-to-professor, etc.), which, of course, is the nature of distance learning, the more direct feedback we can receive, the better off we are and the more connected to the program we (I) feel. Without the feedback the format can be very impersonal and robot-like."

"I would like to see more opportunity to have open chats with the instructors on a regular or rotating basis. This could be for open questions or specific problem solving. It should be optional with the chat results posted as a reference. I have learned that it is important for me to ask questions, seek help and treat an online course like any course. Getting to know the instructors and interacting with them adds to the experience and gets problems solved or questions answered."

"The one drawback that I have found with distance learning is not having the face-to-face contact with classmates and support personnel. Even though I communicate via e-mail with classmates and support personnel, it is not the same as having personal contact with them on campus."

"Finally, at NO time in this last two years have I felt a part of the VT community. Even after it was suggested in one of our texts that online learners be included in campus events was there ANY effort to do so. Just a simple task like sending each of us a Hokies bumper sticker or window sticker could have accomplished this nicely. SOME inclusion with campus life should have been made EVERY semester."

"I loved this program and was very sad when I finished it. Most of what we did was online with a few very timely face-to-face classes. I think the balance was just right. I didn't feel connected enough to the program until the end of the first year when we spent most of a week at Tech. That was a very important time in getting to know the other students, the professors, and realizing that we were part of VaTech."

From the 17 responses (see codes 4.1.1.6 and 4.1.2.3.), regarding satisfaction of the participants' overall interaction experiences in the ITMA program, 12 respondents indicated they were *very satisfied* with their overall experiences.

CHAPTER FIVE

Discussion and Conclusions

This chapter presents the conclusions drawn from this study, discusses the potential implications, and based on the results of this study, proposes future studies. The focus of this study was to determine the existence of social presence from the learners' perspective based on their overall experiences within an asynchronous Web-based instructional program. In addition to determining the existence of social presence, an attempt was made to elicit the value adult distance learners place on it through the two research questions that guided this study. Data collected regarding the demographics and research questions resulted in the following outcomes.

Demographics

The literature on the adult distance learners' attributes (Connick, 1999; Wolcott, 1996) support the findings on the demographics for this study. Many of the participants were educators working towards obtaining their Master's degree with the majority located throughout different counties in the state of Virginia. A higher percentage of females (76.8%) than males (23.2%) participated in this study. The majority of the learners were adults who indicated their ages to be 25-older, and all but one work full-time (99%). Aside from working full-time, the majority of the participants reported devoting an average of 11-20 hours a week on their program studies, followed by the students reporting 0-10 hours a week.

Four groups participated, based on the year the students started the ITMA program (i.e., 1998, 2000, 2001, and 2002). The largest group of respondents (33 out of 95) started the program in the year 2000, in addition, the majority of the withdrawals (seven) from the program occurred in that same year. Of those who withdrew from the program in 2000, four had completed 0-6 hours, two indicated having completed 7-12 hours, while one completed 13-18 hours. From the 1998 cohort, approximately 88% of the respondents (15 out of 17) completed the ITMA program that consisted of 30 hours, one completed 19-24 hours, and another completed 25-30 hours but withdrew from the program. Across all four groups, almost half of the students had taken only two courses,

as indicated by those that responded 0-6 hours, thus having had little exposure to the ITMA program.

Two individuals provided reasons for dropping out of the program. One indicated withdrawing due to personal reasons. The others reported lacking the hardware and software skills required for completing the assignments and preferring more opportunities for learner-to-faculty interactions. In addition, the 2002 group that were new to the program, had only been in the program for about two months and therefore did not answer the few of the questions relating to interactions on the listserv. Although, they were new to the program they did state their expectations of the program. For example, since they did not have access to a listserv, they indicated it would be a valuable communication tool for exchanging ideas with other learners.

Research Question One

This first research question examined to what extent social presence (SP), which is comprised of interactivity, intimacy, and immediacy, exist within the context of an asynchronous Web-based Master's degree program. Three subsequent questions addressed each of the constructs that comprise social presence - interaction, intimacy, and immediacy.

Interactions.

The types of interactions examined in this study included learner-to-teacher (i.e., support personnel or faculty), learner-to-learner, and learner-to-content. The literature describes these three types of interactions as important to providing a sense of interactivity to learners (Moore, 1989b; Wagner, 1994; 1997). A fourth interaction type that emerged from the qualitative responses were learner-to-interface interactions, that were mentioned in the literature (Hillman et al., 1994), but was not specifically examined in this study. Hillman et al. noted that learners who do not have the required necessary communication skills to use the media spend much time learning how to interact with the technology.

The results from the quantitative and qualitative analyses show that there were differences in interactivity/interaction experiences for each of the ITMA groups. Based on the findings of this study the following conclusions can be made. The 1998 group reported more interaction opportunities with other learners and support personnel (i.e.,

faculty, program staff, technical support, and graders) than the other three groups. Besides taking program courses online, this group had the opportunity to experience taking some of the ITMA courses on-campus, providing them an opportunity for face-to-face interactions with other members of the ITMA program. In addition, respondents indicated having had opportunities to meet with the support personnel at their cohort locations (i.e., Abingdon, Franklin, Roanoke, etc.).

Interactions opportunities existed through a listserv and e-mail that allowed participants to interact with other members of the ITMA program. All 17 respondents of the 1998 group indicated being very satisfied to satisfied with their interactions with the support personnel and other learners. Most of the learners from this group were also satisfied with the use of projects for assessment and felt that this strategy added to their sense of interaction with the content.

The group that began the program in fall of 2000 reported that they interacted rarely to occasionally with support personnel, but regardless, they were largely satisfied with the interactions they did have. This group responded similarly regarding their interactions with each other, as they indicated that they interacted rarely to occasionally interacting with each other, but they were satisfied with the levels of these interactions. A majority of the 2000 group felt that the creation and use of projects as an instructional strategy heightened their sense of interaction with the course content. The majority of this group was satisfied with the use of this strategy.

Students who began the program in 2001 also stated that they interacted only occasionally to rarely with support personnel. They indicated being satisfied with their interactions. However, most indicated that they rarely interacted with other students, but regardless of the frequency, they were satisfied with these interactions. Additionally, they responded that the creation of projects did increase their sense of interaction with the content, and they were equally satisfied with this instructional approach.

Fourteen students participated from the 2002 group, which began the program in January 2002. They reported that since they have not had enough time in the program to interact with other students and the content they were unable to answer many of the questions relating to interactions with other students. Although, a few did comment that they would like the opportunity made available for them to interact with other students in

group assignments to get to know each other. At the time of this study, their interactions had mostly been with the support personnel (i.e., program coordinator and technical support). Based on these interactions, most all of them reported satisfaction. Furthermore, this group's only means of communication with members of the ITMA program had been through e-mail. At the time of this study, they indicated that a listserv was not available to them.

In this study, learner-interface interactions emerged as a fourth type of interaction of concern. There were indications that some of the participants had a difficult time learning the applications required for completing the program. However, some students reported that some of their peers' seem to be struggling due to their lack of skill with the technology resulting in spending too much time helping them. A few students mentioned that they lacked the technical skills to work with the hardware and software applications required for the course content and one student dropped out of the program because of lack of technical skills.

Intimacy.

Because of the opportunities provided for the 1998 group to meet face-to-face, several of the participants commented that this allowed them to get to know other students and felt comfortable seeking assistance from them in their online interactions. This group also indicated that they established friendships and only one reported that it was difficult to establish friendships, perhaps due to their " introverted nature". A couple of students mentioned establishing friendships with some of the faculty due to their face-to-face encounters. All but one of the respondents indicated a sense of affiliation with the ITMA program and they would recommend the program to others based on their overall experiences. In addition, the majority would consider taking future web-based courses because of their positive experiences in the ITMA program.

The group of students in 2000 felt comfortable seeking assistance from support personnel and from other students. However, many of these students suggested that they did not establish new friendships with other ITMA students (18 of 33), but 13 of the respondents agreed that they did. This group also was divided in regards to how important it was to establish friendships with other students in the program. Interestingly a majority of this group felt a sense of affiliation with the program. They indicated that

their sense of affiliation with the program influenced their satisfaction with the program, resulting in a majority of respondents being willing to recommend the program to others.

For the 2001 group, a strong majority (27 of 31) felt comfortable level asking for help from support personnel. However, fewer were comfortable seeking assistance from each other (16 of 31). Although, a majority of these learners indicated that they had not established friendships with other ITMA students. This could be due to the decreased amount of interactions. Finally, most of the 2001 group felt an affiliation with the ITMA program, and that this affiliation influenced their satisfaction with the program, resulting in the majority being willing to recommend the program to others.

An observation was made on the 2000 and 2001 students whose comments indicated that they are very familiar with their local cohorts. One cohort even met for lunch regularly to discuss the ITMA program, courses, and difficulties they might be encountering with the assignments. From the qualitative data, there were instances where student's interactions suggested a level of intimacy. Some examples included: meeting another student for dinner, and calling each other long distance for technical or emotional support. In one instance, a student drove quite a distance to meet another student to discuss course assignments. The one student who drove was invited to spend the night. Students who have a need for face-to-face interactions seemed to take the initiative to connect with other ITMA learners aside from the opportunities provided by the ITMA program.

Learners in the 2002 group unanimously agreed that they were comfortable seeking assistance from support personnel. A majority also agreed that they were comfortable seeking help from each other. Likely because this group has just started the program, most indicated that they have not established new friendships with their colleagues. However, most of the students in this group identified a sense of affiliation with the ITMA program, agreeing that such affiliation affected their satisfaction with the program. Concurrently, they all would recommend the program to others, based on their positive experiences.

Immediacy.

Data from all four groups of learners were consistent with regard to the existence of immediacy in the ITMA program. A majority of the participants agreed that they received

personalized communication from support personnel and they were satisfied with the interchanges they had with members of the support staff. In terms of students initiating personalized communication with one another, the majority of the students in 1998, 2000, 2001, and 2002 reported using mostly individualized e-mail. The 1998, 2000, and 2001 groups used the telephone and listserv, while some met with members of their local cohorts.

Regarding individualized feedback on assignments, all of the groups felt that they received such feedback from support personnel and agreed that it was constructive in nature. The use of inclusive language among students was evident from both the quantitative and qualitative analysis. Students agree that it was obvious from their listserv discussions that students included inclusive language such as the pronoun "we" in their listserv postings, indicating the existence of immediacy as conceptualized by Wiener and Mehrabian (1968).

Most participants reported a sensed concern from the support personnel. Based on the qualitative results a large number of the respondents reported that they sensed the support personnel demonstrated concern towards them by the attention given to their issues, problems, and their helpful nature in resolving their problems promptly. Students perceived concern from the ITMA support personnel in the manner in which they provided clear, precise, thorough, and detailed directions to their questions. It appears that the support personnel conveyed a sense of concern towards the learners indicting the existence of immediacy.

Further, the analysis of the qualitative data supported the concern that students perceived from support personnel. An observation made across all groups was the respondents' use of words to describe their sense of concern from the ITMA support personnel across. The following comments were extracted from the qualitative responses as examples. Students perceived support personnel as: "very helpful"," caring, exemplary", "express concern", "encouraging", "down to earth", "seem personable", "exceptional positive attitude", "very accommodating", "professional in their manner", "courteous", "outstanding", "very friendly", and "give helpful advice." A few students even stated that they would rather feel a sense of concern from the support personnel than from their peers.

A greater percentage of students from the 1998, 2000, and 2001 groups also felt a sense of concern from other students, although the 2002 group did not indicate the same. As mentioned before, this could be due to the fact that they are relatively new to the ITMA program and have not had time to experience interactions with other students. Examples of students demonstrating a sense of concern for each other were reported in the qualitative data from the 1998, 2000, and 2001 groups. Only one individual from the 2002 group responded with a comment that through a chat session there was concern from other students. The other groups indicated that students demonstrate empathy towards each other. There was mention of the September 11 incident, during that period there seem to be a greater degree of concern for those students who had lost family or friends. Other students, who expressed their problems through the listserv, usually found support from other students, while some students reported receiving encouraging words from their peers through personal e-mail messages.

Finally, most of the respondents from all four groups felt as though they were part of a learning community. Even in the 2002 group, the respondents (8 out 14) indicated that they sense they are part of a learning community - another indication of immediacy. This finding was quite surprising, considering the frequency of interactions differ across each cohort year.

Learner's Value Placed on Social Presence

Research question two pertained to the value that adult distance learner's place on the construct of social presence (as defined for this study) within the context of an asynchronous Web-based Master's degree program.

The majority of the participants in 1998, 2000, and 2002 groups felt a sense of concern from support personnel as important. Participants from the 2001 group indicated that concern from other learners was not as important to them. The value that students placed on establishing friendships differed across all four groups. The 1998 group placed high importance on establishing friendships with other students, a slightly higher percentage of students in the 2000 and 2001 group indicated it was of little importance. The 2002 group was split in their decision, half reported feeling that forming friendships was important, while the other half indicated it was of little importance.

Students however, across all four groups, placed a very high value on receiving personalized communication from the ITMA support personnel. Finally, the value students placed on feeling like they are part of a learning community received high ratings. The highest percentages were indicated from the 1998, 2000, and the 2002 groups, placing a high importance on being a part of a learning community. While the 2001 group had a majority (22 out of 33) of the respondents indicating importance, eight out of thirteen of the students placed little importance on feeling like they are part of a learning community.

Finally, the overall results from this study revealed that social presence, as comprised by interaction/interactivity, intimacy, and immediacy, does exists in the context of the ITMA program, an asynchronous Web-based Master's degree program. The extent to which it exists varied across each of the four groups due to the different interactions experienced by each. It appeared that the level of interactions encountered between the members of the ITMA program added to the level of intimacy and immediacy.

The interaction opportunities provided by the program varied from year to year. The 1998 group received the most opportunities to interact not only face-to-face (F2F), but also by means of the listserv, chat rooms, and e-mail. The conclusion drawn here is that these opportunities made it possible for students to feel comfortable with each other and get to know one another well enough to establish friendships. This group also spent the most time together working towards completing the program and received all three types of interactions stated in the distance learning literature (Moore, 1989b). Consequently, the 1998 group indicated the highest degree of intimacy on their reported close acquaintances, associations, and familiarity which are indicators of high levels of intimacy (Rubin et al., 1994). These groups also demonstrated a higher degree of immediacy as indicated by their sense of concern for each other, their personalized exchanges, and their use of inclusive language.

Although, the program did not provide the 2000 and 2001 groups with the same interaction opportunities as the 1998 group, opportunities for interactions were still available through the student listserv and individualized e-mail. The 2000 group did have an orientation meeting that provided an opportunity to meet the support personnel and

other learners. However, they indicated a desire for more opportunities for F2F learner-to-learner interactions. Regardless of the interaction opportunities provided within the ITMA program, several of the students from the 2000 and 2001 group took the initiative to conduct their own F2F meetings with their peers. Some took it upon themselves to set up meetings at local libraries, or computer labs. Those students who were part of a local cohort (i.e., Abingdon, VA Beach, etc.) indicated meeting over lunch forming sort of a support group. Based on the qualitative data analysis the 2000 and 2001 groups formed a degree of intimacy with each other (i.e., familiarity, associations, etc.) and immediacy (i.e., sense of concern, personalized communication, etc.) through their overall interactions. These groups reported satisfaction with their interactions with the support personnel, other students, and the content.

The 2002 group had the least opportunities for interactions due to the least amount of time to interact with members of the ITMA program since they just started the program the beginning of the 2002 year. Regardless of their limited experiences, having just been in the program for about two months, they indicated satisfaction with their interactions, and yet felt like they were part of learning community.

Conclusions

The findings show that the lack of feedback on assignments and untimely feedback from support personnel to learners' questions also influence student's overall satisfaction with the program. For this study, the lack of interaction with faculty and other learners influenced the learners' satisfaction, but not their overall satisfaction with the program. However, the support and sense of concern demonstrated by the program director, program coordinator, technical support, and graders towards the students, provided a level of immediacy that appeared to add to the satisfaction with the overall with the 2000, 2001, and 2002 groups.

Given the choice between an increase of interactions with the faculty or other learners, the majority of the participants indicated wanting more exchanges with their peers with those preferably built into the program. Several of the students suggested the use of chat rooms for small group activities with other students. This would provide them opportunities, to not only get to know other students but also it would provide an opportunity for dialog and exchange of ideas similar to the classroom experience.

It seems that some of the students are hesitant to initiate their own interactions when first entering the program. Given an opportunity to interact, for example with a group assignment, it would seem that this would add to their comfort level so that others do not feel like "strangers". This seems to be especially important to those new students who conveyed being cautious in initiating contact with other students that they do not know, especially through e-mail, which seems to be more personal than the listserv.

The findings from this study were supported by the distance education literature (Gundawardena & Zittle, 1997; McIsaac & Gunawardena, 1996; Moore & Kearsley, 1996; Wolcott, 1996). "In spite of the characteristics of the medium, student perception of social and human qualities…will depend on the social presence created by the instructors/moderators and the online community" (Gunwardena & Zittle, 1997, p. 23). As these authors stated, social presence is not just reliant on the distance delivery medium. Social presence also depends on other factors such as the design of the course or program, the opportunities provided for interaction with others, and how distance learners choose to participate (or not) in those opportunities.

REFERENCES

Anderson, T. D., & Garrison, D. R. (1995). Transactional issues in distance education: The impact of design in audio-teleconferencing. *The American Journal of Distance Education, 9*(2), 27-45.

Argyle, M., & Dean, J. (1965). Eye contact and distance affiliation. *Sociometry*, *28*, 289-304.

Baynton, M. (1992). Dimensions of "control" in distance education: A factor analysis. *The American Journal of Distance Education, 6*(2), 17-31.

Best, J. W. & Kahn, J.V. (1993). *Research in education*. Boston: Allyn & Bacon.

Blocher, J. M. (1997). Self-regulation of strategies and motivation to enhance interaction and social presence in computer-mediated communication (Doctoral dissertation, Arizona State University, 1997). *Dissertation Abstracts International, 03A*.

Bradac, J. (1979). Three language variables in communication research: Intensity, immediacy, and diversity. *Human Communication Research, 5*, 257-267.

Bruffee, K. A. (1993). *Collaborative learning: Higher education, interdependence, and the authority of knowledge*. Baltimore, MD: The John Hopkins University Press.

Care, W. D. (1996). The transactional approach to distance education. *Adult Learning, 7*(6), 11-12.

Christophel, D. M. (1990). The relationships among teacher immediacy behaviors, student motivation, and learning. *Communication Education, 39*(4), 323-40.

Collins, M. P., & Murphy, K. L. (1997). Development of communication conventions in instructional electronic chats. *Journal of Distance Education, 12*(1-2), 177-200.

Connick, G. P. (1999). *The distance learner's guide*. Upper Saddle River, NJ: Prentice Hall.

Creswell, J. W. (1994). *Research design: qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.

Cyrs, T. (1997). The interactive study guide. In T. Cyrs (Ed.), *Teaching at a distance with the merging technologies: An instructional systems approach*. Las Cruces, NM: Center for Educational Development, New Mexico State University.

Dick, W., Carey, L., & Carey, J. O. (2001). *The systematic design of instruction* (5th ed.). New York, NY: Harper Collins College.

Dickie, S.D. (1999). *The live experience of being a distance learner*. (ERIC Document Reproduction Service No. ED434231)

Fink, A., & Kosecoff, J. (1998). *How to conduct surveys*. Thousand Oaks, CA: Sage.

Fink, A. (1995). *How to ask survey questions*. Thousand Oaks, CA: Sage.

Fowler, F. J. (1984). *Survey research methods*. Beverly Hills, CA: Sage.

Fowler, F. J. (1988). *Survey research methods*. Beverly Hills, CA: Sage.

Freitas, F. A., Myers, S. A., & Avtgis, T. A. (1998). Student perceptions of instructor immediacy in conventional and distributed learning classrooms. *Communication Education, 47*(4), 366-72.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction* (6th ed.). White Plains, NY: Longman.

Garrison, D. R. (1990). An analysis and evaluation of audio teleconferencing to facilitate education at a distance. *The American Journal of Distance Education, 4*(3), 13-24.

Gilbert, L., & Moore, D.R. (1998). Building interactivity into web courses: tools for social and instructional interaction. *Educational Technology, 38*(3), 29-35.

Gorham, J. (1988). The relationship between verbal teacher immediacy behaviors and student learning. *Communication Education, 37*(1), 40-53.

Gunawardena, C. N. (1992). Changing faculty roles for audiographics and online teaching. *The American Journal of Distance Education, 6*(3), 58-71.

Gunawardena, C. N. (1995). Social presence theory and implications for interaction and collaborative learning in computer conferences. *International Journal of Educational Telecommunications, 1*(2/3), 147-66.

Gunawardena, C. N., & Boverie, P. E. (1993). *Impact of learning styles on instructional design for distance education.* Paper presented at the World Conference of the International Council of Distance Education (November 8-13, 1992), Bangkok, Thailand.

Gunawardena, C. N., & Zittle, F. J. (1997). Social presence as a predictor of satisfaction within a computer-mediated conferencing environment. *The American Journal of Distance Education, 11*(3), 8-26.

Hackman, M. Z., & Walker, K. B. (1990). Instructional communication in the televised classroom: The effects of system design and teacher immediacy on student learning and satisfaction. *Communication Education, 39*(3), 196-206.

Harasim, L. (1996). Online education. In T. M. Harrison & T. Stephen (Eds.), *Computer networking and scholarly communication in the twenty-first-century university* (pp. 203-214). Albany, NY: State University of New York Press.

Harasim, L. M. (1993). *Global networks: Computers and international communication*. Cambridge, MA: MIT Press.

Harasim, L. M. (1995). *Learning networks: A field guide to teaching and learning online.* Cambridge, MA: MIT Press.

Hardy, D. W., & Boaz, M. H. (1997). Learner development: Beyond the technology. In T. Cyrs (Ed.), *New directions for teaching and learning* (Vol. 71, pp. 41-48). San Francisco, CA: Jossey-Bass.

Heath, R. L., & Bryant, J. (1992). Human communication theory and research: Concepts, contexts, and challenges. In J. Bryant (Ed.), *Communication textbook series: General communication theory and methodology* (pp. ix, 337). Hillsdale, NJ: Erlbaum.

Hillman, D. C., Willis, D. J., & Gundawardena, C. N. (1994). Learner-interface interaction in distance education: An extension of contemporary models and strategies for practitioners. *The American Journal of Distance Education, 8*(2), 30-42.

Hiltz, R. (1997). Impacts of college-level courses via asynchronous learning networks: Some preliminary results. *Journal of Asynchronous Learning Networks, 1*(2). Retrieved May 5, 1999 from http://www.aln.org/alnweb/journal/issue2/hiltz.htm

Hiltz, S. R. (1994). *The virtual classroom: Learning without limits via computer networks*. Norwood, NJ: Ablex.

Holmberg, B. (1989). *Theory and practice of distance education*. New York: Routledge.

Imel, S. (1988). *Guidelines for working with adult learners*. ERIC Digest No. 77. (ERIC Document Reproduction Service No. ED299458)

Issac, S., & Michael, W.B. (1995*). Handbook in research and evaluation: A collection of principles, methods, and strategies useful in the planning, design, and evaluation of studies in education and the behavioral sciences*. San Diego, CA: EdITS, 1995.

Jaques, D. (1991). *Learning in groups*. Houston, TX: Gulf.

Johnson, D. W., & Johnson, R. J. (1999). *Learning together and alone*. MA: Allyn & Bacon.

Johnson, D. W., & Johnson, R. T. (1996). Cooperation and the use of technology. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology. A project of the association for educational communications and technology (AECT)*, (pp. 1017-1044). New York, NY: Simon & Schuster MacMillan.

Jonassen, D. H. (1995). Constructivism and computer-mediated communication in distance education. *The American Journal of Distance Education, 9*(2), 7-26.

Jonassen, D. H., Peck, K. L., & Wilson, B. G. (1999). *Learning with technology: A constructivist perspective*. Upper Saddle River, NJ: Merrill.

Keegan, D. (1993). *Theoretical principles of distance education*. New York: Routledge.

Keegan, D. (1996). *Foundations of distance education* (3rd ed.). New York: Routledge.

Keller, J. M. (1999). Using the ARCS motivational process in computer-based instruction and distance education. *New Directions for Teaching and Learning, 78*(Summer), 39-47.

Knowles, M. S. (1973). *The adult learner: A neglected species*. Houston, TX: Gulf.

Knupfer, N. N., & McLellan, H. (1996). Descriptive Research Methodologies. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and Technology. A project of the association for educational communications and technology (AECT),* (pp. 1196-1212). New York, NY: Simon & Schuster MacMillan.

Kuehn, S. A. (1993). *Communication innovation on a BBS: A content analysis*. Retrieved July 2000 from http://jan.ucc.nau.edu/~ipct/1993/n2/kuehn.txt

Lauzon, A. C. (1992). Integrating computer-based instruction with computer conferencing: An evaluation of a model for designing online education. *The American Journal of Distance Education, 6*(2), 32-46.

Lewis, L., Farris, E., Snow, K., & Levin, D. (1999). *Distance education at post-secondary education institutions: 1997-98. National Center for Education Statistics*. Retrieved August 2001 http://www.ed.gov/NCES/pubs98/distance

Logan, R. (1995). *The fifth language: Learning a living in the computer age*. Toronto, Canada: Stoddart.

Lombard, M., & Ditton, T. (1997, September). At the heart of it all: The concept of presence. *Journal of Computer-Mediated Communication, 3*(2). Retrieved May 2000 from http://www.presence-research.org/jcm/vol3/issue2/lombard.html

Markham, A. N. (1998). *Life online: Researching real experience in virtual space*. Walnut Creek, CA: Altamira Press.

McIsaac, M. S., & Blocher, J. M. (1998). How research in distance education can affect practice. *Educational Media International, 35*(1), 43-47.

McIsaac, M. S., Blocher, J. M., Mahes, V., & Vrasidas, C. (1999). Student and teacher perceptions of interaction in online computer-mediated communication. *Educational Media International, 36*(2), 121-31.

McIsaac, M. S., & Gunawardena, C. N. (1996). Distance education. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology. A project of the association for educational communications and technology (AECT),* (pp. 403-437). New York, NY: Simon & Schuster MacMillan.

McLeod, P. L., Baron, R. S., & Marti, M. W. (1997). The eyes have it: Minority influence in face-to-face and computer-mediated group discussion. *Journal of Applied Psychology*, 82(October), 706-18.

Mehrabian, A. (1969). Some referents and measures of nonverbal behavior. *Behavior Research Methods and Instrumentation, 1*(6), 205-207.

Mehrabian, A. (1989). Some subtleties of communication. *Language, Speech and Hearing Services in Schools 3*(4), 62-67.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass .

Miller, D. C. (1991). *Handbook of research design and social measurement*. Newbury Park, CA: Sage.

Moore, M. G. (1987). Learners and learning at a distance. *International Council for Distance Education Bulletin, 14*, 59-65.

Moore, M. G. (1989). Distance education: A learner's system. *Lifelong Learning, 12*(8), 8-11.

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

Moore, M. G. (1993). *Theory of transactional distance*. In D. Keegan (Ed.), Theoretical principles of distance education (pp. xiii, 272). London: Routledge.

Moore, M. G., & Kearsley, G. (1996). *Distance education: A systems view*. Belmont, CA: Wadsworth.

National Center for Education Statistics (1999). Retrieved on August 15, 2001 from http://nces.ed.gov/pubs98/pj2008/highlights.html

Palloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom* (1st ed.). San Francisco, CA: Jossey-Bass .

Parker, A. M. (1994). Locus of control, demographics and mode of delivery as predictors of dropout from distance education (Doctoral dissertation, Arizona State University, 1994). *Dissertation Abstracts International, No. 030A*.

Rafaeli, S. (1988). *Interactivity: From new media to communication* (Vol. 16). Newbury Park, CA: Sage.

Retallick, J., Cocklin, B., & Coombe, K. (1999). *Learning communities in education: Issues, strategies and contexts*. London ; New York, NY: Routledge.

Rice, R. (1984). *Communication, research, and technology: The new media*. Beverly Hills, CA: Sage.

Rice, R., & Love, G. (1987). Electronic emotion: Socioemotional content in a computer-mediated communication network. *Communication Research: An International Quarterly, 14*(1), 85-108.

Riel, M. (1996). Cross-classroom collaboration in global learning circles. In T. Koschmann (Ed.), *CSCL: Theory and practice of an emerging paradigm* (p. 187). New Jersey: Erlbaum.

Romiszowski, A. J., & Mason, R. (1996). Computer-mediated communication. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology. A project of the association for educational communications and technology (AECT)*, (pp. 438-456). New York, NY: Simon & Schuster MacMillan.

Rossman, G., & Rallis, S.F. (1998). *Learning in the field: an introduction to qualitative research.* Thousand Oaks, CA: Sage.

Rourke, L., Anderson, T., Garrison, R. D., & Archer, W. (1999). Assessing social presence in an asynchronous text-based computer conferencing. *Journal of Distance Education,* 14(2), 50-71.

Rubin, R. B., Palmgreen, et al. (1994). *Communication research measures: A sourcebook.* NY: Guilford Press.

Saba, F. (1999). Designing instruction for the distant learner. *Distance Education Report, 3*(4), 1-7.

Sherry, L. (1996). Issues in distance learning. *International Journal of Educational Telecommunications, 1*(4), 337-365.

Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. New York, NY: Wiley.

Sproull, L., & Kiesler, S. B. (1986). Reducing social context cues: Electronic mail in organizational communication. *Management Science,32*, pp. 1492-1512.

Tammelin, M. (1998). *From telepresence to social presence: The role of presence in a network-based learning environment*. Paper presented at the Aspects of Media Education: Strategic Imperatives in the Information Age. Media Education Publication No. 8. (ERIC Document Reproduction Service No. ED428754)

Tardy, C. H. (1988). *A handbook for the study of human communication: methods and instruments for observing, measuring, and assessing communication processes.* Norwood, NJ: Ablex.

Trentin, G., & Benigno, V. (1997). Multimedia conferencing in education: Methodological and organizational considerations. *Educational Technology*, 37(5), 32-39.

Wagner, E. D. (1993). Variables affecting distance educational program success. *Educational Technology, 33*(April 1993), 28-32.

Wagner, E. D. (1994). In support of a functional definition of interaction. *The American Journal of Distance Education, 8*(2), 6-29.

Wagner, E. D. (1997). Interactivity: From agents to outcomes. *New Directions for Teaching and Learning*, 7, 19-26.

Walker, K. B., & Hackman, M. Z. (1991). *Information transfer and nonverbal immediacy as primary predictors of learning and satisfaction in the televised course*. Paper presented at the Annual Meeting of the Speech Communication Association (77th, October 31-November 3), Atlanta, Georgia.

Walther, J. B. (1992). Interpersonal effects in computer-mediated interaction: A relational perspective. *Communication Research, 19*(1), 52-90.

Wegerif, R. (1997). The social dimension of asynchronous learning networks. *Journal of Asynchronous Learning Networks, 2*(1). Retrieved June 15, 2000 from http://www.aln.org/alnweb/journal/vol2_issue1/wegerif.htm

Wells, P. (1999). Different and equal: Fostering interdependence in a learning community. In J. Retallick, B. Cocklin, & K. Coombe (Eds.), *Learning communities in education: Issues, strategies and contexts* (1st ed., pp. xi, 297). London; New York, NY: Routledge.

Wenger, E. (1998). *Communities of practice: learning, meaning, and identity*. Cambridge, UK: Cambridge University Press.

White, K. (2000). Face to face in the online classroom. In K. White & B. Weight (Eds), *The online teaching guide: A handbook of attitudes, strategies, and techniques for the virtual classroom* (pp. 1-12). Boston, MA: Allyn & Boston.

Wiener, M., & Mehrabian, A. (1968). *Language within language: Immediacy, a channel in verbal communication*. New York, NY: Appleton-Century-Crofts.

Willis, B. (1995). *Computers in distance education*. Retrieved July 28, 2000 from http://www.uidaho.edu/evo/dist7.html.

Willis, B. D. (1994). *Distance education: Strategies and tools*. Englewood Cliffs, NJ: Educational Technology.

Wilson, B. G. (1996). *Constructivist learning environments: Case studies in instructional design.* Englewood Cliffs, NJ: Educational Technology.

Witt, P. L., & Wheeless, L. R. (1999, April). Nonverbal communication expectancies about teachers and enrollment behavior in distance learning. *Communication Education, 48*(2), 149-54.

Wolcott, L. L. (1994). *Audio tools for distance education.* In B. Willis (Ed.), *Distance education, strategies and tools* (pp. 135-164). Englewood Cliffs, NJ: Educational Technology.

Wolcott, L. L. (1996). Distant, but not distanced: A learner-centered approach to distance education. *TechTrends, 41*(5), 23-27.

Zvacek, S. M. (1991). Effective affective design for distance education. *TechTrends, 36*(1), 40-43.

APPENDICES

APPENDIX A

Institutional Review Board (IRB) Exemption Approval

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

Institutional Review Board

Dr. David M. Moore
IRB (Human Subjects) Chair
Assistant Vice Provost for Research Compliance
CVM Phase II - Duckpond Dr., Blacksburg, VA 24061-0442
Office: 540/231-4991; FAX: 540/231-6033
e-mail: moored@vt.edu

DATE February 5, 2002

MEMORANDUM

TO: Barbara Lockee T&L 0313
Berlinda Saenz T&L 0313

FROM: David M. Moore

SUBJECT: IRB EXEMPTION APPROVAL – "Student Perceptions of Social Presence and its Value in a Web-based Master's Instructional Program" – IRB #02-062

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of February 5, 2002.

cc:File
Department Reviewer: Jan Nespor

APPENDIX B

Survey A

Survey A
Electronic Learning Environment Survey

DIRECTIONS: This survey is designed to examine the perceptions of adult distance learners regarding their interactions within a web-based learning environment. Responses should be based on your experiences within the Instructional Technology Masters of Arts Program (ITMA) at Virginia Tech. All information submitted will be completely anonymous.

There are three parts to the survey: background information, student perceptions of interactions in the ITMA program, and student input. It takes about 15-20 minutes to complete all three parts.

Part I: Background Information

Please indicate a response to the questions by either clicking on a radio button or filling in a text box.

1. Age

- ☐ 24 or younger
- ☐ 25-35
- ☐ 36-45
- ☐ 46 or older

2. Gender

- ☐ Male
- ☐ Female

3. Approximate the number of ITMA program hours you have completed.

- ☐ 0-6
- ☐ 7-12
- ☐ 13-18
- ☐ 19-24
- ☐ 25-30

4. Indicate the year that you began the ITMA program.

(e.g., 1998, 1999, etc.) ☐

5. If you began the ITMA program in the fall of 1998 (ITMA1) or the fall of 2000 (ITMA2), please indicate your cohort location.

- [x] Abingdon
- [ ] Franklin
- [ ] Northern Virgina
- [ ] Virginia Beach
- [ ] Roanoke

6. Estimate how much time per week you devote to the ITMA program studies.

- [ ] 0-10 hours
- [ ] 11-20 hours
- [ ] 21-30 hours
- [ ] 31 or more hours

7. Employment Status

- [ ] Full-time
- [ ] Part-time
- [ ] Not working

8. Teaching Level

- [ ] Elementary
- [ ] Middle
- [ ] Secondary
- [ ] other (refer to item #9)

9. If you are not presently teaching please provide your current job title:

10. Choose your current status in the ITMA program.

- [ ] Currently enrolled in the ITMA Program
- [ ] Have completed the ITMA Program
- [ ] Withdrew from the ITMA Program

Part II: Student Perceptions of Interactions within the ITMA Program

Section 1: For the items in Section 1, think about your interaction experiences with the ITMA support personnel (e.g., program director, coordinator, graders, technical support, etc.). There are no right or wrong answers to the question items.

11. In an average semester, approximately how often do you interact with the ITMA support personnel?

- ☐ Rarely
- ☐ Occasionally
- ☐ Frequently
- ☐ Very Frequently

12. How satisfied are you with the interactions you have had with the ITMA support personnel?

- ☐ Very Dissatisfied
- ☐ Dissatisfied
- ☐ Satisfied
- ☐ Very Satisfied

13. If you have experienced positive interactions with the ITMA support personnel, provide an example.

14. If you have experienced negative interactions with the ITMA support personnel, provide an example.

15. The ITMA support personnel show concern for me as an individual.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

16. How important is it for you to feel a sense of concern from the ITMA support personnel?

- ☐ Not Important
- ☐ Of Little Importance
- ☐ Important
- ☐ Very Important

17. The ITMA support personnel provide personalized communication (i.e., telephone calls, individualized e-mail, etc.).

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Always

18. How satisfied are you with the personalized communication received from the ITMA support personnel?

- ☐ Very Dissatisfied
- ☐ Dissatisfied
- ☐ Satisfied
- ☐ Very Satisfied

19. How important is it to you to receive personalized communication from the ITMA support personnel?

- ☐ Not Important
- ☐ Of Little Importance
- ☐ Important
- ☐ Very Important

20. I feel comfortable seeking assistance from the ITMA support personnel.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

21. In what ways did you initiate interactions with the ITMA support personnel? Please provide an example.

22. The ITMA support personnel provide individualized feedback on my course assignments.

- Never
- Rarely
- Sometimes
- Always

23. The individualized feedback received on my course assignments from the ITMA support personnel is constructive.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

Section 2: Before you answer these next items, please think about your interaction experiences with the other ITMA students.

24. Approximately how often do you interact with the other ITMA students in an average semester?

- Rarely
- Occasionally
- Frequently
- Very Frequently

25. How satisfied are you in your interactions with other ITMA students?

- Very Dissatisfied
- Dissatisfied
- Satisfied
- Very Satisfied

26. If you have experienced positive interactions with other ITMA students that influenced your satisfaction with the ITMA program, provide an example.

27. If you have experienced negative interactions with other ITMA students that influenced your satisfaction with the ITMA program, provide an example.

28. As a result of my interactions with other ITMA students, I feel comfortable seeking assistance from them.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

29. If you do NOT feel comfortable seeking assistance from other ITMA students, briefly explain why.

30. As a result of my interactions with other ITMA students, I have established new friendships.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

31. What importance do you place on establishing friendships with other ITMA students?

- Not Important
- Of Little Importance
- Important
- Very Important

32. If it has been difficult for you to establish friendships with other ITMA students, briefly explain why.

33. The ITMA students seem to be concerned about the success and well-being of each other.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

34. If you have experienced a sense of concern from other ITMA students, provide an example.

35. How important is it to you to feel a sense of concern from other ITMA students?

- ☐ Not Important
- ☐ Of Little Importance
- ☐ Important
- ☐ Very Important

36. Are there interactions with other ITMA students you felt have been lacking but would be helpful to you? Briefly explain.

Section 3: The items in Section 3 are based on your interaction with the ITMA program course content. Before answering, please think about your interaction experiences with your ITMA course content.

37. How satisfied are you with the ITMA instructional strategy of creating projects for the purpose of assessment?

- ☐ Very Dissatisfied
- ☐ Dissatisfied
- ☐ Satisfied
- ☐ Very Satisfied

38. The creation of projects in the ITMA courses heightens my sense of interaction with the course content.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

39. If there is an instructional strategy (i.e., group discussion) used in the ITMA program that stimulates your sense of interaction with the course content, provide an example.

Section 4: For the next set of items, please think about your interaction experiences on the listserv with other ITMA students before responding.

40. In an average week, how frequently do you interact with other ITMA students on the listserv?

- ☐ Rarely
- ☐ Occasionally
- ☐ Frequently
- ☐ Very Frequently

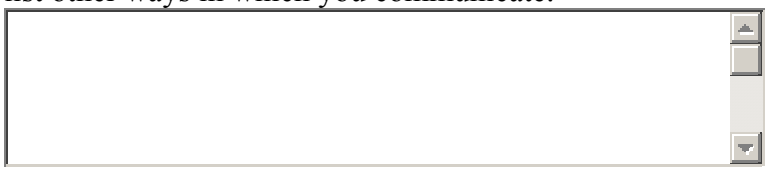
41. In the listserv discussions, the ITMA students address each other by their first name (e.g., "I think you are right on target Judy".).

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

42. The ITMA students often use the pronoun "we" in the listserv discussions (e.g. "Who do we contact for questions on our assignment?").

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

43. Aside from your listserv interactions do you initiate personalized communication (e.g., telephone calls, individualized e-mail, etc.) with other ITMA students? If so, please list other ways in which you communicate.



44. I feel supported by the other ITMA students when they respond to my questions, either by e-mail or the listserv.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

45. During my listserv discussions with other ITMA students I feel like I'm part of an online learning community.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

46. How important is it to you to feel that you are part of an ITMA online learning community?

- Not Important
- Of Little Importance
- Important
- Very Important

Section 5: For these last items, please answer them by thinking about your interaction experiences with the ITMA support personnel, other students, and course content.

47. Overall, I feel a sense of affiliation with the ITMA program.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

48. Having a sense of affiliation with the ITMA program influences my satisfaction with the overall program.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

49. As a result of my interaction experiences with the ITMA support personnel, students, and course content, I would consider taking other web-based courses.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

50. If you would NOT consider taking other web-based courses as a result of your interaction experiences with the ITMA support personnel, other students, or course content, briefly explain.

51. I would recommend the ITMA program to others as a result of my interaction experiences with the ITMA support personnel, students, and course content.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

Part III: Student Input

DIRECTIONS: This last part provides an opportunity for you to contribute additional comments regarding your interaction experiences within the ITMA program.

52. Is there anything else you would like to add regarding your interaction experiences with either the ITMA support personnel, students, or course content, that you have not been asked?

Submit

APPENDIX C

Survey B

Survey B
Electronic Learning Environment Survey

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(e.g., 1998, 1999, etc.) ☐

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- ☐ Northern Virgina
- ☐ Virginia Beach
- ☐ Roanoke

6. Estimate how much time per week you devoted to the ITMA program studies.

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7. Employment Status

- ☐ Full-time
- ☐ Part-time
- ☐ Not working

8. Teaching Level

- ☐ Elementary
- ☐ Middle
- ☐ Secondary
- ☐ other (refer to item #9)

9. If you are not presently teaching please provide your current job title:

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Section 1: For the items in Section 1, think about your interaction experiences with the ITMA support personnel (e.g., faculty, program director, coordinator, graders, technical support, etc.). There are no right or wrong answers to the question items.

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- ☐ Rarely
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13. If you experienced positive interactions with the ITMA support personnel, provide an example.

14. If you experienced negative interactions with the ITMA support personnel, provide an example.

15. The ITMA support personnel show concern for me as an individual.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

16. How important was it for you to feel a sense of concern from the ITMA support personnel?

- ☐ Not Important
- ☐ Of Little Importance
- ☐ Important
- ☐ Very Important

17. The ITMA support personnel provided personalized communication (i.e., telephone calls, individualized e-mail, etc.).

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
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19. How important was it to you to receive personalized communication from the ITMA support personnel?

- ☐ Not Important
- ☐ Of Little Importance
- ☐ Important
- ☐ Very Important

20. I felt comfortable seeking assistance from the ITMA support personnel.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

21. In what ways did you initiate interactions with the ITMA support personnel? Please provide an example.

22. The ITMA support personnel provided individualized feedback on my course assignments**.**

- ☐ Never
- ☐ Rarely
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- ☐ Always

23. The individualized feedback received on my course assignments from the ITMA support personnel was constructive.

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27. If you experienced negative interactions with other ITMA students that influenced your satisfaction with the ITMA program, provide an example.

28. As a result of my interactions with other ITMA students, I felt comfortable seeking assistance from them.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

29. If you did NOT feel comfortable seeking assistance from other ITMA students, briefly explain why.

30. As result of my interactions with other ITMA students, I established new friendships.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

31. What importance do you place on establishing friendships with other ITMA students**?**

- ☐ Not Important
- ☐ Of Little Importance
- ☐ Important
- ☐ Very Important

32. If it was difficult for you to establish friendships with other ITMA students, briefly explain why.

33. The ITMA students seem to be concerned about the success and well-being of each other.

- Strongly Disagree
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39. If there was an instructional strategy (i.e., group discussion) used in the ITMA program that stimulated your sense of interaction with the course content, provide an example.

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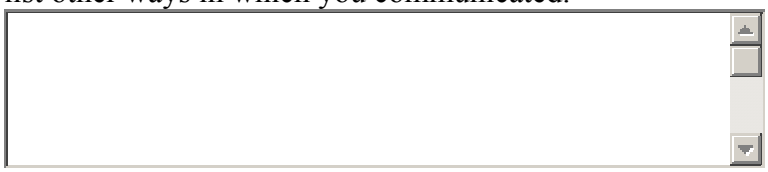
- ☐ Strongly Agree

43. Aside from your listserv interactions did you initiate personalized communication (e.g., telephone calls, individualized e-mail, etc.) with other ITMA students? If so, please list other ways in which you communicated.



44. I felt supported by the other ITMA students when they responded to my questions, either by e-mail or the listserv.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

45. During my listserv discussions with other ITMA students I felt like I was part of an online learning community.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

46. How important was it to you to feel that you were part of an ITMA online learning community?

- ☐ Not Important
- ☐ Of Little Importance
- ☐ Important
- ☐ Very Important

Section 5: For these last items, please answer them by thinking about your interaction experiences with the ITMA support personnel, other students, and course content.

47. Overall, I felt a sense of affiliation with the ITMA program.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

48. Having a sense of affiliation with the ITMA program influenced my satisfaction with the overall program.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

49. As a result of my interaction experiences with the ITMA support personnel, students, and course content, I have taken or would consider taking other web-based courses.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

50. If you would NOT consider taking other web-based courses as a result of your interaction experiences with the ITMA support personnel, other students, or course content, briefly explain.

51. I would recommend the ITMA program to others as a result of my interaction experiences with the ITMA support personnel, students, and course content.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

Part III: Student Input

DIRECTIONS: This last part provides an opportunity for you to contribute additional comments regarding your interaction experiences within the ITMA program.

52. Is there anything else you would like to add regarding your interaction experiences with either the ITMA support personnel, students, or course content, that was not asked?

Submit

APPENDIX D

Student Introductory Letter Sent to Current ITMA Students

Student Introductory Letter
(Sent to Current ITMA Students via E-mail)

Date: Tues, 19 Feb 2002

To: ITMA2, IMTA3, ITMA4 Cohorts [Current students]

Subject: On-going ITMA Program-Survey

From: Berlinda Saenz (bsaenz@vt.edu)

Subject: On-going ITMA Program-Survey

Bcc: [participant's vt.edu PID was used]

Message from Dr. Ken Potter:

Hi,
I hope this note finds you well.

In an attempt to gain some information regarding your ITMA experience, our graduate student, Berlinda Saenz, is requesting your feedback as follows (read letter below). Her dissertation topic deals specifically with interaction and its importance in distance education. Completing the survey will just take a few minutes, so we really appreciate your time and feedback. Your input will serve as important formative evaluation data for the on-going ITMA program. Thanks very much!

Ken Potter
Teaching and Learning

Letter stating purpose of study:

Dear Members of the ITMA Program:

My name is Berlinda Saenz and I am conducting a study as part of my doctoral dissertation in the field of Instructional Technology at Virginia Tech. I am asking for your help in completing the Electronic Learning Environment Survey. This survey is designed to examine the perceptions of adult distance learners regarding their interactions within a web-based learning environment. Distance education (DE) is a relatively new field and a current topic of interest in DE is the value of interactions within on-line learning environments.

I hope you will choose to participate in this unique study opportunity. By sharing your current or past ITMA experiences, I hope to gain some insight regarding your on-line interactions with the support personnel, other learners, and interaction with the course content. Your contributions will provide insightful information on adult distance learners' perceptions of interactions within a web-based instructional program and factors that may affect learner satisfaction. This information will be helpful in the design and development of future web-based instructional degree programs.

The survey consists of three parts: background information, student perceptions of interactions within an on-line environment, and student input. Your participation is strictly voluntary. You may omit any questions you do not feel comfortable answering. All information and responses will remain completely confidential and anonymous. There will be no effect whatsoever on your grades as a result of participating in this study.

Please complete the survey by clicking on the link below that best describes your current student status. You will then be directed to the *Electronic Learning Environment Survey*, which takes about 15-20 minutes to complete. If you could complete the survey by **February 26, 2002**, I would appreciate it. After the results from this study are compiled, they will be posted on-line and the web-site will be provided to you later in the semester should you want to view the results.

Thank you in advance for participating in this study and for your valuable contributions. Again, please try to submit your survey responses no later than **February 26, 2002**. I really appreciate your willingness to participate in my study.

If you are ready to complete and submit the survey, click on the link below that best describes your current student status to access the survey:

Current ITMA student:
http://survey.vt.edu/survey/entry.jsp?id=1012779968331

Former ITMA student:
http://survey.vt.edu/survey/entry.jsp?id=1013576050041

Sincerely,

Berlinda Saenz, Ph.D. Candidate
Instructional Technology

APPENDIX E

Student Introductory Letter Sent to Former ITMA Students

Student Introductory Letter
(Sent to Former ITMA Students via E-mail)

Date: Tues, 19 Feb 2002

To: ITMA1 Cohort [Former students]

From: Berlinda Saenz (bsaenz@vt.edu)

Subject: On-going ITMA Program-Survey

Bcc: [participant's vt.edu PID was used]

Message from Dr. Barbara Lockee:

Hi! I hope this note finds you well.

In an attempt to gain some information regarding your ITMA experience, my graduate student, Berlinda Saenz, is requesting your feedback as follows.

Your input will serve as important formative evaluation data for the on-going ITMA program. Her dissertation topic deals specifically with interaction and its importance in distance education (read letter below). Completing the survey will just take a few minutes, so we really appreciate your time and feedback. Thanks very much!

Barbara Lockee, Ph.D.
Teaching and Learning

Letter stating purpose of study:

Dear Members of the ITMA Program:

My name is Berlinda Saenz and I am conducting a study as part of my doctoral dissertation in the field of Instructional Technology at Virginia Tech. I am asking for your help in completing the Electronic Learning Environment Survey. This survey is designed to examine the perceptions of adult distance learners regarding their interactions within a web-based learning environment. Distance education (DE) is a relatively new field and a current topic of interest in DE is the value of interactions within on-line learning environments.

I hope you will choose to participate in this unique study opportunity. By sharing your current or past ITMA experiences, I hope to gain some insight regarding your on-line interactions with the support personnel, other learners, and interaction with the course content. Your contributions will provide insightful information on adult distance learners' perceptions of interactions within a web-based instructional program and factors that may affect learner satisfaction. This information will be helpful in the design and development of future web-based instructional degree programs.

The survey consists of three parts: background information, student perceptions of interactions within an on-line environment, and student input. Your participation is strictly voluntary. You may omit any questions you do not feel comfortable answering. All information and responses will remain completely confidential and anonymous. There will be no effect whatsoever on your grades as a result of participating in this study.

Please complete the survey by clicking on the link below that best describes your current student status. You will then be directed to the *Electronic Learning Environment Survey*, which takes

about 15-20 minutes to complete. If you could complete the survey by **February 26, 2002**, I would appreciate it. After the results from this study are compiled, they will be posted on-line and the web-site will be provided to you later in the semester should you want to view the results.

Thank you in advance for participating in this study and for your valuable contributions. Again, please try to submit your survey responses no later than **February 26, 2002**. I really appreciate your willingness to participate in my study.

If you are ready to complete and submit the survey, click on the link below that best describes your current student status to access the survey:

Current ITMA student:
http://survey.vt.edu/survey/entry.jsp?id=1012779968331

Former ITMA student:
http://survey.vt.edu/survey/entry.jsp?id=1013576050041

Sincerely,

Berlinda Saenz, Ph.D. Candidate
Instructional Technology

APPENDIX F

Follow-up Message

Follow-Up Message

Dear Members of the ITMA Program:

Recently you may have received an email from me - Berlinda Saenz - regarding the ITMA on-line *Electronic Learning Environment Survey*. I am a doctoral candidate in the Instructional Technology (IT) program at Virginia Tech. If you have already completed the on-line ITMA survey, please disregard this message. My sincere thanks for your time and input!

For those who have NOT had a chance to complete the on-line *Electronic Learning Environment Survey* it is not too late. I would like to encourage as many of you as possible to complete the survey by no later then the extended date, ***Sunday, March 3, 2002***. Please take a moment to consider some reasons for completing this survey.

First, this survey will provide the IT faculty/staff with important information on ADULT distance learner's interaction experience. This is your chance to provide input, which will serve as important formative evaluation data for the ongoing ITMA program.

Secondly, as a member of the Virginia Tech IT community, your contributions will provide the ITMA personnel with insightful information, and direction on future ITMA interaction decisions. This is an opportunity for you to provide valuable feedback for consideration of future on-line degree instructional programs.

Thirdly, as a colleague, I am very much interested in knowing collectively how you perceived your on-line interaction experiences with the ITMA faculty, support personnel, students, and the course content. Who better than you who have first hand knowledge of being a distance learner, as well as knowledge in the field of IT.

Lastly, your efforts will assist me to succeed in this academic endeavor. My journey has been a long one and I welcome the opportunity to return working with professionals like you.

If you decide to complete the survey, be assure that all information and responses are completely confidential and anonymous. You may access the on-line survey at:

Current ITMA student:
http://survey.vt.edu/survey/entry.jsp?id=1012779968331

Former ITMA student:
http://survey.vt.edu/survey/entry.jsp?id=1013576050041

For those interested in reading the purpose of the study the URL is:
http://filebox.vt.edu/users/bsaenz/survey/L-Survey_ITMA.htm

Again, please try to submit your survey responses no later then ***Sunday, March 3, 2002***.
Thank you so much in advance for your time and willingness to assist me to succeed!

Sincerely,

Berlinda Saenz
Ph.D. Candidate
Instructional Technology

APPENDIX G

Assigned Theme Codes for the Qualitative Survey Questions

Coded Themes For Qualitative Survey Items

1. INTERACTIONS
   - 1.1. Learner-to-learner interactions
     - 1.1.1. Frequency of interactions
     - 1.1.2. Timeliness of response
     - 1.1.3. Lack of electronic interactions
     - 1.1.4. Communicate regarding assignments (e.g., due dates, clarify, etc.).
     - 1.1.5. Share ideas/knowledge
     - 1.1.6. Face-to-face interactions (e.g., initiated, desire, etc.)
     - 1.1.7. Means of communication (e.g., e-mail, phone, listserv, etc.)
     - 1.1.8. Satisfaction of interactions
     - 1.1.9. Lack of sense of community
     - 1.1.10. Not enough time (i.e., busy schedules, other responsibilities, etc.)
   - 1.2. Learner-to-support personnel interactions (program coordinator, technical-support, graders)
     - 1.2.1. Frequency of interactions
     - 1.2.2. Timeliness of response
     - 1.2.3. Timeliness of posting grades
     - 1.2.4. Means of communication
     - 1.2.5. Technical support
     - 1.2.6. Questions on assignments (e.g., deadlines, clarity, extensions, etc.)
     - 1.2.7. Questions regarding grade(s)
     - 1.2.8. Administrative issues (e.g., registration, admission, incompletes, etc.)
     - 1.2.9. Satisfaction of interactions
   - 1.3. Learner-to-faculty interactions (Program director, faculty, professors, instructors)
     - 1.3.1. Frequency
     - 1.3.2. Timeliness of response
     - 1.3.3. Questions on assignments (e.g., deadlines, clarity, extensions, etc.)
     - 1.3.4. Satisfaction of interactions
   - 1.4. Learner-to-course content interactions
     - 1.4.1. Course load
     - 1.4.2. Coursework objectives/directions
     - 1.4.3. Questions on modules
     - 1.4.4. Feedback on assignments
     - 1.4.5. Use of instructional strategies
       - 1.4.5.1. chat /live discussion to share ideas
       - 1.4.5.2. group project
       - 1.4.5.3. creating products like portfolio, web sites, etc.
       - 1.4.5.4. other (software evaluation, multiple computer literacy projects, etc,
     - 1.4.6. Satisfaction of interactions
   - 1.5. Learner-to-interface interactions (Hillman et al., 1994)
     - 1.5.1. Problems with software/hardware
     - 1.5.2. Lack of skills/knowledge for using required program applications

2. INTIMACY
   2.1. Learner-to-learner interactions
      2.1.1. Familiarity (i.e., comfort level)
         2.1.1.1. Do not know the others in program
         2.1.1.2. No enough interactions to build a sense of community
         2.1.1.3. Do not know them enough to seek their opinion or trust them
         2.1.1.4. Have had bad interaction experiences
      2.1.2. Established friendships
         2.1.2.1. Lack of time due to busy schedules
         2.1.2.2. No opportunities in program to allow interactions to meet other learners
         2.1.2.3. New to program, not enough time to know anyone
         2.1.2.4. No personal communication between learners such (e.g., face-to-face orientation or gatherings)
         2.1.2.5. Have no desire or need for friends
      2.1.3. Affiliation with other ITMA learners working in same area/school
         2.1.3.1. Disillusion with ITMA program (due to lack of feedback, course load)
         2.1.3.2. Little sense of community with other learners/faculty
         2.1.3.3. No need to take further courses

3. IMMEDIACY
   3.1. Learner-to-learner interactions (e.g., described as "my cohort, my team, my colleagues")
      3.1.1. Personalized communication
      3.1.2. Individualized exchanges
      3.1.3. Concern from other learners
         3.1.3.1. Support (e.g., encouragement, suggestions, technical, etc.)
         3.1.3.2. Empathy (e.g., sharing feelings of frustrations, emotional, time constraints, course load, etc.)
         3.1.3.3. Means of interaction (via listserv, chats, personal e-mail, etc.)
      3.1.4. Use of inclusive language (e.g., "we" vs. "I")
      3.1.5. No personalized communication initiated outside of listserv

   3.2 Learner-to-support personnel interactions (see survey items #13 and 21)
      3.2.1. Personalized communication
      3.2.2. Individualized exchanges
      3.2.3. Concern (e.g., helpful, encouraging, courteous, accommodating)
      3.2.4. Feedback (i.e., on assignments)
      3.2.5. Thoughtful feedback on questions (e.g., clear, precise, thorough, and detailed directions, etc.)

   3.3. Learner to faculty interactions
      3.3.1. Humorous
      3.3.2. Concern (e.g., flexible, lenient, etc.)

4. OVERALL Interaction Experiences with ITMA Program
   4.1. Learner Input
      4.1.1. Learner-to-Learner Interactions
         4.1.1.1. Limited interactions
         4.1.1.2. Face-to-face contact
         4.1.1.3. Listserv
         4.1.1.4. Sense of community
         4.1.1.5. Lack of intellectual dialog/exchange of ideas

4.1.1.6. Student satisfaction

4.1.2. Learner-to-Support Personnel Interactions
4.1.2.1. Untimely grading
4.1.2.2. Means of communication
4.1.2.3. Satisfaction

4.1.3. Learner-to-Faculty Interactions
4.1.3.1. Lack of communication
4.1.3.2. Flexible regarding assignments

4.1.4. Learner-to-content Interactions
4.1.4.1. Content structure/support
4.1.4.2. Course load-lack of support
4.1.4.3. Feedback/assignments

4.1.5. Learner-to-Interface Interactions
4.1.5.1. Lack of skills/background information

APPENDIX H

Tabulated Open-ended Responses

Responses to Survey Item 13

Code	*Q13: If you have experienced positive interactions with the ITMA support personnel, provide an example. [textbox]*
1.2.8., 1.2.9. 3.2.3.	Yes, after several problems with my application, it took an ITMA person to clear up the problems. Without her, I would not be taking these classes today. I would have walked away eventually with a disgruntled attitude and a few letters of complaint to the Grad dept.
1.2.5., 1.2.9. 3.2.3.	Whenever I asked a technical questions, the support personnel did everything they could to help me figure out what was wrong and how to correct the problems.
1.2.2., 1.2.5., 1.2.7., 1.2.9.	When I had a technical questions or questions about my grades (in some of my classes), I had a quick and reliable response.
1.3.3.,3.3.2.	When I couldn't make the deadlines, that were imposed, he [faculty] was flexible concerning that. He could not be flexible after a certain time in the end but the small deadlines throughout, he was.
1.1.7., 1.2.9., 3.2.1.	When a group of us in ITMA2 got together at the VSTE conference for a face-to-face meeting, a graduate assistant [support personnel] joined us. He shared an enthusiastic attitude about the program with us, complimented us on our efforts, and gave us a greater depth of understanding of our instructors in a very positive manner.
1.2.2., 1.2.9. 3.2.3.	Very helpful and have quickly helped me to resolve any problems or difficulties that I have.
1.2.2., 1.3.2.	Timely communication between professor and course assistants via e-mail.
1.2.9., 3.2.3.	They were supportive and timely in their feedback.
1.2.2., 1.2.6.,1.2.9.	They do answer questions quickly and generally well. I have had many questions about the nature of individual assignments and they are responsive.
1.2.2., 1.2.9. 3.2.3.	They are always helpful and try to meet my needs quickly.
1.2.2.,1.2.4.	The teaching assistant promptly replies to my e-mail.
1.2.2., 1.2.9. 3.2.3.	*The grad student support has been exemplary. No matter what the issue or concern, the students who communicate to us are quick precise and express concern*. When an answer is not known, they are active in finding the answers. In answering these questions I am referring should make the results invalid. to the graduate student support personnel not the instructor personnel which is apparently not being addressed in this survey. Which indicates to me a bias in the expected results.
1.2.2.,1.2.9. 3.2.3.	Swift response to questions – personnel was encouraging.
1.2.2., 1.2.8., 1.2.9., 3.2.3.	Some support staff/personnel are courteous and respond in a timely manner. One area this occurred was dealing with questions about "incomplete" grades and needing proof of credit for reimbursement from employer issue.
1.2.2.,1.2.6., 1.2.8.,1.2.9.	Responded quickly to all questions prior to enrolling ex. is the program for teachers only?)and after (can I make substitutions on the assignments?)
1.2.2.,1.2.9. 3.2.3.	*Respond quickly, seem to want to help us be successful give helpful advice and hints to make the experience a little better.*
1.2.2.,1.2.9. 3.2.3.	Quick responses, very friendly, open to suggestions, reassurance. [**3 occurrences**]
1.2.2., 1.2.4., 1.2.9.,3.2.5.	Quick response from my grader [graduate student] Informative postings on the listserv

1.2.2., 1.2.6., 1.2.5.,1.2.9., 3.2.3.	Provided leniency when I missed a deadline due to miscommunication. Persistent in e-mailing me when there was a problem retrieving a file.
1.2.2.	Prompt return of e-mailed questions.
1.2.2., 1.3.2., 3.2.3.	[Professors] answered questions in e-mail very quickly. [Technical support graduate] was so helpful for technical questions. [Program coordinator] took wonderful care of the administrative details in our first year.
1.2.2., 3.2.3.	People have always been inclined to help whenever there is trouble. Last semester I had a misunderstanding in an assignment, and I was allowed to correct the work that was originally submitted.
1.2.2., 3.2.3., 3.2.5.	*Most personnel were very precise in their answers and did not answer "down" because of my lack of experience.* Most answers came in a very timely manner.
1.2.2.	Most of the time my questions are responded to quickly. I appreciate that.
1.2.8.,1.2.9.	[Support personnel] getting the ball rolling with the set up. And [Program coordinator], about transfer of credits from another university in another state.
1.2.2., 1.2.9. 3.2.3.	ITMA personnel always responded to my questions/concerns in a timely manner and were very helpful in solving any problems I encounter.
1.2.9., 3.2.3.	Initially applying, the support was extremely helpful, courteous, and caring.
1.2.9., 3.2.3.	In every case of contact, the ITMA support personnel have been very helpful.
1.2.2., 1.2.9. 3.2.5.	In the short amount of time I have spent in the ITMA program I have been impressed with the quick responses I receive from the staff.
1.2.2.,1.2.6., 1.2.9.,1.2.5., 3.2.3.	Immediate responses when the server went down.I think it was [Technical support graduate].Also, Lots of help with the Audio Class assignments.
1.2.2.,1.2.6., 1.2.9., 3.2.5.	Immediate feedback, granted extensions for incomplete assignments, up-to-date information, clear and detailed instructions.
1.2.2.	Immediate feedback when I have questions or concerns
1.2.2.,1.2.8., 1.2.9.,1.2.5., 3.2.3.	I was admitted late and [technical support] (I believe) was so helpful in keeping my updated, registering me for classes, etc.
1.2.2., 1.2.6., 1.2.7., 1.2.9., 3.2.3.	I turned in an assignment that was apparently overlooked, therefore not graded. Once I brought it to their attention, it was handled almost immediately and the grade was posted within 24 hours. I felt like it was important to them to be sure I was treated fairly.
1.2.2.,1.2.8., 1.2.9., 3.2.3.	I requested information for my school system regarding my participation in ITMA2 for pay increase reasons, and [Program coordinator] responded immediately, providing me two options.
1.2.2., 1.2.4., 1.2.7.,1.2.8.	I requested an incomplete and my course was removed from the blackboard before completion. After an e-mail, it was replaced very quickly.
1.2.2.,1.2.8., 1.2.5.	I receive immediate feedback from [Technical support graduate] and [support staff] regarding technology issues and registration.
1.2.2., 1.2.8., 1.2.9., 3.2.3.	I receive feedback normally within 24 hours when I have questions. [support staff] was very helpful regarding registration of courses as well.
1.3.4.,3.3.1., 3.2.3.	I have to say that I have enjoyed class work that has been written by Dr. [faculty]. He has a way of adding personality and humor, which helps to ease the workload.
1.2.2., 1.2.4., 1.2.9., 3.2.3.	I have asked questions of [Program coordinator] and [support staff] via e-mail, and have gotten prompt, helpful responses.
1.2.2., 1.2.5.,	I had problems with Internet access as I started my ITMA program four weeks after moving to

1.2.9., 1.5.1., 3.2.3.	Richmond. Nothing was connected and there were phone line. Problems with service providers, and problems with my computer modem. ITMA personnel reassured me deadlines would not be rigid if I was having Technical problems. I have gotten the problems resolved and feel good about the program because of its flexibility.
1.2.2., 1.2.5., 1.2.9., 1.3.3., 1.3.4., 3.2.3., 3.3.2.	I entered the ITMA1 Program in summer 1 semester. I completed the first part of my degree @ VT and the second as an ITMA student. Drs. [faculty] and [faculty] have been a great help to me no matter what the issue. *My father has had open-heart surgery and a tractor accident. On both occasions-Dr. [faculty] worked with me to see that I was given extra time to complete my work. ITMA folk are really down to earth people, and will go out of their way to assist and help you be successful.* [Technical support graduate] (Whom I have also had the opportunity to work with) is also a very resourceful person. These three people helped me and replied quickly to my questions no matter what they may have been.
1.3.4.,1.2.8., 1.2.9., 3.2.3.,3.2.5.	I contacted [Program Director] about registering online. He was very helpful, and answered my questions in detail.
1.2.2., 1.2.9. 3.2.3.	[Program coordinator] is outstanding - always provides prompt responses with an exceptionally positive attitude, offering to help in any way possible. The graders with whom I have interacted have also been more than helpful, providing thorough, helpful feedback.
1.2.8.,1.2.9.	[Program coordinator] helped me change my status from Provisional to Regular Graduate student. Previously I had no response from the Grad. Office.
1.2.2.,1.2.4., 1.2.9., 3.2.3.,3.2.5.	[Program coordinator] and [Technical support graduate] have been extremely helpful - quick to answer e-mails - provide direction and are very efficient.
1.2.5., 1.2.9.,1.5.1., 3.2.3.	Having difficulty with my old computer and getting it to complete the tasks that were required, I felt the staff was very accommodating in trying to help me find ways to get it to work.
1.2.2., 1.2.5.	Had problems understanding video cameras/computer hook ups. [Technical support graduate] filled me in before the module started.
1.2.2.,1.2.5., 1.5.1.,3.2.4.	Graders - any inquiry I had was responded to immediately and included a personal note that made me feel like they were interested in my progress. Tech support - invaluable assistance for technical problems, questions on software, and advice when I hit roadblocks in assignments.
1.2.2.	Good technical support from [Technical support graduate]
1.2.2., 3.2.5.	Generally the information received has been excellent. Most of my questions have been answered in a speedy and professional manner.
1.2.2.	For the majority of the time, I received answers to my questions in a timely manner.
1.2.2.	Feedback was given ASAP
1.2.2.,1.5.1. 3.2.3.	[Program coordinator] went out of her way to make sure I had a copy of Authorware to do my project.
1.2.1., 1.2.5., 1.2.9., 3.2.3.	[Technical support graduate] was especially supportive and helpful. Best yet, he always had solutions. There were so many instances when I needed his help. He was always able to help me work my way through each difficulty.
1.2.5., 1.2.9., 1.5.1., 3.2.3.	[Technical support graduate] has been very helpful when I had problems with questions concerning e-mail forwarding and when I was not going to meet my deadlines.
1.2.2.,1.2.9. 3.2.4.	[Technical support graduate] has been my grader throughout much of the program. He is quick to respond to questions and gives constructive feedback of my work.

1.2.2., 1.2.4., 1.2.5., 1.5.1., 3.2.3.	[Technical support graduate], technical support is outstanding. An example from this semester would be when I needed to know the type of hardware and software I would need for a particular module. I described what I had available and he quickly responded via e-mail with the answer to my questions. He is always quick to respond to e-mail questions.
1.2.2., 3.2.3.	[Technical support] being able to solve any problems that I encountered. Working in the lab on campus while doing the video portion of the program. Everyone there was very supportive and helpful.
1.2.2., 1.2.5.	[Technical support graduate] always figured out computer and/or software problems for me.
1.2.9.,3.2.5.	Basic instructions as well written and exact. They walk you through the process and either work or tell you what to do in case of an error.
1.2.2.,1.2.4., 1.2.9., 3.2.5.	Any questions I submitted via e-mail have always been returned promptly and thoroughly. [**2 occurrences**]
1.2.2.,1.2.4., 1.2.5.,1.2.9.,3.2.5.	Any messages sent to [technical support graduate] receive immediate replies. His responses to the listserv also helped to clarify situations and resolve problems.
1.2.2.,1.2.4., 1.2.5.,1.2.9., 3.2.3.,3.2.5.	Always positive and timely support from technical support graduate. He is very informed. His answers are clear and detailed.
1.2.2., 1.2.9., 3.2.3.	*Always answered my questions thoroughly, politely, in a friendly manner, and told me to e-mail back if I needed more information. Supportive attitude and interest in my questions was notable*. Notified us of Tech's breaks, when the staff would most likely be away.
1.2.2.,1.2.4., 1.2.9., 3.2.3.	All were very supportive and quick to respond to e-mail questions sent to them. They seem personable as well.
1.3.4.,3.3.2.	All of my interactions were positive but I cannot relate a specific example (being in the top age bracket given above, my memory is fuzzy). I am not sure, in this survey, if professors are included in support personnel (I suspect not) but I do remember how impressed I was that [program director] asked about my father's health, months after Dad had had open heart surgery during a class I was taking under [program director].
1.2.2., 1.2.5., 1.2.8.,1.2.9.	All experiences have been positive- They always find an answer for me and always get me back on track. Case in point: I was having trouble registering - could not log in to accomplish such - one e-mail to the support staff got me a change of password and I was back in business.
24	Non responses

Responses to Survey Item 14

Code	*Q14: If you have experienced negative interactions with the ITMA support personnel, provide an example. [textbox]*
1.2.1.,1.2.2.	Sometimes do not get answer in an adequate amount of time
1.3.2.,1.3.4., 1.4.1.	When students complained about problems with feedback and the fact that course piled up on top of course as a result, [ITMA Program Director] issued a really well-written letter that basically said not all people are cut out for distance learning. I thought that response was not in the spirit of the attitudes we were taught in the distance learning class.
1.2.2.,1.2.4.	When I e-mailed a particular person, I got no response until I actually got that person on the phone.
1.2.3.	Untimely turn around for grades.
1.4.6.	The psychology class was very difficult for me.
1.2.4.,1.2.7., 1.3.2.	The only negative I have had is after getting an incomplete; I had to e-mail the professor to let him know that material had not been graded. This, too, was taken care of in a timely fashion.
1.2.4.,1.2.9.	The most negative thing I remember did not happen to me personally but I recall a time a joke was posted on the listserv calling our program "teach yourself instructional technology " (it was a time we were all working hard), and support personnel came down pretty hard on the jokester (he apologized for his humor). I think a little more understanding would have been appropriate.
1.2.4.	The listserv was monitored a little gestopo like for me.
1.3.2., 1.4.4.	Some courses better organized than others -Very slow feedback from [professors/instructors] on specific lessons on which subsequent lessons were based -Last time we were asked to complete a survey to " help" ITMA designers, feedback was not forthcoming even though we were told info could be shared.
1.2.2., 1.4.4.	Seem to not have enough time to devote to the program. Scattered e-mails, but not regular ones. Not enough feedback on assignments.
1.4.1.,1.4.2., 1.4.4.,1.4.6.	Poor or very little feedback on course assignments. Unrealistic assignment requirements. Poor or confusing directions for assignments. Exceedingly high expectations for students without providing the necessary requisite training to achieve those goals.
1.2.2., 1.2.3.,1.2.8.,	Other classes. it took forever for some graders to grade my stuff. Also, I had a questions about my course of study and I was wondering if I could substitute a credit I took earlier in my undergraduate year. It took forever to find the right people to resolve that little crisis, but eventually, it did get figured out.
1.2.2., 1.2.4.,1.2.9.	One of the teaching assistants answered questions with questions. This was a problem in an e-mail situation since time was an important factor. If you had to e-mail back and forth several times to get information, then much time was wasted in which I could have been completing assignments.
1.2.2.,1.2.3., 1.2.4.,1.2.9.	Once did not get an answer in 24 hours (e-mail), during the work week (Wednesday?), which was frustrating when I needed information to proceed. Scoring of assignments during the first semester hour were not explained until long after the scores were published (2 weeks). Scoring of assignments during the second semester hour were not done promptly (more than 2 weeks for some assignments), although this was not really an interaction (maybe a non-interaction!).
1.2.2.,1.2.3., 1.2.4.,	Not really negative, but it sometimes takes 4 or 5 days to get a response to an e-mail sent to my grader. Grades have also been slow to be recorded in one of my classes - work I completed a month ago is still not graded.
1.2.3.,1.4.4.	No feedback on work only a grade. Delay in grades.

1.1.7.,1.1.8.	Many people never did seem to understand the process of the listserv. They would post messages to everyone when they did not even apply to us. I usually just read them and replied specifically to the person if I thought I could help. When I needed assistance, I usually e-mailed the specific person that I felt could assist me most. I liked the list serve, but many people sent and continue to drown our e-mail boxes with unnecessary material. Don't get me wrong though, it was a very useful tool.
1.2.2.,1.2.9.	Lack of information and slow response time would be my negative encounters.
1.2.1.,1.2.2., 1.2.3.,1.4.4.	It's the lack of frequent communication with the staff that is negative. Especially when it comes to grading. More times than not, I do not know which part of a project needed improvement or why or how to improve a specific area.
1.3.2.	[Instructors] take a while to respond.
1.2.2.,1.2.4., 1.2.6.	I have sent 2 e-mails with questions regarding assignments. Only one was responded to.
1.2.3.,1.2.4., 1.4.4.	I have not received feedback from course work I submitted. Therefore, I am not sure that it was received. I would suggest the support personnel sending an e-mail when course work is received. In addition, the course work should be graded in a more timely manner.
1.2.2.,1.2.4., 1.5.2.,1.2.9.	I found myself e-mailing for help, especially on problems with the Filebox servers (back when we had to use FTP) when using Front Page. It seemed that no one could help.I had get support from my school system personnel to solve the problems. I also found myself in the position of supplying the help to other people in the program because their skill level was very low.help with simple web page creation, e-mail, and chatting. It was very hard to keep up with my assignments, work with a group where I was the one constantly supplying the support that the ITMA personnel should have been providing, and find the answers for questions I had elsewhere.
1.2.9.	I found [the ITMA program coordinator] to be very negative and condescending. After one interaction with her, I refused to interact with her again due to her unprofessional behavior in answering a question that I and a number of other students posed.
1.2.3.,1.2.4., 1.4.4.	Have been promised feedback on work submitted but only received a number or letter grade. This stymies growth and confidence when the content is to you. You wonder how carefully or even if the work was evaluated. List 'masters' do not answer questions in a timely manner (2-3 days) and often only one of two or three questions are addressed. We are *not* kept informed with a posting on the listserv as to status of programs or assignments that are late being posted but are expected to keep checking the web site to see if they are there.
1.2.3.,1.4.4.	Grading is not done in a timely manner. Additionally, the graders seem to think it is not important to return work that has been graded. I want to see why points were deducted.
1.2.3.,1.4.4.	Grading and feedback do not come in the timelines that they set forth. [**2 occurrences**]
1.2.2.,1.4.1., 1.4.4.,1.4.6.	Feedback is not always available. When we express concerns about the amount of work required for some courses, we are often "brushed off" and made to think it is our problem. Some classes are very reasonable, while others have been almost impossible to complete. The summer/fall session was a nightmare. Many students had three modules going at one time and it was way over the top in terms of the expectations. We were told to expect to spend 10 hours per week on the class, which is a totally unrealistic expectation. I know everyone wants to learn the content, it just seems that some of the work was redundant and what I would call busy work. When this feeling was expressed, we were not taken seriously. Some of your questions need a neutral choice because I don't agree or disagree.
1.2.3.,1.3.2., 1.4.4.,1.4.6.	Ed psych was a terrible experience. e-mail not answered in a timely manner, grading not done in timely manner.

1.2.4.,1.2.7.	During the early modules, we were introduced to the graders and felt as if we k them. For the past year, I have not felt as connected as I did in the past. I think the fact that I don't know who is grading my work is a big part of my discontent.
1.2.2.,1.4.1.	Communication during Advanced Edu Psych was very poor as so was ID.
1.4.4.	At times, have had to wait up to 5 days for a response to an assignment question. It only happens rarely, but it causes me a lot of down time when it does.
1.2.1.,1.2.4.,1.2.9.	About 50% of the questions I have e-mailed to the current ITMA2 contact person [Program Coordinator] go completely unanswered. Just a quick note to let me know she doesn't have the information I need would be a major morale booster.
1.2.2.,1.2.4.	A few times I have sent out questions to personnel and the listserv and did not get a response.
3 occurrences	None. All negative interactions have been with the Grad School personnel.
54	Non responses

Responses to Survey Item 21

Code	*Q21: In what ways did you initiate interactions with the ITMA support personnel? Please provide an example. [textbox]*
1.2.4., 1.3.4.	When I had trouble with getting my course of study straightened out, I simply e-mailed my professor. He told me where to go to next and all of it was handled over e-mail. I must have talked to four or five different people, but I got it down.
1.2.2., 1.2.4., 1.2.5., 1.5.1.	When I had technical questions or questions about software or even a virus :(I would e-mail [Technical support]. He always e-mailed me back, usually within a couple of hours. There were many times I needed to seek advice from Drs. [faculty], and no matter what the questions may have been, I was always responded to with kindness, concern, and friendliness.
1.2.5.,1.5.1.	When I had a problems with FTPing, I contacted [technical support], who directed me to the correct support service.
1.2.2., 1.2.5., 1.5.2.	When I first started the program, I did not understand file structure for the VT filebox. I received prompt, courteous, helpful feedback.
1.2.2., 1.2.4.,	We are only allowed to communicate with [program coordinator] and [Technical support] at this time. I have sent each of them e-mails written in a positive way asking specific questions. Sometimes the [program coordinator] answers me. [Technical support] always does. Sometimes items of concern entered to the listserv also receive responses, usually from [Technical support] or from [grader].
1.2.2., 1.2.4.,	Via e-mail. On my second assignment I was asked to complete an on-line survey. When I submitted the survey, I received an error message. I e-mailed both the course coordinator & the grader to try to determine if my survey had actually been submitted & the confirmation message bombed, or if the survey did not get submitted. The course coordinator was most helpful. She verified that the system was working & followed up with the grader. The grader was helpful, but very slow to respond.
1.2.2., 1.5.1., 1.2.4.,	Via e-mail. I could not log into the system. After describing the problems in an e-mail, I received a detailed response that explained why I had the problems and that the problems was fixed. I was also given the proper instructions for proceeding to successfully log on.
1.2.4., ,1.2.7.	Via e-mail regarding website grade
1.2.2., 1.2.4., 1.2.5.	The only support person I have contacted during this year is [Technical support]. I have not had any personal contact with anyone other than when he responded to my questions. Distribution lists and listservs are the only contact I have with ITMA support or any other personnel.
1.2.6.	Sought assistance when I had questions with particular assignments...especially with website assignment.
1.2.7.	See question number 14. I also found myself asking about the grading on the assignments...many times assignments seemed to be weighted by format rather than content.
1.2.8., 1.4.4., 1.5.1.	Questions on applications, courses to register for, how to use my id, what to do since my transcript wasn't sent to VT on time, was I accepted, etc. Once the courses started, my communications should be minimized! There are enough people to support, so I only ask for support when critical in nature. On #23, I really didn't receive any feedback other than a grade!
1.2.5. ,1.2.6.	Questions about assignments and technical problems.
1.2.6.,1.2.7.	Questions about assignments and grades. [**4 occurrences**]
1.2.4., ,1.5.1.	Primary through e-mail. I had troubleshooting issues with projects generated in Hyperstudio.
1.4.3.	Most recently, for example, I pointed out some errors and some 'malfunctions' in the latest module and asked for clarification.

1.2.4., ,1.3.2.	I went to high school with someone by the same name as a professor and so initiated e-mail concerning that. He promptly replied and we exchanged a bit of humor. Turned out he was very distantly related.
1.2.4., ,1.4.2.	I sent an e-mail to [Program coordinator] telling her what I wanted to do as a project.
1,.2.2., 1.2.4.,	I sent an e-mail and they responded quickly.
1.2.2.,1.2.5. 1.2.6.	I seek clarity of assignments from [ITMA program coordinator] and also from [grader]. My grader. [Technical support] is so good about helping with technical questions in a very timely manner.
1.2.6.,1.2.9.,	I needed an extension because I was a little behind on a module, and it was approved without making me feel as if I had been wasting time.
1.2.5., 1.2.6.	I initiated interactions when I had Technical problems or when I had questions about assignments.
1.2.2., 1.2.4.,	I have faxed and e-mailed the ITMA support personnel and gotten quick responses to both.
1.2.2., 1.2.4., 1.5.1.	I have been able to call and e-mail staff members, as needed. It takes some researching, in some cases. For example, I was having trouble uploading some files to the Filebox and had to figure out exactly who to e-mail--wasn't sure if I e-mailed someone from the ITMA department, or someone at Filebox. I chose the Filebox group and have been really happy with the quick and thorough response. They have also given me other resources I can contact, in case I need more help.
1.2.2.	I have asked about a survey at the beginning of the first module that I took and I never received a response.
1.2.2.	I had problems with a particular section of a course and was never able to get anyone to ever address my real questions. I had legitimate questions about "how to perform certain tasks" and I got the run-around. This is a weakness in a web-based course.
1.2.7.,1.2.8., 1.4.2.	I had problems registering for a class and I had questions regarding course information and grading.
1.2.8.	I had interactions when I was trying to get a Psy. class accepted into the ITMA4 program.
1.2.2.,1.2.5., 1.5.1.	I frequently had difficulties posting changes to my web page. I felt no reservations whatsoever in contacting the ITMA support personnel. They were immediately available.
1.2.4., 1.3.2,	I e-mailed professors and sometimes I would receive a response and sometimes I would not. The ratio is about 50/50. Sometimes I proceeded without feedback that I needed.
1.2.4., 1.2.9.	I e-mailed [program coordinator], [Technical support], or [support personnel]. I e-mailed ITMA studio once or twice, but I felt the person answering really didn't understand my question.
1.2.2., 1.2.4., 1.2.6.	I e-mailed and asked questions when I was confused about an assignment. They responded by e-mail promptly.
1.2.2.	I contacted them regarding issues and they responded right away.
1.2.8., 1.4.2.	I contacted ITMA personnel concerning the start of the semester, and what the courses would consist of.
1.2.4., 1.2.8., 1.3.3.	I called ITMA when I needed to register for classes and the web site was not fulfilling my needs. I have called both professors for clarification of assignments and both times been pleased with the help. My e-mails to other support staff have been answered in CLEAR, concise, and timely ways.
1.2.5.,1.2.6., 1.2.9.	I asked for information regarding the program. The support personnel was very FRIENDLY and answered all of my questions. In addition, I had trouble submitting my first assignment. The support personnel helped guide me through the process.
1.2.4., 1.2.6., 1.2.9.	Generally e-mail. I ask that the relevance of an assignment be explained. The answer I received was not really an answer-just a restatement of the assignment
1.4.2.,1.4.3.	For clarification of feedback or of module expectations/objectives.

1.2.4., 1.3.2., 1.3.3.,1.3.4.	E-mailing a professor to say that I needed an extension and was having trouble with a particular section of an assignment. Never received follow through on assistance from him.
1.2.6.	Great help when I had to complete an assignment early because I was going to be out of town when it was actually due....
1.2.4., 1.2.6., 1.2.7.,1.4.1.	E-mail - questions about grading and due dates for assignments e-mail - comments regarding the amount of work required in a very short period of time with little notification of the change
1.2.9.	At the beginning there was a great enthusiasm for communicating through the listserv. However, when one person expressed some dissatisfaction with the communication and direction of the course they were promptly told that they could go somewhere else if they didn't like it. After this point they communication in the Listserv dropped and the feeling was to just put up with it and keep communication to your course issues not personal problems with it. There is always going to be someone who complains, but to tell them to shut up or get out is not an appropriate response. (My words.) So I stuck to communicating only questions I needed for myself and stopped communicating through the general list. Any initiation was made directly to the support people involved.
1.2.4., 1.2.6.	All of my interactions have been initiated through e-mail. Today, for instance, I e-mailed [program coordinator] to find out if she could let me know in advance what the next assignment is since I will be out of town...
1.2.2.	After our initial orientation program, the only interaction I have had with the ITMA personnel is through e-mail. For the most part, I received responses to my e-mails in a timely manner.
1.2.4.	Posting on listserv, distribution lists [4 occurrences]
1.2.4.	E-mail questions/ concerns. [56 occurrences]
1.2.4.	Sometimes by phone [6 occurrences]
1.2.4.	Face-to-face meeting.
14	Non responses

Responses to Survey Item 26

Code	*Q26: If you have experienced positive interactions with other ITMA students that influenced your satisfaction with the ITMA program, provide an example. [textbox]*
1.1.6.,1.1.5., 2.1.2., 2.1.3., 3.1.4.,3.2.3.	A few of my colleagues got together at my home to work with the "" audio software we downloaded. On another occasion, the Salem ITMAers met in the computer lab at Andrew Lewis Middle School along with [graduate], who earned her doctorate at Tech. helped us understand some of the aspects of Photoshop that we needed for our graphics class.
1.1.6., 2.1.2. 3.1.3., 3.1.4.	As other ITMA2 students and I F2F have established on-line friendships through the listserv, we have been able to share problems and triumphs, to offer one other assistance, and to a lesser degree, to provide a general support network for each other.
1.1.2.	Asked general questions, received answers.
1.1.7.,1.4.5., 3.1.4.,	At the beginning of our program, we had a group assignment, where we were assigned to groups to chat and discussion vocabulary.
1.1.6.,2.1.3., 3.1.4.	At the orientation meeting, it was good to meet people who were in the program. I felt a good connection with my peers as we were about to start into the program.
1.1.7.,1.4.1., 3.1.4.	During the first semester, there was some concern about the timing of the assignments and grading. It was not until one person e-mailed the group with concerns that we realized that everyone was concerned. Our concerns were not properly addressed by the ITMA support personnel
1.1.7.	E-mail and keep in touch often **[2 occurrences]**
1.1.7.	E-mail is available and discussion boards were available in Blackboard, but interactions (to this point) haven't been necessary or needed.
1.1.7.,1.1.4., 3.1.2.	E-mailed another student for clarification of an assignment.
3.1.3.	Encouragement from those who felt the same way I did was greatly appreciated.
1.1.7.,1.1.8., 3.1.3.	For the most part, I like the attitudes of the learners that are still left in the program. The emails that are sent out keep me updated on what I should be doing and where everyone else is. I am usually worried that I am very far behind. Above asked about full-time or part-time, but I have a full-time job and a part time job while completing this program.
1.4.5.	Group assignment was fun.
1.1.6.,2.1.3., 3.1.3.	I drove a great distance to the NOVA meetings, and other students offered to share part of the ride and to even have me spend the night with them if it would HELP me out.
1.1.7.,3.1.3.	I enjoy being able to post questions on the listserv so that other students can HELP me.
1.4.5.,1.4.6., 3.1.3., 3.1.4.	I especially liked the group project. I had a great team and we had lots of interaction and gave each other much support.
1.1.6., 1.1.7., 2.1.3.,3.1.2.	I have recently moved to Richmond and one of my ITMA classmates offered to tour me around the city. She also gave me her phone number so I can call her if I have difficulty.
1.1.5.,3.1.2., 3.1.3., 3.1.4.,	I mainly worked with one other lady that works within my school system. She and I talked frequently to discuss what we were doing and how we were approaching assignments.
1.1.7.,1.1.5., 1.4.5.	I was assign to a group for the first set of classes and had a good experience completing an assignment where our group met in a chat room and "discussed" Instructional Technology terms.
1.1.6.,1.1.7., 1.4.5.,1.4.6., 2.1.3.	Initiated local lunches that were positive. I really liked reading other students' posts after reading similar articles. Working together through chats and e-mails to create web pages was fun.

1.1.8.	Interactions have been neither positive nor negative.
1.1.7.,1.1.4., 3.1.3.	It was nice to work in the lab provided at the Franklin County lab and get feedback from other students as to what the general consensus was about what the instructor wanted in assignments.
1.1.7., 1.4.5.,1.4.6., 3.1.3., 3.1.4.,	It's necessary to create a sense of community within the class. I enjoyed the interactions we had within our small group for the first class using the features on Blackboard. Additionally, we used the listserv to communicate when everyone was feeling time crunched at the end of last semester and that gave some insight into others' lives and reactions to the material. That was good.
1.1.8.,3.1.3., 3.1.4.,	Last semester, through the ITMA cohort, messages were posted to keep us going to get the final projects done. We were all feeling overwhelmed and pushed each other along. Some of us discovered common ground, which was nice.
1.1.5.,1.1.7., 3.1.1.,3.1.3., 3.1.4.	My best interactions occurred within the local cohort group. I did not meet frequently with them (exception noted in example included here) but we e-mailed each other pretty often. One time we really helped each other was in the Video class - the computers at the SWVHEC were set up with the video editing software. We really had to help each other learn it. The SWVHEC personnel were around but not right there all the time for question -answering, so we relied on each other. It turned out to be one of my favorite classes.
1.1.7.,1.4.5. 1.4.6.,3.1.2.	My one interaction with another student during my last semester was fun - it was nice to chat with someone with common interests. I appreciated that the chat was built into an assignment.
1.1.7.,1.4.5., 3.1.4.,	My only contact was for the Intro to IT one-hour course which required an online chat. We organized a chat session via e-mail (webmail.vt.edu) and had a successful chat session.
3.1.3.	Often they answered questions about problems they had experienced.
1.1.7.,3.1.3.	Other students have asked the listserv questions that I inquired about. These questions were answered by other students' replies.
3.1.3., 3.1.4.	Positive interaction with students as we struggled to complete all of the assignments..
1.1.7.,1.4.5., 3.1.3.	Provided constructive feedback during our 1st group discussion activity and assisted with learning to navigate the "chat area"
1.1.7.,2.1.3., 3.1.3., 3.1.4.	Several of us taught at the same school. We would discuss instruction and help each other out of technical difficulties frequently. The listserv was also great for interacting with other students for assistance.
1.1.5., 3.1.3. 3.1.4.	Sharing ideas/knowledge we were unable to obtain from support staff.
1.1.4.,1.1.5., 1.1.6., 3.1.3., 3.1.4.	Some students in my cohort formed a study/support group that I found to be extremely helpful. We would meet and discuss/clarify assignments and help each other to set timelines for completing assignments. We would also help each other with technical problems. We never helped each other with content. We were only there to offer each other support. I found the support from the people in my group invaluable.
1.1.4.,1.1.7., 3.1.3.	Sometimes other students could tell you how to do something. Usually someone was always on-line from one of the cohorts that you could ask questions too. You had to wait for the teaching assistants to e-mail you back which could take a whole day.
1.1.4.,3.1.2., 3.1.3., 3.1.4.	Spoke with [student] weekly about projects and assignments. We often shared assignments with each other to have them critiqued.
3.1.3.	Supportive interactions from other students helped make the course work seem less frightening and helped a little in alleviating that feeling of isolation that I have frequently had.
1.1.7.,1.1.8. 1.4.5.,1.4.6., 3.1.3.	The chat Room exercise in my first class at ITMA was fun and allowed me to get to know other students. I feel that if I missed something or was desperately seeking empathy, then I at least know two other students having a similar experience.

1.1.8.,1.4.5., 1.4.6., 3.1.2., 3.1.3.	The group project during one of the early courses was a great experience in online collaborative learning. Unless I k one of the students, I did not communicate as a general rule. if there was a question that I had experience with, I did try to help that person.
1.4.5.	The group work that we had to do together.
1.1.7.,1.1.8.	The listserv is wonderful.
1.1.7., 3.1.3.	The listserv provides an open lines of communication that helps keep everyone involved problems can be shared and resolved.
1.4.5.,1.4.6.	The positive interaction with other ITMA students was conducted during a group activity.
1.1.6.,1.4.5., 1.4.6.,2.1.3., 3.1.3., 3.1.4.	The Tidewater group meets about once every other month for lunch and that it helpful. I wish more of our assignments were interactive. The best assignment was when we built the web page from different parts of the state.
3.1.3., 3.1.4.	There are others in my school that are in the ITMA program without their encouragement and support I doubt I would still be in the program. We experience frustrations together.
1.1.6.,3.1.3., 3.1.4.	There is a core group of ITMA students in my school division and we depend on each other. If it were not for these students, I would have dropped out of the program. If I had to depend on support totally from the professors, I would not be successful.
1.1.4. 1.1.5.,1.1.7., 1.1.8.,1.4.5., 3.1.2.,3.1.3., 3.1.4.	There were some members of the ITMA community that made part of the experience positive. I found interacting with one student in Virginia Beach to be a great learning experience she had great teaching ideas to share and we worked collaborately together to finish a group project (that the other group members had technical and skill level problems with). The *only problem was* that we ran up a pretty high phone bill calling back and forth long distance to finish the project. She was a Mac user and I was a Windows user and she had trouble using the chat area in Blackboard. I know Blackboard has upgraded lately, so that may no longer be a problem.
1.1.7.,1.4.5., 3.1.4.	Using the blackboard for an assignment, we interacted in a fashion similar to a chat room along with a sketch board.
1.1.6.,1.1.8., 1.2.9.	Very positive to be with my peers during instructional design on campus in summer. This was a positive experience. Positive experience to gather with the professors at the locations, but my satisfaction was more geared towards the professor or doctoral student teaching the material, i.e., video with [technical support].
1.1.4.,3.1.3., 3.1.4.	We communicate due dates, technical advice.
1.1.4.,1.1.7., 2.1.2.,3.1.2., 3.1.4.	We communicated well on assignments through email and phone calls. I remain friends with some to today.
1.1.5.,1.1.7., 1.4.5., 3.1.4.	We completed an online discussion and both students I interacted with were very professional. The discussion was thoughtful and in-depth.
1.1.7.,1.4.5., 1.4.6.,3.1.1., 3.1.4.	We had a chat room with the first class for an assignment. Finding a time for us all to meet was very difficult. But I enjoyed finding out about who was in my group.
1.4.5.,1.4.6., 3.1.1., 3.1.4.	We had a group assignment through a virtual chat that was fun because it was personal
1.1.7.,1.1.6., 1.3.1.,3.1.3., 3.1.4.	We sometimes met at the lab and commiserated which was very Supportive and helped me to feel that I was not alone. Having a faculty member and church members in my cohort helped a great deal.
1.2.3., 3.1.3.	When the summer/fall modules went upgraded for months on end, it was positive to talk with four other members of the class who could understand and complain along with me!
3.1.3.	Words of encouragement when family problems and job related duties get me behind with my ITMA studies.

1.1.7.,1.4.5.,	Worked together on an assignment and was able to have online chats.
1.4.5.	Yes, when it takes place. Using the virtual classroom to discuss defining instructional technology.
34	Non responses

Responses to Survey Item 27

Code	*Q27: If you have experienced negative interactions with other ITMA students that influenced your satisfaction with the ITMA program, provide an example. [textbox]*
1.1.7.,1.5.1., 1.5.2., 3.1.3.	Within my own cohort, I found myself supporting at least 4 other people with technical problems they encountered. They needed to have some basic skills before taking the ITMA classes, maybe beginning webpage design and web-based chatting and e-mail courses
1.4.5.	When I had a group online interactive project, some of the students were rude and insensitive to the women.
1.1.3.	This wasn't really negative, but I felt that some people really misunderstood the honor code and thought that we should never discuss anything or never should offer any advice to each other. I don't think we ever really understood if we were competing against each other, as in the case in many traditional courses.
1.4.5.,1.4.6.	The opening group exercise was a pain. Having to depend on others to be where they should be at specific times was a problem.
1.1.6.,1.1.7.	The lack of face-to-face communication... it's a minor point with me, but it would be nice to see who I'll be graduating with.
1.1.7.,1.5.2.	Sometimes, a few of the students send out too many e-mails or ones that should be directed towards individual teachers or support staff. Many of the e-mails do not apply to me.
1.1.7.	Sometimes the listserv gets tiresome.
1.1.7.,1.5.2.	Some students seemed challenged by simple technology tasks (like e-mail). Seeking a master's degree in a medium where the user is on kindergarten level made little sense. I think some areas of our instruction were scaled back due to the poor preparation of some of the students.
1.1.8.	Some other students whined a lot!
1.5.1.,1.5.2.	Some of the students in my group had problems connecting to his/her online service. Not because of service errors but because of lack of computer knowledge. The same held true for MS Office applications that we were required to use. It bothered me that I spent more time teaching my cohorts than collaborating with them.
1.4.2.,1.4.6.	Some negative as students felt like some of our professors did not follow through with what they were suppose to accomplish..
1.1.7.,1.1.8.	Some ITMA2 students never seem to post to the listserv except to complain in a negative tone. This can be de-moralizing to all of us.
1.1.3.,1.4.5.	Not negative interactions--no interaction! I don't understand why we are not doing group work and posting to discussion boards and exchanging ideas. I feel like I'm in an electronic correspondence course--not what I expected from Virginia Tech. University of Maryland (a colleague is enrolled there) requires interactions and a certain number of postings from each student so there will be communication and exchange of ideas in addition to interaction with the material. I think that's important.
1.1.7.,1.1.3.	None, negative. I do wish a mailing list or listserv was more actively used - with a web interface and archive feature like Yahoo groups or even the Virtual Classroom feature on Blackboard.
1.1.3.	None, just too little communication to feel like a community.
1.4.5.,1.4.6.	I've only had one experience with a chat room discussion with other students. It seemed unorganized & I wasn't sure it was terribly effective. That might just be because it was a experience.
1.1.7.	It was difficult coordinating a time to chat with this person, but that's just the reality of busy schedules and I appreciated [Program Director's] flexibility relative to due dates.

1.1.7.,1.4.5.	I wouldn't mind more times where we could meet and chat like this (it is difficult with everyone's different work schedules).
1.1.6., 1.1.7.	I would really have enjoyed getting together for an on-campus class (as I did for two summers at VT) but to have the ITMA groups there. Or, it would have been nice to have seen the other ITMA folk at least once a semester if only for an open panel discussion or snacks and a talk group about how classes were going. I think this would have created a sense of closeness that the listserv can not do.
1.1.3., 1.1.10.	I think most of us are so busy with the rest of our lives that we have difficulty finding time to spend in interaction.
1.1.7.,1.5.2.	I sometimes get annoyed at students responding to an individual through the listserv. I don't think it's intentional, they just don't understand the purpose of the listserv.
1.1.3.	I haven't had a negative experience, but I believe the students should interact more.
1.1.6.,1.1.8.	I have no negative interactions to relate. I enjoyed the few times we met as a complete group on the VT campus. It was good to put faces with names.
1.4.5.	I dislike working with other students when their work ethic varies from mine. I do not care to be grouped with people for group projects when my grade reflects another student's inability or unwillingness to conform to the expectations of the rubric at hand.
1.4.5.	I didn't like working in a group the first semester. I felt like some of us were more dedicated to the assignment that others. I like working in my own more than depending on others for my grade.
1.4.5.	I did not like the discussion group I was in another student was overbearing and made the discussion assignment difficult.
1.1.6.,1.1.8.	I did *not* feel comfortable in the Franklin Co. lab. I felt as if it was a waste of time to go there - I could get a fast connection at my school or be at home. I felt as if I had been fussed at during out video class, because there were some conflicts related to scheduling the equipment and the reinstallation of software.
1.4.5.,1.4.6.	group work - some of the group did not fulfill their part.
1.4.5.,1.4.6.	At beginning of project to work with other three students to create a webpage, I found some members deciding breakdown of responsibilities without enough input to be dissatisfying.
62	Non responses

Responses to Survey Item 29

Code	*Q29: If you do NOT feel comfortable seeking assistance from other ITMA students, briefly explain why. [textbox]*
1.5.2.	Well, I think I k more about chat rooms and other technologies than the people I was paired with in our groups. That gets old after awhile. I want to learn something and not have other students looking to me for advice. I get that everyday with my college students in class - I really didn't want too much of that as a student myself.
2.1.1.2.	There was no development of a community.
1.5.1.	The students I have dealt with are not very bright.
2.1.1.4.	The men in this session were arrogant, judgmental, and egotistical with their responses.
2.1.1.1. 2.1.1.3.	Since I hardly know these people, why should I feel comfortable asking for help from *nearly complete strangers*?
2.1.1.4.	Only because of that one bad experience.
2.1.1.1.	It is hard to seek assistance when you don't know the person. So the group i seek assistance from is the Tidewater group.
2.1.1.4.	In the first organizational meeting, we were told that we should never work with other students unless it had been assigned. When one member of the group posted a questioning, somewhat critical comment about the organizational meeting, we all reprimanded. There is no tolerance for even the slightest negative comment on the program on the listserv and a bit of nervousness on the part of students that no question or answer be posted that might be perceived that way.
1.5.1.,1.5.2.	I should have saved my answer from 17 for this. Often I did feel that others in my cohort maybe didn't know any more than I did, but we often plugged along together and tried to make things work.
2.1.1.1.	I only disagree because I do not know the true level of expertise anyone has and the need for their assistance has not presented itself.
2.1.1.1.	I have to admit, that not knowing enough about my co-students has made me hesitate in seeking assistance as readily.
2.1.1.1., 2.1.1.3. 2.1.1.2.	I don't know them. I have no reason to *trust them*. Four of us spent about 3 hours one evening chatting about our philosophy of education. We all exchanged email bio sketches. That is not enough to build community.
2.1.1.1., 2.1.1.3.	I don't have enough contact from them *to invite their advice, or opinion*. I attempted an invitation to do a live discussion on the Blackboard about a particular topic and no one responded back.
2.1.1.1., 2.1.1.3.	I haven't had enough interaction with them to feel like I know any of them well enough to ask for help or ***trust*** *them*. [**8 occurrences**]
1 occurrence	You have to be careful about what you say to avoid any cheating.
1 occurrence	I think a lot of them have dropped out.
71	Non responses

Responses Survey Item 32

Code	*Q32: If it has been difficult for you to establish friendships with other ITMA students, briefly explain why. [textbox]*
2.1.2.2.	We have only met once--hard to say whether or not we are friends.
2.1.2.2.	We have not really been encouraged to do so. *I'm not sure where everyone is on assignments, so I haven't contacted anyone.*
2.1.2.2.	We have no opportunity to get to know each other…due to no interactions [**4 occurrences**]
2.1.2.2.	Unless I particularly initiated it myself, it's not going to happen in the atmosphere that has been created/not created by the program staff.
2.1.2.3.	Too - first semester & have little to no contact with other students at this point. [**4 occurrences**]
2.1.2.2.	There's not enough interactivity to establish friendships so far, but I do see that it might be a possibility in the future with more classes and more interactivity.
2.1.2.1.	The only difficulty, really, is that we are all so busy, no time. [**8 occurrences**]
2.1.2.2.	Our assignments rarely call for collaboration, and we never seem to meet, which we were led to believe would happen occasionally.
2.1.2.2.	Only one assignment has required group interaction.
2.1.2.4.	No personal communication b/w students, no consistent communication b/w the students. It would be nice to do more live discussions to encourage bonding
2.1.2.2.	My friendships are confined within my local cohort group, I did not see other ITMA cohort members enough to establish friendships. I think a form of support can be offered via email, but friendships take more interaction.
2.1.2.4..	Lack of personal communication between the people in the program. I know some people in my program because they send a letter to the entire listserv. But as for how many people are in my program, I have no clue.
2.1.2.4.,116	Lack of communication and opportunity to meet one on one. [**2 occurrences**]
2.1.2.4.	It is clear to me that some meetings to bring students together would be highly beneficial. During the one meeting we had, it was said that we would be able to meet together at the Roanoke Valley Graduated Center for support. That would have been a great addition to this program. I believe it is a significant omission that it has not been done. I cannot tell you how often I could have used the experience of someone to show me how to do something. It would have saved me hours of wasted time.
2.1.2.5.	It has not been difficult, simply have no need for additional friendships at this point. [**3 occurrences**]
2.1.2.4.	I was not really able to establish "friendships" with other ITMA students because we were not given the opportunity to come into contact with one another (face to face).
2.1.2.3.	I have only taken 2 1-credit courses so I may not of gotten to courses that require a lot of interaction. So far only one small assignment has required communication with others. That interaction went very well.
2.1.2.2.	I have not really tried; not made the effort; opportunity does not exist.

2.1.2.2.	I have actually gotten to know another teacher at my school through this program. My communication with other teachers has been limited to the one group assignment.
2.1.2.4.	I felt that some from other cohorts were very different from the people in my cohort. Maybe that was because of geographic culture. I did make several friendships with people who were most similar to me.
2.1.1.2.	I do not know who the other students are. [**2 occurrences**]
2.1.1.2.	I did not take advantage of the "ice-breaker" activity and follow-up. I did not think it was as important as it is seems now. I miss the classroom setting to communicate, gripe, exchange ideas, etc., more than I thought I would. Will attempt to re-connect in future classes.
2.1.2.2.	I currently reside in Richmond but I belong to the Tidewater cohort. Some of the meetings that ITMA students have arranged are too far away for me to attend. Also, in a class that required student interaction, friendships were made but there have not been any interactions in any other classes since then (approx. 1 year). [established friendships]
2.1.2.4.	Have not had but one opportunity to meet with them face to face. Maybe a once a semester meeting should be implemented. Some cohorts arrange to have lunch together, but that does not happen for some of us that live in small towns and who are not close enough to one another to arrange a get-together.
2.1.2.4.	*Distance* is tough-especially without the face. [**2 occurrences**]
2.1.2.2.	Unsure. Perhaps, it is because I felt like some of the others were already connected as friends because they worked together in the same schools and I k no one when I came into the program. This probably relates just as much to my introverted nature, and me even though I am very vocal and don't mind speaking up.
50	Non responses

Responses to Survey Item 34

Code	*Q34: If you have experienced a sense of concern from other ITMA students, provide an example. [textbox]*
1.1.7., 3.1.3.2.	When one of our classes seemed to be addsing extra work at the end of the semester, *many* emailed the listserv *with their concerns*.
3.1.3.1.	When I was feeling overwhelmed, the encouragement from other ITMA students helped make things better.
3.1.3.1., 1.1.7.	We express our concerns on the listserv. It helps to have a way to vent.
3.1.3.1., 1.1.7.	Those who post questions and pleas for help get my concern
3.2.3.	This was not a feeling that I generally got from the other ITMA students. The sense of concern that I felt was from the professors and the ITMA support staff.
3.1.3.2.	There is a great deal of empathy between us, and we try to help each other as best as we can.
3.1.3.1., 3.1.3.2.	Students who had problems and expressed them through the listserv were supported when ever possible by the rest of the group.
3.1.3.1., 1.1.7.e	Students give suggestions, pick-me-up messages, and advice through emails.
3.1.3.1.	Some taught certain programs that I was unfamiliar with so that I could complete assignments.
3.1.3.1., 1.5.2.	Some did...a few didn't. I did not think the problems came from the students, but from the prerequisites (or lack of beginning courses).
1.1.7.e, 3.1.3.2.	Personal emails from a number of students needing communication to release stress or obtain reassurance they were on the right track as far as course expectations.
1.1.7., 3.1.3.1.	Over the listserv, there was a lot of encouragement and supportive comments from ITMAers to finish the modules. It was nice. [**2 occurrences**]
3.1.3.1., 3.1.3.2.	Our group project members seemed very concerned for one another-one had a personal tragedy and the others picked up the slack. Locally, the people I k in ITMA have had fun sharing.
1.1.7.e, 3.1.3.1.	One member of my group emailed me twice during this module to ask how my work was progressing.
3.1.3.1., 3.1.3.2.	Of the seven people who began ITMA from our school division, *three have dropped out*. We have reached out to them and tried to provide support before they dropped. Two others have been on the verge, but they remain with verbal support as well as timely meetings intended to bring them up to date and back into the fold.
3.1.3.2.	Most talk about the time crunch.
3.1.3.1., 3.1.3.2.	Most of these concerns were on a personal level and we emailed each other individually. I felt that some of the mass posting about so and so having a baby, etc. were maybe too personal to post to a large group. I felt a little imposed upon to have to open such emails.
3.1.3.1., 3.1.3.2.	Many were concerned over the direction and consistency for the pilot program. We were able to discuss this with one another before approaching instructors with these types of issues.

3.1.3.2.	Many times we helped each other get through.
3.1.3.2., 1.1.7.	Last semester, when the last module was late coming on line and contained an enormous amount of work, the listserv was very active with people upset with the situation.
1.1.7.c, 3.1.3.2.	In the chat, we had time to discuss taking our classes. Even in that short amount of time, you can bond with others.
1.1.7., 3.1.3.1.	I notice it every time the listserv has a question on it. People just chime in with immediate and accurate help. I think people are looked after if they post to the listserv.
3.1.3.1., 3.1.3.2.	I have found one person (whom I met during the first module because we were placed together in a discussion group) who has a great knowledge of this topic. He is merely in the program for the degree and has been very helpful when I needed to have something explained to me.
3.1.3.1., 3.1.3.2.	I asked for assistance on a non-ITMA matter having to do with a move I will be making to another cohort's area, and received many responses that were extremely helpful.
1.1.7.e, 3.1.3.2.	From one when we were at crunch time last semester. We exchanged emails encouraging one another. This was a result of the interaction I detailed above. From another who was grading assignments for a particular module. We played with the live discussion board and found out we had a few things in common. She was great! I felt that she cared about my success.
3.1.3.1., 3.1.3.2.	Everyone was always willing to help if asked. Folks who didn't mind driving up to Blacksburg would take projects up for other students as well.
3.1.3.1.	Every student in my class seemed willing to help.
3.1.3.1.,1.1.7.e	Emails about due dates and course load.
1.1.7., 3.1.3.2.	Email communications from others if I didn't contact them for long periods of time.
3.1.3.1.,1.1.7.	Comments made on the listserv are evidence of this.
3.1.3.1.	At times I would fire a e-mail off to ask if for example, if they got there grade for an assignment yet,
3.1.3.1.	At the beginning, when we were put into groups requiring teamwork and tight deadlines, most of the ITMA students expressed feelings of frustration, stress, and a general sense of being overwhelmed.
3.1.3.2.	At one point I was considering dropping out and the some of the other students talked to me and offered help if I needed it.
1.1.7.,3.1.3.1.	Again, too little interaction to comment. Based on the listserv conversations people generally seem to be supportive of one another and do their best to be helpful.
3.1.3.2.	After the events of 9/11, several students expressed concern for other students who had friends involved.
3.1.3.1., 3.1.3.2.	A few of the more outspoken ones have sought information from the group and shared a bit of themselves following 9/11 and that was good. When we couldn't finish on time last semester there was good interaction and concern voiced by many.
3.1.3.2.	Two students asked on several occasions, how I was coming along and which lesson I was on. It made me feel better to know that I was not the only student to request an incomplete.
56	Non responses

Responses to Survey Item 36

Code	*Q36: Are there interactions with other ITMA students you felt have been lacking but would be helpful to you? Briefly explain. [textbox]*
1.1.6.	VT staff should have been willing to support the program enough to travel to the sites and have a least one class meeting each semester.
1.1.3.,1.1.9.	There needs to be a place for students online to feel a part of a community. When the instructors at the beginning were reactive and not supportive of students expressing their frustrations and doubts it KILLED the sense of trust and support that should be available. This was lacking, communication became subversive by excluding the listserv and writing or talking directly to others about our doubts and frustrations. This was a great loss to the designers, as it would have done much more to make the positive and negative experiences clear throughout the semesters.
1.1.6.,1.1.9.	Some people from the Tidewater cohort have met a few times and talked about the program while having lunch. I think this would be helpful for other cohorts to do as well.
1.1.3.	Some ITMA students never utilized the listserv. This kept them at an even greater distance than already existed in the program.
1.1.6.,1.1.9.	Perhaps a meeting once a year with all of the cohort students. That way, faces can be placed with names.
1.1.3.,1.19.	It would be nice to receive an email of all of the students in the program, as well as a brief bio, name, location, career field, etc. We all had to send bios over the Internet, but it ended up being a pain to read and sift through to find people in the same area (location) or field.
1.1.3.,1.1.5.	Interactions from other students who are in corporate training, training and development or E-learning would be a great help to me.
1.1.6.	I would like to meet at least once a semester with other members of the cohort and someone from the school. I think it would help us understand what is expected of us better.
1.1.6.	I would like the opportunity to take a summer course on campus for a week. I would rather give up a week in this summer than try to suffer through a course like ed psych.
1.1.6., 1.4.5.	I was very pleased with the small groups we were assigned to in an early module. I don't think it is possible to know everyone, but if we were grouped together on a regular basis with different folks, we would have more interaction.
1.1.3.,1.1.5., 1.4.5.	I thought the program would provide opportunities for group work, on-line conferencing, idea exchange, but have not seen much of that so far.
1.1.5.	I know of several students that requested an incomplete, but I would like to have known that others were in the same boat with us. That would reinforce the idea that it was not just me who needed more time to complete the work.
1.1.3.,1.1.5.	I feel there should be interaction between the ITMA students to discuss the courses and the ITMA program in general.
1.1.3.,1.1.9.	I feel a little isolated and would appreciate more interactions with other students built into the courses.

1.4.5.	I don't think we really had time for more. In one class, we had some group projects. We probably should have done more of that to become more comfortable with that type of work so that we could in turn employ that type of communication in our own teaching.
1.1.3.,1.1.5.,	I believe all ITMA students are going through the same thing and I believe it would be helpful for us to associate with one another and be able to ask questions of each other, but due to individualized work, we don't associate with one another enough to feel comfortable to ask these "strangers" questions.
1.1.5., 1.1.9.	Collaboration is an important key to learning. This opportunity has not been present to date.
1.1.7., 1.1.9.	A bulletin board where we could post and read questions regarding assignments, etc. would be extremely helpful.
1 occurrence	We need to share about the course materials. See comments above.
1 occurrence	I have no examples in either direction. I've not been in this long enough.
65	Non responses

Responses to Survey Item 39

Code	*Q39: If there is an instructional strategy (i.e., group discussion) used in the ITMA program that stimulates your sense of interaction with the course content, provide an example. [textbox]*
1.4.5.3. 1.5.2.	Again, see above. Having to dive in and create projects left me with no choice by to interact with the content. At first, and probably still now, I was (am) overwhelmed by the amount of knowledge I'm lacking.
1.4.5.1.	Distance education course provided the most group discussion about subject matter, and the best opportunity to interact with each other on an intellectual level. I usually looked forward to the listserv, even though it sometimes was very 'complainy'. But I do feel like the complaining should be allowed because students always let out their complaints before and after class by talking in the hallways, etc. The listserv was our hallway sometimes – an emotional outlet, but rarely an intellectual stimulus.
1.4.5.2.	Even though I was skeptical at first, the group project was one of the most rewarding projects I have completed.
1.4.5.1.	Going to discussion forums and reading other students' posts.
1.4.5.1., 1.4.5.2.	Group discussions and group projects are stimulating to me.
1.4.5.1.	I enjoyed using the chat board discussion area of "blackboard."
1.4.5.1.	I got a lot out of the intensive courses over the summer. It was nice to get to interact with the professors as well as other students who I k only through the listserv.
1.4.5.3.	I liked creating the web site and exploring the web, though that took a lot of time. I liked using Blackboard and exploring the features available there.
1.4.5.1.	I liked the online discussion we had for Introduction to instructional technology.
1.4.5.3.	I think the projects are actually a great idea (i.e., the audio module). By creating the product, a sound file, I now know how to make for my classes. I feel it was worthwhile and meaningful.
1.5.1.,1.5.2.	I thought the assignments were difficult given my background. I use an apple at work and a pc at home. That was hard for me. I did not have the background knowledge for program and wish I had known that going into it.
1.4.5.1.	I would say that the group discussion was the best.
1.4.5.1.	Last semester there was a live discussion to define principles as a group. It was very nice to exchange the ideas.
1.4.5.1., 1.4.5.2. 1.4.5.3.	Making the portfolio websites, [faculty] distance learning class with the online discussions (live and bulletin board), email, group projects, creating many projects that I can (and do) use in my teaching now.
1.4.5.1.	On one occasion, group or one on one discussion can be helpful. In general, projects that depend on the application of material are most helpful.
1.4.5.1.	One of our first assignments was to do a group discussion in a chat room environment.

1.4.5.1.	The chat room requirement for Intro to IT created a sense of interaction with the course content. It was a good experience and made me feel like I was not alone in taking this class. It provided a small sense of connection.
1.4.5.1.	The course on Distance Learning (I think) was one in which we had small groups set up to "chat" - this strategy allowed me to get to know other ITMA students in a way.
1.4.5.3.	The development of our portfolio stimulates me to do my best work since I know it will become a part of that virtual representation of who I am as an Instructional Technologist.
1.4.5.1.	The online chats and listserv discussions are helpful and informative.
1.4.5.1.	The only group discussion in which I was involved occurred during the first module. I loved it and long for more.
1.4.5.1.	There was an online group discussion in the very first course offering, but it was very clumsy and I did not enjoy it all that much. We created a list of definitions as a group. Personally, this activity stretches the technology too much and tends to be unreliable too often.
1.4.5.4.	This is a negative response. I found in the Multimedia component of the modules, instructors were very reluctant to allow varying software packages for presenting media components. This would have been more valuable to me in my current occupation as the software of choice, Hyper Studio, is very rarely used.
1.4.5.3.	Use of the portfolio to show care my work.
1.4.5.3.	Web building in the early class was wonderful.
1.4.5.1.	When the flash or QuickTime sessions worked they were a good place to gain a sense of interaction. There was NO group discussion except through the listserv and that was terrible and restricted.
1.4.5.4.	Yes, research over the Internet
1.4.5.4.	I am just totally impressed with how it has been laid out. I have enjoyed the computer literacy projects. They brought a tremendous sense of satisfaction.
1.4.5.4.,	I appreciate the multiple interactions with the content in Ed Psych. [2 occurrences]
1.4.5.4.	[faculty's] sense of humor in the coursework that he writes. Currently, I am completing the software evaluation course and I enjoy reading the coursework that [faculty] has written.
1 occurrence	Not group discussion!
1 occurrence	These questions are very difficult to pin down as agree or disagree. Some projects were great others were overwhelming.
62	Non responses

Responses for Survey Item 43

Code	*Q43: Aside from your listserv interactions do you initialize personalized communication (e.g., telephone calls, individualized e-mail, etc.) with other ITMA students? If so, please list other ways in which you communicate. [textbox]*
1.1.6.,2.1.3.	Yes. One person works on the same campus and I have seen her about 3 times.
3.1.1.,3.1.2.	Yes, individualized e-mail. [**12 occurrences**]
1.1.6.,3.1.1.	Yes. I use e-mail and I have telephoned. I have made arrangements to meet someone at a meeting which we with both attend in April. This will be the first time I have met someone I did not know before entering the program.
1.1.1.,3.1.1.	Twice when I was particularly struck by something that someone said or I felt some Common connection/similar circumstance.
1.3.2.	Sometimes. If I have a question that regards the program. Most of the time I contact the professor who doesn't always respond.
3.1.1.	Some, but rarely (most of the time by phone)
1.1.6.,2.1.3., 3.1.1.	Some people from the Tidewater Cohort have met for lunch a few times and plan to continue having meetings.
3.2.3.	Rarely. I just didn't feel very connected to other ITMA students. I usually contacted the ITMA support staff.
3.1.1.	Phone calls, e-mail, meetings [**2 occurrences**]
3.1.1.	Occasional individual e-mail if I am having a prolonged discussion with one person that would not really benefit the group.
2.1.2., 3.1.1.,3.1.2.	Numerous phone calls (long distance) visited some homes e-mail tried to chat I'm not sure that I remember the listserv interaction enough to answer these questions.
1.1.7.	Message board
2.1.3.,3.1.1.,3.1.2.	Just one student who lives and works in my same city I have called about 4 times.
1.1.6., 2.1.2. 2.1.3., 3.1.1.,	Individualized e-mail, phone calls working together at a central location many times(several members of my cohort work in the same school system, living near each other, and could get together to work). [**2 occurrences**]
1.1.2.,3.1.2.	I tried with a couple of individual e-mail. Lack of response let it die.
3.1.1., 3.1.2.	Primarily communicated through e-mail and phone calls. [**3 occurrences**]
1.1.2., 3.1.2.	I once tried to organize a group, but I never got a response. Maybe it was because it was nearly the end of the semester.
3.1.1.,2.1.2.	I keep answering your questions too early. I mostly answered with personal e-mail. I tried never to post to the whole listserv and when I did, I was very red-faced. I did initiate phone calls with people who live in my area.
1.1.9., 3.1.3.	I haven't used the listserv feature extensively. I do think that as a program issue, it should be emphasized to students that there fellow students can be resources and that sending individual e-mail, calling (if a student wants to give out a phone number) or basically developing "online" friendships should be encouraged. I have answered a few "calls for help" but have not received feedback.

1.1.6., 2.1.2., 3.1.1., 3.1.2.	I have interacted with other students through individualized e-mail and have met other students for lunch on at least one occasion.
1.1.6.,2.1.2., 3.1.1., 3.1.2., 3,1,3,	I did some individual e-mail on occasion, especially with other students locally. One other ITMA student and I work at the same school, so we often discussed assignments, problems, etc. On one or two occasions another ITMA student and I went together to a local library to do research.
1.1.6., 2.1.2., 3.1.1.,3.1.2.	E-mail, dinner
1.1.6.,2.1.3., 3.1.1.	Again, I contact one lady because we work in the same school system.
1.1.6.,2.1.3., 3.1.1.	A co-worker at my school is enrolled in same ITMA4 program and we communicate daily.
3.1.1.	Only if I k them personally.
1.5.2.	No. And there was no place to comment about this, but I sometimes wonder if people realize their messages are going to the entire group, when their questions conversations seem to be directed at one or two individuals. It is frustrating at times to have to read a number of irrelevant e-mail.
3.1.4.	No!! **[13 occurrences]**
38	Non responses

Responses to Survey Item 50

Code	*Q50: If you would NOT consider taking other web-based courses based on your interaction experiences with the ITMA support personnel, other students, or course content, briefly explain. [textbox]*
2.1.3.1.	This question #49 is not clear. I HAVE taken other web-based courses that were graduate level and much better organized and prepared. The ITMA program does not influence my choices of further interaction either because of its positive or negative experiences. I would, however, think TWICE before taking other ITMA courses.
2.1.3.1.	The last course I took with the program left me feeling disillusioned with the ITMA program. I did receive a final grade (A), however, to date I have received zero feedback on the work I submitted - Not one single comment on submitted assignments and work. As an educator, I find that unacceptable, especially in a distance learning environment.
2.1.3.1,	The feedback is a problem! [**2 occurrences**]
2.1.3.1.	Some of the course content was either repetitive (had same info in undergrad work) or was difficult to adapt to my current needs. Some of the projects were much too time-consuming for the learning I was supposed to receive, and these same projects didn't seem to fit my situation as a teacher.
2.1.3.2.	Like I've said earlier, there is little sense of community. I feel like I'm taking electronic correspondence courses. I expected to interact with people via the Internet like I do with my job. I communicate with people all over the world every day via e-mail.
1 occurrence	If the ITMA personnel begins to work like the Grad School with registration, I won't go through that Hell again. It's not worth beating your head against the wall for this degree. Nothing's worth that. As long as ITMA doesn't become them, we're OK.
2.1.3.1.	I would take other courses...I love the format. But my experiences with ITMA would not be a positive factor in that decision. I need a certain amount of structure I can count on because of my varied schedule and responsibilities. I would prefer always having all assignments at the beginning of the course so I could work around my schedule rather than end up having to function on 3 or 4 hours sleep because assignments were dished out piece-meal or late. For working adults, school is not the only full time job.
1 occurrence	I would consider other web-based courses, but this is not due to any experience I have had with ITMA. I hope you understand this response.
2.1.3.1.	I think some standards need to be set for students, support staff and faculty. Junk mail on a listserv is annoying. Months of ungraded work with no feedback are inexcusable. Read a chapter, create a project is not a satisfactory learning environment for me.
2.1.3.2., 2.1.3.3.	I said agree, but it is mostly because I am interested in the content. Most of the time, I feel like I am wasting time trying to figure out what is going on. As I said before, we needed time, at least once a month, to go to the graduate center to talk to someone who k what was going on and who k answers to software and hardware concerns.
2.1.3.2.	I hope, as time goes on, that I will feel more sense of community with fellow students, but at present, I do not. However, this is probably partially because I have barely begun the program.
2.1.3.3., 2.1.3.4.	I don't really have a need to take any other courses. If I did, I would prefer a visual learning experience. I feel like the courses on the web are taken and then forgotten just to get through. Sometimes I find the classes to be just a lot of writing (typing) and not much more.

2.1.3.1. 2.1.3.2.	Along with my other comments, I also felt that the course content was lacking at times. After taking VT courses in IT on-campus, I see a big difference in the amount of things I learn being in class rather than the ITMA program. That may just be the fact that web-based learning was not for me because I need interaction, and I also need to be challenged (and not feel like I "know what's being taught" and have to help everyone else). I feel like I've learned 10 times the amount from courses on campus than from the ITMA course. The only course from ITMA that I even reflect on currently was the one that used Papert as a text book. It does make me wonder if degrees from on-line programs should be considered the same as on-campus programs. I know that if I had continued in the on-line program, my knowledge would be a lot less than it is from being on-campus.
2.1.3.4.	At this time don't need to take future courses.
2.1.3.2.	I chose web-based because of convenience (it's a long distance to a traditional program). However, I really miss the face-to-face interaction with a professor and the sense of group from a classroom situation. It's not because of ITMA that I would not take other web-based courses, but more that this is not my style.
78	Non responses

Responses to Survey Item 52

Code	*Q52: Is there anything else you would like to add regarding your interaction experiences with either the ITMA support personnel, students, or course content, that you have not been asked?*
4.1.1.6. 4.1.4.2.	Yes, there are times when I spend so much time trying to get a visual picture of the assignments so that I might go ahead with the projects. I feel that, in the absence of a teacher, that final examples of the assignment should be given to the ITMA students. If I can visualize what a final project looks like, I can do a much better job and in a timely manner. Also, sometimes I feel that some of the assignments are too thorough, that they require too many lessons that repeat themselves at times. I do think however, that I am learning a great deal, which is good.
4.1.2.2.	What other communication options can be used to make your experience even more satisfactory? I'd like to have a chat room to talk to my support personnel - so that I wouldn't have to make long distance phone calls. We could arrange to meet in a chat room through email so we can discuss my individual problems if I had any. Financially, that would be more cost-effective than day-time long distance charges. I use a chat room for my college students, and it's pretty effective when arranging times with alternative schedules for my distance ed. courses.
4.1.1.6. 4.1.2.2.	We need more programs offered in this fashion. The medium is available to make the programs available to all. We need to take advantage of it, and do so inexpensively.
4.1.3.1. 4.1.1.1. 4.1.4.1. 4.1.1.4.	We have recently been told that we are not allowed to contact our instructors, but must communicate through the support personnel at all times. This has been bad for morale, and may be a cause for why there has been significantly less interaction of any kind (listserv or personal e-mail from other students) during the current semester. I am feeling much more disconnected from the group and staff currently than I have before. Also, I would not recommend the program to anyone who is not already very quick to learn to use equipment and software independently since no instruction or support is aimed directly at these skills. (A graduate student or two to specialize in assisting in these areas would be a great addition to the program.) I do understand, though, the necessity for focusing on instructional skills and theory in a Masters Program.
4.1.4.1.	We had an excellent course on how to design a distance education experience but very few of our professors seem to have read the 'book'.
4.1.3.1.	Upon replying that I would not recommend the ITMA program, it reflects something (other than the support personnel) with which I take issue. When the overview of this program was first presented to my cohort, the "folks in charge"(graduate office personnel).
4.1.4.1.	This has nothing to do with your question, but I was rather disappointed to find out that the faculty thought so little of the actual graduation ceremony or diplomas. I felt rather duped when we weren't even notified that we would not receive diplomas…
	There were a few questions I could not answer because of the "either or" answer I would have to give. I think it would have been good to have a "neutral" or "not applicable" category. Another reason it was hard for me to answer some questions is because I have just started and there is no basis for my answers as of yet. Good Luck with your survey
4.1.4.1., 4.1.4.2.	There should be a procedure for asking questions related to the material assignments. Some instructors/professors up front say to email them. Others make no offer for help or support. I struggled with one course, was given an extension of time to complete assignment but then there was NO support available for me during the time I had to work on the assignments (Winter holiday break).

4.1.4.1., 4.1.4.2. 4.1.1.6.	The work load was horrendous with the first 3 credit course. The only reason that I was able to get stuff done was because we had two snow days in the nick of time. I think maybe that was why my discussion friends had to drop. This current 3 hours I am taking seems to be better but he is still putting in deadlines that I get the impression aren't very flexible. I have made them so far but it causes some concern.
4.1.4.1., 4.1.4.3.	The only problem I see with the ITMA program is that it seems to be difficult to get assignments out on the Internet in a timely fashion. The current class was not up and running until 2 to 3 weeks into the semester. The last one was continually added to over the course of the semester. It can be very frustrating. It would also be beneficial to those of us around the country to have a list of the books needed for the class several weeks before classes begin, (instead of 1 or 2 days). It takes us a while to get them through the mail. Thanks.
4.1.4.3. 4.1.1.6.	The only downside that I see with the ITMA program is the lack of feedback on assignments. I've spent numerous hours on a project, submit it online, and get a perfect score with no feedback for any of the rubrics. In one class, my class project (approx. 15 pages) was graded within 10 minutes of my submitting it. This makes me wonder how much effort is being put into the assignments being graded. Even if a paper is a 100%, I'd like to get some feedback whether it is positive or negative.
4.1.1.2., 4.1.1.4., 4.1.1.6.	The one drawback that I have found with distance learning is not having the face-to-face contact with classmates and support personnel. Even though I communicate via e-mail with classmates and support personnel, it is not the same as having personal contact with them on campus.
4.1.3.1. 4.1.4.3. 4.1.1.6.	The main complaint that I have about the ITMA program is the lack of feedback from instructors. Especially during the summer of 2000 there was a total lack of feedback. For example, one assignment was to write an educational philosophy, one component of our portfolio. I would have appreciated some comments from the instructor instead of a grade posted weeks later. Also when assignments build upon each other, prompt feedback is critical. I became so frustrated last summer I seriously considered dropping out of the program. My approach is to continue on regardless of feedback and just do my best. I found it ironic that in the ed psych class where all the material stressed the importance of feedback, there was no feedback for us. Not a good model.
4.1.1.3. 4.1.1.4.	The listserv was extremely beneficial. I liked it better when the first woman allowed us to talk freely among ourselves without the instructional staff in on the discussion. This simulated outside the classroom interaction that couldn't take place because we were geographically isolated from each other. I also think the cohorts probably bonded more within the cohort group because we at least all got together at the beginning of most of the semesters. I think the initial face-to-face meeting broke the ice.
4.1.1.2. 4.1.1.6.	The ITMA program was a wonderful opportunity for me. I will have to admit though that my on-campus experiences helped me create a relationship with [technical support], Drs. [faculty]. These "in-person" interactions allowed me to create a friendship with them.
4.1.1.6., 4.1.4.1.	The ITMA program is just in the neophyte stages for me, so a lot could change in a few months. Also, the program and the structure is very strong. I feel that the content of what I'm learning and the objectives/goals that I'm achieving are very sound and informative. I love the program for it's challenging and informative information. I also feel good that the courses have credibility and will be useful in my career and development

4.1.1.3. 4.1.4.6. 4.1.4.3.	The ITMA courses I am taking represent my third attempt at online distance learning. I did not complete my two previous online courses. In part, the subjects were not as well presented, but I also felt that I was just "out there doing this with little support." I think the ITMA course assignments have been well thought out. Resources are available for help, but I would like to see more opportunity to have open chats with the instructors on a regular or rotating basis. This could be for open questions or specific problem solving. It should be optional with the chat results posted as a reference. I have learned that it is important for me to ask questions, seek help and treat an online course like any course. Getting to know the instructors and interacting with them adds to the experience and gets problems solved or questions answered.
4.1.1.6.	The course work for the summer sessions really created the dissatisfaction I now have for the program. Lack of timely feedback in the first course was a problem. In the second course if I had really known where the final part of the project would take me, I would have taken a totally different tact. I thought it was to be based on an SOL but that SOL was too broad and vague for the final project. Twenty typed pages became the average size of each step of the project. The lack of timely feedback was a problem and then there were the site down times and glitches. VERY FRUSTRATING!
4.1.1.6. 4.1.4.1.	The content/structure of the first semester did not seem very well organized in the timing, grading, and posting of assignments. I'm hoping it was an early glitch and the rest of the courses will progress more smoothly.
4.1.1.6.	The Advanced Educational Psychology course is much more personal than the courses offered in the fall through Blackboard. [faculty] is constantly communicating and providing feedback. The previous courses I took involved no communication from the instructor. However, if it weren't for the online program, I couldn't take the courses at all. Therefore, for all the not so great aspects of online courses, they are certainly better than not taking them. I am more than willing to continue the program as long as I am able.
4.1.1.2.	Sometimes I think we need an occasional face to face interaction. We have only had one meeting to start things on campus. I think it would be beneficial to meet once a year at least.
1 occurrence	Program is not meant for everyone.
4.1.1.4.	One of the things the Tidewater cohort talked about was the possibility of taking a class on campus. The ability to get a course over in a week would be wonderful. We found the courses last summer hard to handle.
1 occurrence	One must be very self-motivated to complete a course of this nature. It isn't for everybody.
3 occurrence	no comments
4.1.16. 4.1.4.2.	Just my frustrations at what I (and others) to be unreasonable expectations. At times I feel as though they have a course designed that they just plug in that may carry 1 credit or 3 credits. The same course would be used for both classes. A one hour course
4.1.1.3. 4.1.4.3.	It would be helpful to hear from the professors from time to time. For instance, the individual teaching the Advanced Educational Psychology class sends a weekly e-mail to all of the students taking the class. He basically communicates with the students, keeps them informed of upcoming events and provides feedback. Based on my experience with the other courses I have taken, I received an e-mail stating that the course was on the blackboard and I could begin. This has been the only communication so far. Some type of correspondence would help me to know if I am on track with my assignments or not.

4.1.1.5. 4.1.4.1.	Intellectual on-line discussion did not happen very often. Perhaps this was because everyone was so busy with completing the course work and working full-time. But it existed during the summer multimedia program and during the distance learning program. Perhaps the reason it existed then was because it was structured by the professors for the courses. Perhaps there is a message in this - in order for the intellectual stimulation/discussion to occur at a graduate school level, it needs to be facilitated through structured activities, just like we physically structure discussion in a traditional classroom. I miss the program and the structured learning opportunities, and the interaction with the ITMA support staff and professors.
4.1.1.1. 4.1.4.3.	In general I think because the amount of interaction is so limited (student-to-student, student-to-professor, etc.), which, of course, is the nature of distance learning, the more direct feedback we can receive, the better off we are and the more connected to the program we (I) feel. Without the feedback the format can be very impersonal and robot-like. This being only my second semester I anticipate that more feedback will come with more challenging and thought-provoking course content. Thanks for asking!
4.1.3.1. 4.1.1.6.	I would not recommend the program to others based on my experiences because the program has been changed. There is less interaction with instructors. Modeling is an important part of the process of learning and it is seriously lacking in a total online format. I feel the program that I went through was tremendous but the changes have cheapened it. It looks more and more like a program to make money. I hope I am wrong and the degree I busted my butt for is not cheapened by a mass internet program.
4.1.1.6. 4.1.3.1. 4.1.4.3.	I would like to have had more interaction with the professor other than via internet. I think that initial meetings prior to each course is important so that the student can get a feel for the class content and professor. Questions can be asked to clear up any misinterpretations before the course began. I did not feel that the listserv was unavailable to the professor. I think that it is a place for students to vent their frustrations as well as to get support from other classmates. I do not think that it is constructive to continually gripe, but it helps to get some issues out in the open.
4.1.1.6.	I was generally very satisfied with my interactions as an ITMA student. I left the program for personal reasons, not because of any dissatisfaction with the program.
4.1.1.6.- 4.1.1.1.	I really am looking forward to continuing this process--even if it doesn't get any better. I'm dissatisfied with the interactions and the level of personalization, but that will not cause me to withdraw from the program. I hope someone is looking at University of Maryland University Campus Distance Education program. They have been doing this a long time and seem to know how to do it.
4.1.4.3.	I must admit to noticing a difference in feedback from the first courses I took with [ITMA Program Director] and the next course from [faculty]. Often assignments took a long time for grading, however, [faculty] program has allowed for immediate feedback with quizzes.
4.1.1.6. 4.1.1.2. 4.1.1.5.	I loved this program and was very sad when I finished it. Most of what we did was online with a few very timely face-to-face classes. I think the balance was just right. I didn't feel connected enough to the program until the end of the first year when we spent most of a week at Tech. That was a very important time in getting to know the other students, the professors, and realizing that we were part of VaTech. I think this should have come sooner, and I believe that change was made for ITMA2.
4.1.1.6	I love this program and what I am learning. The exception is the listserv where people do not respect the opinions of others because they can hide behind the screen of a computer.

4.1.1.6. 4.1.1.5. 4.1.1.2.	I like the convenience of ITMA, but I think that I am missing a "grad school" experience because I don't think there is much opportunity for an exchange of ideas from professors and students. The material presented on line is a nice general education, but we would benefit from more interaction, either in person or electronically. Occasional meetings at the Higher Ed center would be helpful.
4.1.5.1. 4.1.1.6.	I left the program because I did not have enough background info. to understand all that the assignments involved and without an instructor to ask, I was at too much of a disadvantage. I found that I had to keep printing "tutorials" to figure out every little thing. No one at my school was taking the program and I felt that I was in over my head. It is important for people to enter the program with enough prior knowledge. I did learn a tremendous amount in just one semester. Thanks!
4.1.4.3. 4.1.3.2. 4.1.1.6.	I have only been associated with the program for a short time. During this time I have found the feedback on performance to be minimal, providing no direction, encouragement, or constructive criticism. I have found some of the assessments to be what I would call busy work, but I understand that the nature of the course delivery requires some special considerations for assessment. On the positive side, I have found the instructors to be flexible and willing to work with the students in regards to assignment due dates,
4.1.4.3.	I have only been a student for a couple of months, so much of this was difficult to answer. I attempted to do the best I could, and predicted some of my responses, regarding feedback on assignments.
4.1.1.3.	I have no problems initiating communication. I have just started the program and look forward to hearing more from other students in the program. We have not had much opportunity to do that quite yet. I would like more information about the listserv. Should we be getting a continuous flow of email from the listserv?
4.1.1.6.	I have been satisfied with my experience as an ITMA student to recommend this program to another person who may join it.
4.1.1.6.	I have been quite critical, and actually the support personnel are the least of the problem. They are trying to make this work. Unfortunately, this program should not be held together by graduate students and technicians. I do not have the feeling this program has the full support of the faculty involved, or perhaps the institution has not supported the faculty adequately. In either case, the program appears disorganized and is frustrating to students as a result.
4.1.1.6. 4.1.4.3.	I have been extremely satisfied with the ITMA program to date, but once again, this is only my second semester. The first semester was good, but there was no real feedback on the grading. We simply had the numbers posted and at times there were delays in posting. But, the important understanding is that one accepts the fact that this is the way asynchronous distance learning works. The ratio of faculty to student is usually very high, so I don't expect a "lifelong link" with my instructor... I respect the instructional delivery mechanisms for what they are. I accept them and appreciate the "virtual" support I get from the staff when I need it. ITMA is a great program!
4.1.1.3.	I feel that there needs to be more concise information regarding timelines, before beginning the courses. Before beginning coursework, it was my impression that assignments were all due in May. Luckily, I looked through the courses posted, or I would not have known that some have earlier assignment submission dates. Had I not looked, I probably would have missed these, and just progressed through each course on my own timeline. Also, I did not complete the portion of your questionnaire regarding the listserv, because I was not aware that there was one for us. A listserv would be extremely helpful to me, as well as a

	discussion board. For the latter, we could post any questions, comments, etc., and then look up answers to common problems at our leisure. I am enjoying my courses, but sometimes feel that I am not sure WHO to contact with questions - the course professor, grader, or teaching assistant. Some of my answers might seem somewhat negative - this is mostly because I have not been in the program long enough to have experienced some of the things you asked about.
4.1.1.6. 4.1.2.3. 4.1.4.1.	I feel that it is much more important to be in touch with support personnel than other students. After all, I am responsible for my own work. It is, however, nice to know how I compare with the other students. The only thing that I would have changed about my first experience is that it would have been nice to have the entire course content on-line at the beginning so I could better schedule my time.
4.1.1.4.	I don't think that you provided enough questions on background to get a clear picture of who is where with this program. Some of the students are single with no "life" outside of what they want to do outside of work. This makes working on this program easier as there are fewer life distractions. Some have much more demanding jobs to deal with that restricts their availability to the course work. Others never took or often have taken online courses, this too makes a difference in how they will react to your survey. Others have families, summer jobs, and active job demands and end of the year work or other demands that have OBVIOUSLY NOT been considered by the course designers. And again, there is little clear and no direct questioning of the instructional personnel participation which I consider weak and probably unrepresentative of the University at large. Your questions about the interaction with the course content are terrible. Much of the content was redundant, some of it inconsistent, more of it incredibly trite and while the projects were fine the quizzes after every chapter of some texts only tends to demonstrate that the instructor had too little planning in the course design to implement relevant assessment. For many of us (having discussed this outside of the listserv) we only opened the text to take the quiz, thumbing through the chapter until the answers were found, never really reading the content. I think the listserv is the poorest means of communication for discussions and resolution of problems. A listserv is a great way to disseminate information but a poor way to interact with it. Blackboard has a very useful means of creating discussion groups that allow for threaded communications. These can be followed clearly and easily by everyone. Responses are clear and consistent in this environment but not in a listserv. In a listserv, it takes too much organizing or changing of ones email routine to follow the entire thread. An organization feature that is not worth establishing. This is another example of the instructional designers of this course not considering the tools and not considering the students. If BB had been utilized there would have been much less redundancy in the messages discussed. In BB, separate discussions could be established for specific problems or projects that would allow students to check previous questions before repeating them in the listserv or to participate as a community. Finally, at NO time in this last two years have I felt a part of the VT community. Even after it was suggested in one of our texts that online learners be included in campus events was there ANY effort to do so. Just a simple task like sending each of us a Hokies bumper sticker or window sticker could have accomplished this nicely. SOME inclusion with campus life should have been made EVERY semester. I think that there was one effort to have us visit the campus but that was a pretty meager effort. If I would make other suggestions, I would have the instructors better prepare the material. I would have them design and test the workload to consider the lives of the students in the field that are TOTALLY different than those on campus.

	I would have them read the texts they teach and practice what they are teaching. I would setup a means of having everyone be successful in this experience and when there is a rash of withdraws, I would seriously look at the reasons. I would find a means of getting those back who left or stopped and find a way to have them be successful. I would make this work for everyone. This was a good strong qualified group that appears to have dwindled to half. This is not the trials for the Olympics where only a few can compete. The world needs people who can design qualified courses for successful educational experiences and what better public relations than to say they came from Virginia Tech.
4.1.1.6.	I am not negative about the learning experience I am having with the ITMA program. It is just that...a learning experience. However, I don't know that the experience is teaching me exactly about Instructional Technology effectively. I still question exactly what it is I can do with the degree once I am finished.
4.1.1.6. 4.1.1.4.	Although I feel I am getting much out of the program, I do not really feel connected to it. Maybe it is because I have only taken two courses toward this degree. I am wondering what I will do with this knowledge if/when I finish the program. I think I would prefer to go to school full-time, but that is impossible because I have a full-time job, and I couldn't afford the tuition anyway.
46	Non responses

APPENDIX I

Vita

VITA
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EDUCATION

May 2002	Ph.D., Instructional Technology, Department of Teaching and Learning, Virginia Polytechnic Institute State University. Dissertation Title: "*Student Perceptions of Social Presence and its Value in a Web-based Master's Instructional Program*"
May 1998	Master of Arts in Curriculum and Instruction, Instructional Technology concentration Virginia Polytechnic Institute State University, Blacksburg, Virginia.
May 1996	Bachelor of Arts in Human Services, The George Washington University, Washington, D.C.
May 1982	Associate of Science in Business Administration, Pima Community College, Tucson, Arizona.
May 1978	Associate of Arts in Social Sciences, Pima Community College, Tucson, Arizona.

PROFESSIONAL EXPERIENCE

August 2000-Present	Graduate Assistant, Center for Instructional Technology Solutions in Industry and Education, Virginia Tech. Responsibilities include supporting faculty in the implementation of web-based instruction. Providing technical assistance and support to faculty/staff/students associated with the college. Troubleshooting network, hardware/software problems, includes setting up new computer equipment/devices, installation of operating system and applications for faculty/staff. Providing assistance to faculty/students using the computer lab equipment. Managing and supporting two computer learning labs (PC/Macintosh) and the classroom facilities. Designing and conducting workshops (i.e., Microsoft Office Suite, web development) for college faculty/staff as well as one-to-one instruction. Providing training on hardware/software installation procedures to new graduate assistants. Conducting presentations to educational practitioners on computer hardware components.
March 2000 - August 2000	Graduate Assistant, Center for Instructional Technology Solutions in Industry and Education (CITSIE), Virginia Tech. Responsible for online course development and implementation, worked with faculty to translate course content to Course Info in preparation for a graduate online research course.
January 1999-February 2000	Project Manager, Tutorial Development, Informatics Laboratory, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, Virginia. As a member of a development team, responsibilities included, but not limited to coordinating the development of an interactive web-based tutorial, provided technical and instructional design recommendations to the subject matter expert (SME), developed and designed storyboard layout, implemented instructional design principles and interactions. Coordinated work performed by graphic designer, programmers, and work-studys. Attended weekly meetings and communicated all tutorial development events to the SME and development team.

January 1998- December 1998	Graduate Assistant, Instructional Technology Program, Virginia Polytechnic Institute State University, Blacksburg, Virginia. Duties included working directly with faculty in all phases of the analysis, design, development and implementation of a web-based masters degree instructional program. Assisted faculty with administrative tasks. In addition, responsible for conducting formative evaluation on an online undesrgraduate course; videotaped student interviews, collected data and tabulated results. Based on the formative evaluation provided a list of recommendations to the web site developers for revisions. Other duties included providing technical assistance and support to faculty/staff, and students. Troubleshooting hardware, and software problems and maintaining Educational Technology Lab equipment. Assisted with web development workshops conducted for the college faculty and staff.
August 1991- May 1997	Executive Assistant, The Graduate School of Education and Human Development, Department of Teacher Preparation and Special, Education, The George Washington (GW) University, Washington, D.C. Assisted the department chair, coordinated all routine work requests from thirty-two faculty members. Other duties included designing and maintaining databases on all student internships/practicums/fieldwork; processing requests for state certification verification, stipend payments, travel reimbursement, etc.; assisting student teachers with placement requests and supervised work-study students. Also, provided general computer support conducted workshops to faculty/staff, research assistants, and work-study students. Coordinated GW's National Teachers Examination (NTE) and provided training on exam procedures to new NTE proctors.
September 1989- August 1991	Technical II Assistant, The Office of Business/Industry Relations, FCPS. Responsible for conducting duties for three individuals and the director. Maintained database files on business/school partnerships and awards obtained. Maintained spreadsheet files on school grants, contracts, and grant proposals. Assured smooth and accurate general office procedures.
April 1987- September 1989	Technical I Assistant, Office of Staff Development & Training/Office of Adult and Community Education, Fairfax County Public Schools (FCPS), Fairfax, Virginia. Responsibilities included: assisting office manager in administrative responsibilities for staff development trainers and ESL teachers. Creating, preparing, and maintaining database reports and records. Preparing materials for workshops conducted by the staff development trainers. Provided support to four Fairfax County Adult Education programs: English as a Second Language, Library Lab, English in the Workplace, and Community Education. Also, responsible for student registration and training new office employees.

PROFESSIONAL PAPERS

Ogle, T., Schneider, S., Liu, H., Saenz, B., Macedo, P., & Farrell, I. (under review). *Examining the socio-cognitive relationship between context and performance.* Paper submitted for inclusion in the 2001 AECT Conference Proceedings.

Doolittle, P., Saenz, B., & Scheer, S. (2000). *The Instructional Design of Distance Education* as *an Ill-Structured Problem*. Unpublished manuscript.

Saenz, B. (1996, September). *Virtual Job Seekers, needed: Persons with self-determination and computer skills.* The George Washington University, Department of Teacher Preparation and Special Education, Vocational Evaluation and Assessment Bulletin, 9(1).

PROFESSIONAL PRESENTATIONS

Ogle, T., Schneider, S., Liu, H., Saenz, B., & Macedo, P. (2001, November). *Examining the socio-cognitive relationship between context and performance.* Roundtable presentation at The Association for Educational Communications and Technology (AECT) Convention, Atlanta, Georgia.

Hall, J., & Saenz, B. (1999, November). *The Design and Development of an On-line Acid-Base Authorware Tutorial.* Presentation to Provost at the Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA.

Holmes, G., Saenz, B., & Hall, J. (1999, November). *The Design and Development of an On-line Authorware Tutorial*. Presentation to the Director of Continuing Education. Meeting hosted by the Informatics faculty, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA.

Holmes, G., Saenz, B., & Lockee, B. (1999, November). *A Comparison of Authoring Languages: Authorware and Toolbook Applications*. Presentation to Trigon Health Group, Blacksburg, VA.

COMMITTEES

IT Professional Graduate Seminar Committee
Graduate Research Organization in Virtual Environments (GROVER)
IT Journal Club

HONORS/PROFESSIONAL AFFILIATIONS

Kappa Delta Phi
Phi Kappa Phi
The Association for Educational Communications and Technology (AECT)
International Visual Literacy Association (IVLA)

Life Teen Program Volunteer
Catholic Youth Organization

REFERENCES AVAILABLE UPON REQUEST