

**Student Satisfaction with and Perceptions of Relationship Development in
Counselor Education Videoconferencing Courses**

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(ABSTRACT)

Personal interaction and proximity have been the cornerstones for relationship development in counselor education for decades. However, these concepts are opposed by the physical distance and lack of proximity inherent in a distance classroom environment. As the use of distance education increases in higher education, counselor educators must ensure that quality teaching and learning is maintained in the distance classroom. The purpose of this study was to explore student perceptions of counselor education courses taught at a distance using video teleconferencing (VTC); specifically, student satisfaction with course delivery and relationship development in the VTC environment was the focus of the study. Research questions included the following:

1. To what extent are counselor education students satisfied with graduate counseling classes delivered via videoconferencing? Specifically, student satisfaction with:
 - a. the instructor characteristics,
 - b. the technological characteristics, and
 - c. the course management characteristics of the class?
2. What are counselor education students' perceptions of teacher/student relationship development in the VTC classroom environment?
3. What is the relationship between student satisfaction and relationship development when counselor education courses are taught via VTC?

Responses from 43 Virginia Tech master's and doctoral level students who participated in VTC Counselor Education courses between 1998 and 2006 were used to explore student satisfaction and instructor/student relationship development in the VTC class environment. The Barrett-Lennard Relationship Inventory © (BLRI; Barrett-Lennard, 1962) and the Telecourse Evaluation Questionnaire (TEQ; Biner, 1993) were the instruments used to create an on-line questionnaire. Participants reported highly positive feelings about the instructor/student relationship ($M = 4.1$) and perceived that relationship to be honest, direct, sincere, and open. Student satisfaction and relationship development in the VTC class environment were found to be related to one another ($r = .48$). However, the technology used to deliver VTC courses was *not* found to be related to students' feelings about their instructor or to their ability to build a relationship with the instructor. Reliability scores in this study were comparable to published scores for these instruments.

Dedication

This document is dedicated to my husband, Chris Stone—the love of my life. Thank you for your love, friendship and support through this arduous process. Can you believe all of the dreams we dreamed under Maggie the tree have come true?

To my daughter, Delaney Elizabeth, you are the sunshine in my life. I hope this accomplishment inspires you and teaches you that you can be anything you want to be if you try hard enough. I love you Lanie-bug!

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CHAPTER I

INTRODUCTION

Distance education is a rapidly growing phenomenon in higher education that has implications for all academic disciplines, including counselor education. According to the National Center for Education Statistics (NCES, 2003) *Report on Distance Education at Postsecondary Institutions 2000-2001*, 56% of all 2-year and 4-year Title IV-eligible, degree-granting institutions offered distance education courses in 2000–2001, representing an estimated 2,320 institutions. An additional 12% of all institutions indicated that they planned to begin offering distance education courses in the next three years (NCES, 2003). It is predicted that by 2005, almost 70% of American universities will offer courses via distance education (NCES).

Distance education is a cost-effective instructional mode that increases student access to higher education (Ancis, 1998). Distance education encompasses a variety of formats, such as correspondence courses, televised courses, on-line courses, videoconferencing, and desktop conferencing (Albrecht & Jones, 2001). Distance education has become an accepted method for course delivery across a range of academic courses and programs, including counselor education and social work (Albrecht & Jones, 2001; Siegel, Conklin, Jennings, & Flynn, 2000).

As distance education technology, such as videoconferencing, is used more frequently by universities across the country, the profession of counselor education must seek an effective merger between an increasingly technological world and a profession that is practiced through personal contact (Tyler, 1997). Teacher/student relationship development has historically been a fundamental aspect of counselor training (Rogers, 1951). Carl Rogers noted that significant learning rests upon the personal relationship between facilitator and learner (Kirschenbaum & Henderson, 1990). Further, personal interaction and proximity have been the cornerstones for teaching relationship development in counselor education for decades (Rogers). However, these concepts are opposed by the physical distance and lack of proximity inherent in a distance classroom environment (Harris-Bowlsbey, 1984). Twenty years ago, when distance technology as we know it today was in its infancy, Harris-Bowlsbey suggested that a combination of the use of technology and a human touch might achieve a balance between the two.

For counselor educators, there may be questions of concern when considering the use of distance education in counselor training: How will counseling professionals protect the human element that is fostered in counselor training and still make room for the benefits of technology?

How is relationship development between student and faculty member, and student and peers affected when counseling courses are offered via video conferencing (VTC)? Are counselor education classes taught at a distance as good as counselor education classes taught face to face, in other words, are students satisfied with counselor education courses taught via distance education through video conferencing? Perhaps, a first step to ensuring high standards when counseling classes are delivered via VTC is to explore student perceptions of the following: (a) relationship development between student and instructor when counseling classes are delivered via distance education using video conferencing and (b) satisfaction with distance delivery of counselor education classes.

Distance learner satisfaction is, in and of itself, an inherently important criterion by which to judge the effectiveness or success of videoconferencing courses; further, it is a criterion that is as important as the academic performance of distance learners (Biner, Dean, & Mellinger, 1994). Research has shown that maintenance of high levels of distance learner satisfaction with courses offered via videoconferencing can result in a number of program related benefits, such as (a) lower student attrition rates, (b) greater number of referrals from enrolled students, (c) higher levels of student motivation, (d) greater commitment to tele-education programs, and (e) better learning (Biner, Dean, & Mellinger, 1994).

Specific to counselor education is the need to train students in the development of the working alliance. Bordin (1975) asserted that the working alliance is a dynamic relational element in all change inducing relationships. The client/counselor relationship is a fundamental aspect of therapeutic change in counseling (Rogers, 1957) and of learning in student/teacher relationships (Rogers, 1969). Distance education presents a challenge in modeling the working alliance when the student is at a distance from the teacher. How is the relationship or connectedness between teacher and student developed at a distance?

Lia-Hoagberg, Vellenga, Miller, and Li (1999) defined connectedness as a sense of satisfaction expressed by students related to the level of contact they had with faculty and peers at both same site and remote sites. These authors chose to study connectedness because they suspected that high levels of connectedness would support student learning. Connectedness has historically been an important aspect of relationship development in counselor education. A study by Wheeler and Batchelder (1996) found communication and interaction to be a concern in VTC classes. The students surveyed in that study reported limited interaction with the instructor

and students at other sites. Those researchers found the absence of time to chat before and after class made students feel less connected to classmates (Wheeler & Batchelder, 1996).

Carl Rogers (1969) asserted that a positive, connected, personal relationship between teacher and learner must be present for significant learning to take place. Learning is dependent on qualities of interpersonal relations, such as empathy, warmth, and genuineness. In *Freedom to Learn*, Rogers (1969) discussed the importance of applying the humanistic principles used to form a working alliance in therapy to educational settings. A humanistic orientation is thought to produce a more collaborative relationship between therapists and patients and between students and teachers who can work together to identify needs and solutions (Barrett-Lennard, 1962; Rogers, 1959).

Significance of Study

Based on Biner, Dean, & Mellinger's (1994) research on student attitudes and satisfaction in tele-education, one might say that satisfied students are more motivated and committed to their classes and, ultimately, are better learners than dissatisfied classmates. Numerous research studies conducted by Biner and colleagues have focused on the study of student satisfaction with telecourses (e.g. Biner, Dean, & Mellinger, 1994; Biner et al., 1996; Biner, Summers, Dean, Bink, Anderson & Gelder, 1997; Biner, Welsh, Barone, Summers, & Dean, 1997). However, research on counselor education students' satisfaction with distance education is lacking (Hayes, 1999); in particular, their satisfaction with relationship development between peers and with the instructor.

Carl Rogers (1957, 1969) asserted that the relationship is central to change inducing counselor/client and student/teacher relationships. Rogers calls aspects of relationship development the *core conditions* for facilitative counseling and educational practice (Rogers, 1967). Research on relationship development in the VTC counselor education classroom environment is essential to ensure the core conditions for learning can be achieved when teacher and students are physically separate.

Statement of the Problem

As the use of distance education increases in higher education, counselor educators must ensure that quality teaching and learning is maintained in the distance classroom. Given that student satisfaction with video conferencing (VTC) is linked to student achievement (Biner, Dean, & Mellinger, 1994; Biner et al., 1996; Biner et. al., 1997), it is important to explore the

extent to which counselor education students are satisfied with courses delivered via VTC. Further, research has shown that the working alliance is a critical aspect of the counseling process and of learning in student/teacher relationships (Rogers, 1951, 1967, 1969). Therefore, a critical aspect in counselor education must be to assure that the modeling and teaching of the working alliance and the development of connectedness is not compromised by distance learning.

Purpose of the Study

The purpose of this study was to explore student perceptions of counselor education courses taught at a distance using video teleconferencing. Specifically, student satisfaction with course delivery and relationship development.

Research Questions

1. To what extent were counselor education students satisfied with graduate counseling classes delivered via videoconferencing? Specifically, student satisfaction with:
 - a. the instructor characteristics,
 - b. the technological characteristics of the class,
 - c. the course management characteristics of the class?
2. What were counselor education students' perceptions of teacher/student relationship development in the VTC classroom environment?
3. What was the relationship between student satisfaction and perceived relationship development when counselor education courses are taught via VTC?

Definitions

Counselor Education. The Council for Accreditation of Counseling and Related Educational Programs (CACREP) defines counselor education as a process that prepares counselors at the Master's level in both the didactic and the clinical aspects of counseling. Doctoral programs also prepare counselors to serve as counselor educators (CACREP, 2001).

Distance Education. Distance education is planned learning that normally occurs in a different place from teaching and, as a result, requires special techniques of course design, instructional techniques, methods of communication by electronic and/or other technology, as well as special organizational and administrative arrangements (Moore & Kearsley, 1996). The United States Distance Learning Association (2004) defines distance education as the acquisition of knowledge and skills through mediated information and instruction, encompassing all

technologies and supporting life long learning for all (United States Distance Learning Association, 2004).

Satisfaction. Satisfaction is defined as affect or feeling or emotion resulting from one's evaluation of the situation. As affect, the concept of satisfaction includes both positive affect (satisfaction) and negative affect (dissatisfaction) (Savickas, 1994). Satisfaction is determined by the point of view of the individual, which is one's positive affective response to a situation (Osipow & Fitzgerald, 1996).

Video Teleconferencing (VTC). Video teleconferencing (VTC) falls under the broad umbrella of tele-education and is also referred to in the literature as videoconferencing (VTC), interactive instructional television (ITV), or interactive video networking (IVN). These terms and their abbreviations will be used interchangeably throughout the next sections.

Videoconferencing is a process where compressed video is transmitted through digital phone lines to provide interactive audio and visual communication between sites which are geographically separated (University of Maryland, 2006.). A videoconference can be *point to point* which connects just two sites together, or it can be *multipoint* where individuals located at many sites can see and hear those at all of the other sites. These virtual classrooms and meetings can take place across the campus or across the world (University of Wisconsin-Extension, 2006).

Videoconferencing may be delivered through Two-way Audio/One-way Video, this technology includes the transmission of a live video signal from the university to a remote classroom. Students at the remote classroom can see and hear the instructor, but the instructor can only hear the students through the two-way audio system (Albrecht & Jones, 2001).

Two-way Audio/Video is another method of videoconferencing, which allows the instructor and students at all sites to see and hear one another in real time. This method of videoconferencing is the closest approximation to the traditional classroom environment distance education offers (Albrecht & Jones, 2001). It is also one of the most utilized. Among two-year and four-year institutions offering distance education courses in 2000–2001, videoconferencing was one of the most often used as modes of instructional delivery. Fifty-one percent of universities surveyed reported using Two-way Video Two-way Audio technology for course delivery (NCES, 2003).

Limitations

Originally, the study was delimited to CACREP counselor education programs in the United States that delivered at least one course via video conferencing. However, due to a poor response rate, detailed in Chapter III, the study was limited to current and former Counselor Education students at Virginia Polytechnic Institute and State University. Students were asked to voluntarily participate in this study and responded to standardized instruments related to satisfaction and relationship development in the VTC classroom.

Summary

As the use of distance education increases in counselor education, we must consider the wisdom of Carl Rogers (1951) who believed that significant learning rests upon the personal relationship between teacher and learner. It is imperative to maintain high standards and foster the core conditions necessary for students to learn, grow, and develop into professional counselors. To do so, there must be systemic research to explore relationship development in distance education as well as student satisfaction with distance education.

CHAPTER II

REVIEW OF THE LITERATURE

Though much attention has recently been given to distance education, the concept is not new. Currently, distance education lacks one definition, so the phrase is used in higher education as a catch all that encapsulates teaching and learning methods delivered over a variety of mediums: such as computer networks, video conferencing, and paper based courses (Albrecht & Jones, 2001; Woodford, Rokutani, Gressard, & Berg, 2001).

The history of distance education can be traced to the 1800s, when correspondence courses were offered by many universities. In correspondence courses, traditional mail or “snail mail” was used to transmit information across geographic barriers (Albrecht & Jones, 2001). As technology has evolved so has distance education. Over the years, colleges and universities have delivered courses over the radio, through reel-to-reel tapes and eventually cassette tapes, which were sent out to class participants to listen to and return. Between 1940 and 1960, text-based correspondence courses gained popularity and instructors began to include audio recordings in the materials they sent students (Albrecht & Jones, 2001). By the 1970s, universities were broadcasting classes on television. As this method of distance education gained popularity, universities began to offer classes at multiple times so that participants could watch in the comfort of their homes (Albrecht & Jones, 2001; Phipps & Merisotis, 1999; Russell, 1999). In the 1980s, the availability of the video cassette recorder (VCR) saw additional changes in distance education; classes on video tape meant students could see and hear their professor lecture at home, at the time of their choice (Albrecht & Jones, 2001). Since the 1990s, the most recent developments in distance education involve the use and integration of technologies such as television, computers, and the World Wide Web to educate students across geographic boundaries (Albrecht & Jones, 2001; Bobby & Capone, 2000).

Distance Education

The following sections will provide a definition of distance education, information on videoconferencing as a distance education delivery method, and statistics on the use of distance education in higher education. The term distance education will be used to describe teaching and learning that takes place in classes that may be separated by time or location.

Definition of Distance Education

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 techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements (Moore & Kearsley, 1996). The United States Distance Learning Association (n.d.) defines distance education as the attainment of knowledge and skills through mediated instruction. Distance learning encompasses all technologies and supports the quest for life long learning for everyone (United States Distance Learning Association, 2004).

Distance education courses may be delivered through synchronous or asynchronous communication methods (Albrecht & Jones, 2001). These delivery methods offer specific advantages and disadvantages to students and instructors. Synchronous communication occurs when teacher and student are present at the same time during instruction, even if they are in two different places. Asynchronous communication occurs when students and teachers do not have person-to-person direct interaction at the same time or place (Albrecht & Jones, 2001; Phipps & Merisotis, 1999). Synchronous distance education is most like traditional, face-to-face classes since the course instructor and students must participate at the same time. Synchronous delivery methods include classes taught in a traditional, face-to-face manner and classes taught via videoconferencing or desktop conferencing. The advantage of synchronous distance education is that class members can interact with classmates and the instructor in real time. The disadvantages of synchronous distance education is that it does not offer participants choice as to the time and place the class will be offered as do methods of asynchronous delivery, such as correspondence courses, televised courses, and on-line courses (Mingmuang, 2001).

Videoconferencing

Videoconferencing, also called video teleconferencing (VTC) or interactive video networking (IVN) , is one of the most commonly used forms of distance instruction (NCES, 2003). Technology affords colleges and universities the opportunity to offer program access to students who, due to their lack of proximity to the university, would not have previously been able to participate. Students are not physically located in the same room as their instructor and their on-campus classmates, yet they are able to see and interact with their classmates and instructor by way of VTC. Videoconferencing is the closest thing to being there by way of

technology (Marquardt & Kearsley, 1999). Perhaps for this reason, videoconferencing is a popular choice among counselor education programs; Quinn, Hohenshil, and Fortune (2002) found that 48% of survey respondents from CACREP counselor education programs reported using interactive satellite technology for course delivery.

Videoconferencing is a process where compressed video is transmitted through digital phone lines to provide real-time, interactive audio and visual communication between sites that are geographically separated (University of Maryland, 2006.). A videoconference can be *point to point* which connects just two sites together, or it can be *multipoint* where individuals located at several sites can see and hear those at all of the other sites. These virtual classrooms and meetings can take place across the campus or across the world (University of Wisconsin-Extension, 2006).

Videoconferencing technology affords universities a cost effective way to reach a wide variety of students and allows students not in proximity to the campus access to programs that may not be available to them locally (Albrecht & Jones, 2001). Access to education is of particular value to non-traditional, adult learners who can continue to work and handle family obligations while completing a degree (Albrecht & Jones, 2001; Ancis, 1998; Bobby & Capone, 2000; Johnson, 1999). Due to increased competition in higher education, more and more universities have begun to offer courses at a distance to meet the needs of busy, non-traditional adult students. The reduction in the cost of this technology has made it possible for universities to offer classes via videoconferencing in a number of locations using the faculty who are currently teaching on campus (Albrecht & Jones, 2001; Johnson, 1999).

Videoconferencing also provides interesting professional development opportunities for higher education. Through the use of VTC, university faculty have the opportunity to teach students located far from the main campus of the university, potentially adding diversity and differing cultural perspectives to classes. Additionally, experts from universities around the world can be conferenced-in to the VTC class to guest lecture or take questions from a class (Baggerly, 2002). Videoconferencing can also afford faculty the opportunity to team with a colleague at another university (Woodford et al., 2001) and may provide faculty at a branch campus an opportunity to connect with their on campus colleagues for meetings and staff development (Baggerly, 2002).

Statistics on University Use of Distance Education

According to the United States Department of Education, National Center for Education Statistics (NCES, 2003) Report on Distance Education at Degree-Granting Postsecondary Institutions 2000-2001, 56% of all 2-year and 4-year Title IV-eligible, degree-granting institutions offered distance education courses in 2000–2001, representing an estimated 2,320 institutions. Twelve percent of all institutions indicated that they planned to begin offering distance education courses in the next three years (NCES, 2003). Fifty-nine percent of all the institutions surveyed in the NCES study indicated that they offered distance education courses in the 2001–02 academic year, an increase of 3%-age points from the previous year. Five percent of institutions that did not offer distance education courses in 2000–2001 indicated that they had offered these courses within the previous five years (1995–2000) (NCES, 2003).

Distance education courses by college level were offered at 57% of institutions with undergraduate programs and by 63% of institutions with graduate programs. College-level distance education courses were offered at the graduate/first professional level by 22% of all institutions (NCES, 2003). Distance education courses at this level were offered by 20% of institutions that had undergraduate programs and by 52% of institutions that had graduate/first-professional programs (NCES, 2003). In the 2000–2001 academic year, there were an estimated 3,077,000 enrollments in all distance education courses offered by 2- and 4-year institutions. There were an estimated 2,876,000 enrollments in college-level, credit-granting distance education courses (NCES, 2003).

These statistics show that distance education is on the increase in both graduate and undergraduate programs across the United States. As the use of distance education increases, it is imperative that studies are undertaken to explore the effect of its use on respective professions. In the current study, the effect of videoconferencing on counselor education will be explored.

Research on Distance Education

Distance education provides universities the ability to reach increased numbers of students and offers those students more flexible instructional formats. Distance education provides access to educational programs that may not otherwise be available to students in certain geographic locations (Sorensen & Baylen, 1999). Distance education also may better meet the needs of adult students who must balance education with work and family obligations (Albrecht & Jones, 2001).

Distance education is moving toward more interactive environments. Due to the availability of new technologies, students can now interact with their geographically removed instructor and peers in real time (Sorensen & Baylen, 1999). As distance education technology improves, it stands to reason that more higher education institutions will offer courses at a distance. We must consider if distance education is a good enough way to educate adult learners, especially learners in the helping (e.g., counseling, social work, psychology) and medical professions. Research on learners in distance education, VTC in particular, has primarily been concerned with student outcomes, performance, and satisfaction with VTC (Biner, Bink, Huffman, & Dean 1995; Biner, Dean, & Mellinger, 1994). Considering student attitudes (i.e., satisfaction) about distance education may be one way to evaluate if distance education is a good enough method to educate graduate level students (Biner, 1993).

Russell (1999) published *The No Significant Difference Phenomenon*, a book compiling 335 research reports, summaries, and papers all concluding that there is no significant difference in learner outcomes (i.e., grades) between distance-taught and traditionally-taught courses. However, in 1999, the Institute for Higher Education Policy published a research review of distance education literature concluding “the overall quality of the original research (concerning distance education) is questionable and renders many of the findings inconclusive” (Phipps & Merisotis, 1999, p.3).

A major concern in videoconferencing is the possible lack of interaction between students because of physical distance between them. However, the majority of studies of learning outcomes, as measured by course grades and grade point average, has shown no significant difference between on-site and distance students (Daly, McClelland, & Yang, 1994; Russell, 1992, 1999).

Sorensen and Baylen (1999) found the presence of an instructor at different sites affected class dynamics. Interaction and verbal expression appeared to increase at sites where the instructor was present. These researchers found that maintaining attention in the distance classroom is more difficult than in the traditional class. To remedy these problems, the researchers recommended that the course instructor rotate sites to increase class participation across sites.

Huff (2000) compared the learning of critical thinking skills of VTC and face-to-face classes in social work, finding that both groups significantly improved their critical thinking skills, and there were no significant differences between the groups. Huff (2000) suggested:

Numerous studies have supported equal acquisition of content when a comparison is made between distance education students and on-site students. Perhaps it is time for the comparisons to stop. Rather than continuing efforts to prove that distance education is as good as traditional education, future research should focus on how to improve distance education courses by making them more effective learning experiences for students. (p.413)

Student Attitudes About Distance Learning

The term attitude is used to refer to the general tendency of an individual to act in a certain way, under certain conditions (Mager, 1968). Mager suggested that the more strongly students are attracted to and interested in a subject, the harder they would work to stay in contact with that subject. Instructors must try to present subject material in a way that helps the student foster a positive attitude toward the subject matter. By doing so, the instructor can develop a positive learning environment which can increase student learning (Mager, 1968).

It has been suggested that assessment of student reactions (i.e., attitudes, opinions) to a program should precede assessment of learning outcomes (i.e., academic achievement measured by course grades) (Biner, 1993; Huff, 2000). Assessment of student attitudes has emerged as an important part in evaluation of university telecourses (Biner et al., 1994; Biner et al., 1996; Biner et al., 1997a; Biner, et al., 1997b; Biner et al., 1997c).

Biner and colleagues (Biner, Dean & Mellinger, 1994; Biner, et al., 1996; Biner et. al., 1997a) argued that student attitudes *per se* represent an important criterion by which to measure the effectiveness of tele-education. These authors have suggested that it would be in the interest of all tele-education programs to implement systematic ongoing attitudinal assessment plans to monitor student attitudes about interactive telecourses. Biner et al. (1997a) asserted that positive student attitudes can result in benefits to academic programs including the following: lower student attrition, increased student motivation, greater student commitment to the program, and greater program referrals. These researchers used the Telecourse Evaluation Questionnaire (TEQ) (Biner 1993, 1995; Biner & Dean 1995; Biner, Dean, & Mellinger 1994; Biner et al., 1996) as an attitudinal assessment of student satisfaction with various aspects of interactive telecourses. Biner et al. (1997a) also used the TEQ to research the relationship between academic performance and student satisfaction with interactive telecourses. The findings of this

study offer evidence that positive student attitudes about a telecourse are predictive of the student's relative academic performance.

Biner et al. (1994) argued that student attitudes represent an important criterion by which to measure the success of televised instruction. The authors contend that the maintenance of positive student attitudes can result in a number of student and program related benefits. This study resulted in two interesting findings: (1) female students were found to be less satisfied with the logistical/management aspects of the telecourse when compared to their male classmates; and (2) students with the most telecourse experience, in terms of the number of prior telecourses they had completed, had the least positive attitudes about the instructor/instruction aspects of the course (Biner, et al., 1994).

According to Biner (1995), positive distance learner attitudes do not guarantee that student learning has taken place. However, negative student reactions can undermine program support and detrimentally affect learning. Negative student attitudes are likely to adversely affect student retention, motivation, commitment, and program referral rates. For these reasons, it is important to assess learner attitudes in distance education. Biner noted that employers have long been aware of the negative effects of dissatisfied employees (e.g., missed work, turnover, apathy). However, is not common practice for universities to monitor student reactions to distance education; those that do, often do so in a non-scientific, haphazard, inconsistent fashion.

Student Satisfaction with Distance Learning

Numerous research studies conducted by Biner and his colleagues have focused on the study of student satisfaction with telecourses (e.g. Biner et al., 1994; Biner et al., 1996; Biner et al., 1997a; Biner, Welsh, Barone, Summers, & Dean, 1997c). Biner et al., (1997a) found a student's satisfaction with a telecourse is predictive of his or her overall performance in the class. The results of this research showed that students who performed best were those most satisfied with the technological aspects of the class. Biner et al. (1997b) found that personality characteristics are associated with telecourse satisfaction. The researchers found that students who are mature, humble, venturesome, and extroverted were more satisfied with their telecourse experience.

Lia-Hoagberg, Vellenga, Miller, and Li (1999) found that students at the remote classroom site were more satisfied with their VTC course than originating site students. These results make sense because subjects at the remote classroom site in this study would not have

access to graduate programs without the availability of videoconferencing technology.

A study by DeBourgh (1999) found that the following pedagogical characteristics are associated with student satisfaction in a course taught using VTC: faculty providing clear explanations about course assignments, prompt recognition and response to student questions, encouraging student participation in class, use of a variety of instructional techniques to heighten student learning, access to the instructor out of class, and timely feedback and return of written course work.

Distance Education and Adult Learning

Adult learners have different needs than traditional graduate students (ACES, 1999b). They balance the responsibilities of work, family, and home with their education (Biner, Barone, Welsh, & Dean, 1997a). Because adult learners sacrifice family time for their education, they must be challenged by course material that is presented in an interesting and relevant manner (Burke, 2001).

The high level of technological sophistication in the general population combined with the rising costs of higher education have led distance education students to become more critical of their education. Distance education students are typically older, married, and have children; they balance their school responsibilities with their duties at work and home. These students expect a high quality education in return for their time and money. The attitudes of these discriminating students are essential to their retention in distance classes and programs (Biner, Barone, Welsh, & Dean, 1997a).

According to Burke (2001), key concepts in adult learning are the following: structure, involvement, challenge, support and feedback, integration, application, and evaluation. *Structure* makes course material accessible to the student. *Involvement* depends on engaging the student by presenting material in an interesting manner. *Challenge* is the process of engaging students to analyze, question, criticize, and research course material. *Support* and *feedback* are important to maintain involvement, monitor progress, and highlight areas of weakness. *Integration* and *application* test the efficacy of the delivery of the course material. *Evaluation* is the opportunity for the student to relay to the instructor their perceptions of the strengths and weaknesses of the class (Burke, 2001).

Although student age has not been shown to predict student satisfaction in distance education (Biner et al., 1996), older student age may be associated with expectations for higher

levels of interaction and collegiality with the course instructor and peers. Both of these activities may be limited in distance education, which may impact the satisfaction of adult learners (DeBourgh, 1999). This must be considered because, while course satisfaction is essential in any learning environment, it is essential in adult learning since adults have many stressful, competing schedules to juggle while completing school (Lia-Hoagberg, Vellenga, Miller, & Li, 1999).

Distance Education in the Helping Professions

The use of distance education is growing rapidly in higher education (NCES, 2003). The use of distance education has implications for all academic disciplines, especially the helping professions. Because personal interaction and proximity assist relationship development in the helping professions, the use of distance technologies that physically separate student and teacher must be considered carefully (Hayes, 1999). The use of distance education in the helping professions of social work, nursing, and psychology will be discussed in the next sections.

Social Work

Social work literature contains interesting research on the use of distance education and, specifically, videoconferencing (Coe & Gandy, 1998). Questions raised by social work authors (Macy, Rooney, Hollister, & Freddolino, 2001) regarding distance education include the following: Is it different from the learning that takes place in face-to-face classrooms? Is effective learning at a distance primarily an effect of variation in the behaviors of teaching institutions, a function of learner characteristics, or is it a function of the interaction between the two? What qualities are necessary in effective distance learners, and what can institutions do to respond to them?

According to Siegel, Conklin, Jennings, and Flynn (2000), social work programs utilizing distance education technologies continue to grow. As of the year 2000, 20% of social work programs were using some kind of distance technology to teach, representing a 6% growth from 1995-2000 (Siegel et al., 2000). Macy, Rooney, Hollister, and Freddolino (2001) noted that interactive television (ITV) is currently a popular choice for social work distance education programs. Interactive television has become so common in higher education that many institutions offer a range of options via ITV from a single course to a full degree program (Macy et al., 2001).

Coe and Gandy (1998) presented a literature review of evaluation studies done on the use of distance education in social work. The researchers focused on the strengths distance education

programs offer relative to traditional programs. The authors also offered a discussion of quality issues in regard to teaching and learning in distance education with a panel of experienced distance learners (Coe & Gandy, 1998).

Freddolino and Sutherland (2000) assessed the comparability of classroom environments in graduate social work education delivered via interactive instructional television (ITV). In this study, the researchers compared master's level social work (MSW) students' perceptions of the classroom learning environment among one on-campus and two distance sites linked via VTC for 13 courses from 1994 through 1998. Analysis of these data showed no statistically significant difference in students' overall perceptions between distance and on campus sites or between the two distance sites.

Huff (2000) compared live instruction with interactive television (ITV) for teaching master's level social work (MSW) students critical thinking skills. To measure the acquisition of critical thinking skills in MSW students over one semester, Huff used the California Critical Thinking Skills Test. When pre and post test data from 62 MSW students were analyzed, both groups significantly increased their critical thinking skills with no statistically significant differences between groups. Based on these data, the researchers concluded that distance education using ITV was equivalent to face-to-face instruction with regard to acquisition of critical thinking skills (Huff, 2000).

Nursing

Distance education via ITV allows nursing students and practicing professional nurses to remain in their communities, at their jobs and with their families while completing further training or an advanced degree (Block et. al., 1999). Research on the use of distance education in nursing has focused on student learning outcomes (Daly, McClelland, & Yang, 1994), student satisfaction, and connectedness with instructor and peers (Lia-Hoagberg, Vellenga, Miller, & Li, 1999).

A study on the use of ITV done by nursing researchers found that distance education students located at the remote classroom site had significantly higher levels of satisfaction and experienced high levels of connectedness and professionalism throughout the courses they took via ITV (Lia-Hoagberg et al., 1999). Students at the distance classroom site rated satisfaction with level of contact with same-site peers higher than satisfaction with level of contact with the instructor or peers at other sites (Lia-Hoagberg et al., 1999).

Research conducted by DeBourgh (1999, 2003) examined predictors of student satisfaction in a graduate nursing program taught via video conferencing and World Wide Web/Internet. The researcher used a correlational research design to examine the relationships among five learner attributes and three instructional variables predictive of student satisfaction. Results of this study showed the overall instructor rating strongly correlated with student satisfaction. Findings of this study also point out that good pedagogy is important to students' perceived satisfaction with distance education (DeBourgh, 1999, 2003).

Psychology

Psychology research literature reports that interactive television is being used to deliver psychological services in a variety of settings (Barnett & Scheetz, 2003; Jerome & Zaylor, 2000). This medium holds potential for the profession of psychology because it can increase access to mental health services for a variety of individuals who might not receive needed services without (e.g., deployed soldiers, prison inmates, individuals living in remote locations) (Jerome & Zaylor, 2000). However, psychology researchers acknowledge that the profession must be cautious in its use of technology (Barnett, & Scheetz, 2003; Jerome & Zaylor, 2000).

Jerome and Zaylor (2000) reported that as of the year 2000 no empirical evidence existed that indicated that ITV approximates face-to-face interactions or that it is equal to in-person therapy. These authors discuss technological limitations of tele-therapy, such as limited sound quality, field of view, and problems with lighting and glare which can alter the experience for both client and therapist when psychotherapy services are delivered via ITV.

Barnett and Scheetz (2003) point out that therapy provided through ITV and related technologies is preferable to telephone, e-mail, and chat room therapy. In ITV, the client can see, hear, and interact with the therapist in real time. However, these authors note that important limitations exist when ITV technology is used to deliver psychotherapy services. Limitations include (a) possibility for a breach of confidentiality, (b) loss of interpersonal cues due to limitations of the technology, (c) technological failures, and (d) difficulty in responding to emergencies and information that may require mandatory reporting requirements (Barnett & Scheetz, 2003).

Distance Education and Counselor Education

Though numerous research studies exist within the academic discipline of distance education, few studies have explored the use of distance learning in counselor education (Hayes,

1999). However, numerous books, articles, and reviews exist within the counselor education literature which explore the utilization of technology in counselor education (Berry, Srebalus, Cromer, & Takacs, 2003; Bloom & Walz, 2000; Hohenshil, 2000; Hohenshil & Brott, 2002; Quinn, Hohenshil, & Fortune, 2002; Tyler & Sabella, 2004). Others offer experience, advice, warnings, and best practices to those teaching or supervising at a distance (Ancis, 1998; Baggerly, 2002; Harris-Bowlsbey, 1984; Johnson, 1999; Lundberg, 2000; Sampson, Kolodinsky, & Greeno, 1997; Watson, 2003) or tell about course development or instructional design strategies counselor educators have used (Ancis, 1998; Johnson & Combs, 1997; Jones & Karper, 2000; Kuo & Srebalus, 2003; Price & Repman, 1995; Woodford et al., 2001).

Sampson, Kolodinsky, and Greeno (1997) raise these questions about the use of videoconferencing in counselor education: Are counselor and client perceptions of nonverbal behavior any more or less accurate in the two-dimensions of televised instruction versus the three-dimensions of actual physical proximity? Do the physical distances inherent in a geographically remote classroom environment encourage or discourage self-disclosure, if the client is unlikely to ever physically encounter his or her instructor and classmates? Will counselor educators be able to exhibit warmth toward students who they have never physically met? How will confidentiality be established, effected, and maintained? Will students trust the televised image of the instructor and their classmates?

When considered from the perspective of the best practices that have been historically taught in counselor education, the use of distance education technology in counselor training, such as video teleconferencing, raises some red flags. The term best practices includes the belief that counseling is a *high touch* (Harris-Bowlsbey, 1984 p.6) profession, meaning there is a strong emphasis placed on human interaction; close physical proximity; and interpersonal skills to facilitate a relationship between counselor and client or, in the case of counselor education training, instructor and student (Harris-Bowlsbey, 1984). Personal interaction and proximity have been the foundation of relationship development in counselor education (Rogers, 1957); these concepts are opposed by the physical distance and lack of proximity inherent in a VTC classroom environment.

Legal and Ethical Issues

The same ethical guidelines apply to counselor educators teaching at a distance as to those teaching face-to-face. To ensure high standards are maintained, the American Counseling

Association (ACA) Code of Ethics (ACA, 2005) mandates that counselor educators are skilled as teachers and practitioners; knowledgeable and skilled in applying the knowledge regarding the ethical, legal, and regulatory aspects of the profession, and making students and supervisees aware of their responsibilities; as role models for professional behaviors; and infuse material related to human diversity into all courses and/or workshops that are designed to promote the development of professional counselors.

In the past few years, the major professional counseling organizations have published legal and ethical guidelines for teaching, supervising, and counseling at a distance. The Association for Counselor Education and Supervision (ACES) provided the following information in their Guidelines for Online Instruction in Counselor Education (ACES, 1999a). Counselor education courses taught via distance technology must offer, at minimum, an equivalent educational experience as a traditional course. Distance offerings should be held to the same standards as traditional courses. Objectives that cannot be presented at the same level and cannot be replaced or modified with equivalent objectives should be delivered in a traditional class format. It is unclear at this time if distance education approaches are equal in all ways to traditionally taught classes. To ensure appropriate educational standards, a range of potential outcomes should be assessed, including skill level of students, knowledge, student attitude, personal development, and professional orientation.

In their Guidelines for Online Instruction in Counselor Education, the American Association for Counselor Education and Supervision (ACES, 1999a) remarked on the education of graduate level counseling students, citing that adult learners have different needs than traditional college students. They note that current learning theory suggests that appropriate education of adults involves opportunities to process information, create solutions for real world problems, and apply abstract theory to specific settings and situations. Distance learning courses must provide an equivalent opportunity for adult students to be actively engaged in the learning process (ACES, 1999a).

In 2001, the National Board of Certified Counselors (NBCC, 2001) published ethical guidelines for internet counseling. These guidelines state that counseling can take place face-to-face or at a distance with the assistance of technology. The communication medium for counseling can be text, audio, video, or in person. The interaction process for counseling can be synchronous or asynchronous. The selection of the specific form of counseling will be based on

the need of the client. Distance counseling supplements face-to-face counseling by providing increased access to counseling on the basis of necessity or convenience. Barriers such as geographic separation, limited physical mobility, or disability can make it a necessity to provide counseling at a distance (NBCC, 2001).

The Council for Accreditation of Counseling and Related Educational Programs (CACREP) acknowledges the use of distance education. The 2001 Standards for Counselor Education Accreditation (CACREP, 2001) recognizes that alternative instruction methods (e.g., distance learning) are currently used in many counselor education programs. Three important principles apply when evaluating these programs. First, programs that use alternative instruction methods will be evaluated with the same CACREP standards for accreditation as programs that employ more traditional methods. Second, accreditation for such programs will be based on their demonstrated compliance with CACREP standards. Third, programs that use alternative instruction methods are subject to the same level of review as programs that employ more traditional methods.

Trust, Security, and Confidentiality Issues in Counselor Education Videoconferencing

The issue of confidentiality is a concern of paramount importance in the use of videoconferencing in counselor training (Johnson & Combs, 1997; Sampson et al., 1997). Because counseling classes often involve the exchange of sensitive information about clients and students, security precautions need to be implemented and enforced that ensure appropriate protection of this information (ACES, 1999a).

All participants in VTC must adhere to American Counseling Association ethical guidelines regarding confidentiality; including instructors, students, and broadcast technicians who facilitate the process of keeping the technology up and running (Johnson & Combs, 1997). Third parties, such as computer and broadcast technicians, have not previously been an issue in the delivery of traditional counseling classes, so these personnel must be schooled in the importance of confidentiality to the profession. In VTC, the possibility exists for breach of confidentiality of televised class information, since this information is transmitted electronically over computer networks, it may not always be secure (Sampson et al., 1997). Consequently, videoconferencing is more secure than other forms of technology, such as e-mail or chat rooms. It is more secure because it utilizes a closed point-to-point communication system and occurs in real time (Roblyer, 1997).

Distance Education and Relationship Development

Psychology research conducted by Cook and Doyle (2002) investigated whether the working alliance, a central component of successful therapy, can develop when therapy participants are geographically separated. In this study, the Working Alliance Inventory (WAI), a 36-item self-report questionnaire, was used to measure overall working alliance between therapist and client, as well as three subscales: tasks, bonds, and goals. In the WAI, the tasks subscale refers to the collaboration between therapist and client on specific, in-session behaviors and techniques (e.g., guided imagery, role play). The goal subscale refers to the degree that the therapist and client agree on goals for therapeutic outcomes. The bonds subscale of the WAI measures the human relationship between therapist and client in which trust and attachment are formed so that the work of therapy can progress (Cook & Doyle, 2002; Horvath & Greenberg, 1986). Results of this study suggest that a working alliance can be established in therapy delivered on-line. Cook and Doyle (2002) found no significant difference in the level of working alliance with therapist in the online therapy sample as compared to the face-to-face sample.

In the Institute for Higher Education Policy report (Phipps & Merisotis, 1999), the authors stated that "...much of the research [on distance education] is to ascertain how technology affects student learning and student satisfaction, many of the results seem to indicate that technology is not nearly as important as other factors, such as learning tasks, learner characteristics, student motivation, and the instructor" (p. 31). Saba (1998) indicated that the issue is not whether distance education is comparable to a traditional, or face-to-face, instruction, but if there is enough interaction between the student and instructor for the student to find meaning and new knowledge. Teacher/student interaction seems to be of utmost importance in distance education. Student learning seems dependent on an interactive, responsive relationship with the instructor, regardless of class delivery mode (Johnson, 1999; Saba, 1998, 2000; Woodford et al., 2001; Ramage, 2002).

Teacher/student relationship development has historically been a fundamental aspect of counselor training. In *Client-Centered Counseling* (1951), Carl Rogers noted that significant learning rests upon the personal relationship between the facilitator and learner. Relationship development must be considered when counselor education courses are taught via distance technology. Hayes (1999) noted that building relationships is probably one of the most salient aspects of the counseling process; many counseling professionals are concerned that the use of

technology may deny the client and students-in-training the opportunity to develop relationship skills.

In 1967, Rogers commented on the importance of the interpersonal relationship in the facilitation of learning, stating there are certain qualities or *core conditions* that facilitate learning. *Realness in the facilitator of learning*: having a direct personal encounter with the learner, so they can be themselves in the relationship. *Prizing, acceptance, trust*: valuing the feelings and opinions of the learner and caring for them as a person of worth. *Empathetic understanding*: The teacher's ability to understand the learner's personal reactions can increase the likelihood of significant learning (as cited in Kirschenbaum & Henderson, 1990, p.304-311).

When considering the use of videoconference technology for counselor training, we must not forget that historically in counselor preparation emphasis has been placed upon physical proximity and *high touch* between counselor/client and instructor/student (Rogers, 1951; Harris-Bowlsbey, 1984). As counselor training adapts to accommodate the growing capabilities of technology, a marriage of tradition and technology must be reached to preserve the relationships that are fundamental to the training and practice of counselors and counselor educators.

Summary

As the use of videoconferencing continues to increase in higher education, counselor educators must engage in systemic exploration of the impact of this delivery method on students and, ultimately, the clients they will serve. Relationship building is one of the most significant aspects of the counseling process (Hayes, 1999; Rogers, 1951). The relationship development skills counselor education students develop in their graduate programs should be modeled in their future interactions with clients. As a profession, work must be done to ensure that Rogers' (1967) core conditions for learning can be achieved in the distance classroom. Counselors, often ask clients "how do you feel about that?" It makes sense to pose that same question to graduate students in regard to the use of videoconferencing in counselor training.

CHAPTER III

METHODS AND PROCEDURES

Chapter III is a description of the research methods, instrumentation, data collection procedures, and data analysis. The methods and procedures presented in this chapter were to answer the following research questions:

1. To what extent were counselor education students satisfied with graduate counseling classes delivered via videoconferencing (VTC)? Specifically, student satisfaction with:
 - a. the instructor characteristics,
 - b. the technological characteristics of the class,
 - c. the course management characteristics of the class?
2. What were counselor education students' perceptions of teacher/student relationship development in the VTC classroom environment?
3. What was the relationship between student satisfaction and perceived relationship development when counselor education courses were taught via VTC?

Method

A web-based questionnaire was used to explore the perceptions of graduate students in Council for Accreditation of Counseling and Related Educational Programs (CACREP) counselor education programs who had completed at least one video teleconferencing course. The focus of the study was students' satisfaction with video teleconferencing courses and their perceptions about relationship development with the course instructor.

Initially, target participants for this study were master's and doctoral level students at 159 CACREP counselor education programs across the United States, who had taken at least one counselor education class taught via video teleconferencing. However, due to problems with data collection, detailed later in this chapter, only students from Virginia Polytechnic Institute and State University's Counselor Education Program participated in the study.

Instrumentation

The Telecourse Evaluation Questionnaire (TEQ; Biner, 1993) and the Barrett-Lennard Relationship Inventory © (BLRI; Barrett-Lennard, 1962) were the instruments used for this study. See Appendix A for the TEQ; see Appendix B for selected items from the BLRI. Permission to use the TEQ was obtained from Paul M. Biner (Appendix C); permission to use

the BLRI was obtained from Godfrey T. Barrett-Lennard (Appendix D). The eight General and Demographic Information items from the TEQ (e.g., workload, sex, year in school) were used in the current study with the “year in school” being identified as master’s, doctoral, and other. In addition, participants were asked: (a) to disclose the title of the course they had considered when completing the questionnaire; and (b) to provide additional comments about the student/instructor relationship, if they so desired. Appendix E is a copy of the instrument used in the current study. The psychometric properties for the TEQ and BLRI follow.

Telecourse Evaluation Questionnaire (TEQ)

Numerous research studies conducted by Biner and his colleagues have used the Telecourse Evaluation Questionnaire (TEQ) to study student satisfaction with telecourses (Biner et al., 1994; Biner et al., 1996; Biner et al., 1997a; Biner et al., 1997b; Biner et al., 1997c). The TEQ has been used to investigate factors underlying satisfaction with interactive televised courses (ITV) (Biner, Dean, & Mellinger, 1994); the demographics associated with student satisfaction in ITV (Biner et al., 1996); the relationship between satisfaction with ITV and relative academic performance (Biner, Barone, Welsh, & Dean, 1997a); and the relationship between personality characteristics and satisfaction with ITV (Biner et al., 1997b). As of 1995, the TEQ had been administered to more than 1,700 students enrolled in televised courses at Ball State University, as well as, at least 14 other universities (Biner, 1995). Additionally, the TEQ has been used in more than 14 research studies (e.g., Biner, Bink, Huffman, & Dean, 1995; Biner, Dean, & Mellinger, 1994; Biner, 1995; Biner et al., 1997a; Cramer, 2000; DeBourgh, 1998, 2003; Mingmuang, 2001; Siebert, 2002). Through its use in these studies the TEQ has been found to be a reliable, valid measure of student satisfaction with interactive tele-education.

The Telecourse Evaluation Questionnaire (TEQ) was developed by Biner (1993) to assess student satisfaction with various aspects of interactive telecourses (ITV). The 34 items of the TEQ fall into three dimensions of student satisfaction: 16 statements address Instruction/Instructor Characteristics; 7 statements address Technological Characteristics; and 11 statements address Course Management and Coordination Characteristics (Biner, 1993; Biner, Dean, & Mellinger, 1994; Biner et al., 1996). Students are asked to rate their level of satisfaction with each statement on a Likert-type scale (1 = Very Poor to 5 = Very Good) (Biner, 1993). To limit bias in the wording of questions, the TEQ uses simple statements related to the three specific dimensions of student satisfaction.

Validity. Development of the TEQ was prompted by (a) the realization that distance education is delivered through a combination of media and technology, and (b) the lack of rigor employed in the development of attitudinal questionnaires at the time of the TEQ's publication (Biner, 1995). The TEQ was developed using the following steps. First, 71 items relating to course satisfaction were generated using a sample representing students who were enrolled in telecourses at the time of the study; faculty members teaching ITV courses; instructional designers with telecourse design experience; full time distance education coordinators; and tele-education and education technologies administrators (Biner, 1993).

Second, the dimensions underlying the 71 items identified in step one were defined by seven content experts in tele-education using a card sorting technique (Biner, 1993). As a result of this process, three dimensions emerged; analysis of mean agreement percentages for items assigned each dimension showed 81% agreement (Biner, 1993).

Third, content validation was performed by 11 experts in tele-education (Biner, 1993). Subjects were sent the 71 items and asked to rate each on a three-point scale: 1= It is not necessary that the question be asked of the students on this topic; 2=It is useful but not essential that a question be asked of the students on this topic; and 3=It is essential that a question be asked of students on this topic (Biner, 1993, p. 67). Content Validity Ratio (CVR) was calculated for each of the 71 items. A CVR is similar to a correlation coefficient, and ranges from +1.00 (all judges rate an item as essential) through .00 (50% of judges rate an item as essential) to -1.00 (none of the judges rate an item as essential). It was determined that items with CVRs greater than zero would be included in the instrument (Biner, 1993). As a result of the CVR process, 34 items remained (Biner, 1993).

In the fourth and final step of development of the TEQ, the 34 items were paired with a five-point rating scale from Very Poor to Very Good, clustered, and randomly ordered into three general sections of the instrument identified in step two (Biner, 1993). The completed instrument was then administered to 98 graduate and undergraduate students enrolled in three different Colleges within Ball State University; ultimately, 77% of remote-site student surveys and 86% of on-campus surveys were returned (Biner, 1993). Results provided useful and diverse information that Biner (1993) used to (a) assess student satisfaction both overall and with specific components of the courses; (b) compare remote-site versus campus student satisfaction;

(c) identify, through correlational analysis, facets of the course that were most predictive of overall satisfaction; and (d) identify program areas producing negative reactions.

Reliability. In later research using factor analysis (Biner, Dean, & Mellinger, 1994), it was found that the items of the TEQ essentially address seven factors of student satisfaction. These factors of student satisfaction include the following: instruction/instructor; technological; course management and coordination; at-site personnel; promptness of material delivery; support services; and out-of-class communication with instructor (Biner, Dean, & Mellinger, 1994). To assess inter-item reliability among the groups of items comprising each of the seven factors, inter-item consistency estimates (Cronbach alphas) were computed. The resulting estimates ranged from very high to moderate: Factor 1 (Instruction/Instructor) = .94; Factor 2 (Technological) = .83; Factor 3 (Course Management and Coordination) = .80; Factor 4 (At-Site Personnel) = .89; Factor 5 (Promptness of Material Delivery) = .74; Factor 6 (Support Services) = .60; Factor 7 (Out-of-Class Communication with Instructor) = .51 (Biner, Dean, & Mellinger, 1994). Table 3.1 shows items in Biner's (1993) original three dimensions of the TEQ; Table 3.2 presents the seven factors, items, and reliabilities found by Biner, Dean and Mellinger (1994). For this study, Biner's (1993) original subscales were used because they are the subscales used most predominantly in the research literature.

Table 3.1
Items Contributing to TEQ Subscales: Biner, 1993

Dimension	# of Items	Item #
Instruction/Instructor Characteristics (Dimension 1)	16	1-16
Technological Characteristics (Dimension 2)	7	17-23
Course Management and Coordination Characteristics (Dimension 3)	11	24-34
Total	34	

Table 3.2**Items Contributing to TEQ Subscales: Biner, Dean, and Mellinger, 1994**

Factor	# of Items	Item #	Alpha
Instruction/Instructor (Factor 1)	14	1-4, 6, 8, 9-13 15, 16, 22	.94
Technological (Factor 2)	7	17 - 23	.83
Course Management and Coordination (Factor 3)	4	30, 32, 33, 34	.80
At-Site Personnel (Factor 4)	2	28, 29	.89
Promptness of Material Delivery (Factor 5)	2	5, 31	.74
Support Services (Factor 6)	3	7, 26, 27,	.60
Out-of-Class Communication with Instructor (Factor 7)	2	14, 24,	.51
Total	34		N/A

Barrett-Lennard Relationship Inventory © (BLRI)

The Barrett-Lennard Relationship Inventory © (BLRI; Barrett-Lennard, 1962) has been used by numerous researchers to study relationships between couples, families, close personal friends, and students and teachers (Al-Saleh, 2002; Baird, 1972; Barrett-Lennard, 1962; Barnoski, 1988; Collins, 1976; Cramer, 1990; Deal, Wampler, & Halverson, 1992; Dillion, 1981; Drevets, Benton, & Bradley, 1996; Mills & Zytowski, 1967). Through its use in these studies and others, the BLRI has been found to be a reliable, valid measure of an individual's perception of his/her relationship with another person.

The BLRI was developed based upon the humanistic theory of Carl Rogers (Barrett-Lennard, 1962). The purpose of the BLRI is to study the perceptions of individuals involved in helping relationships: client to therapist, husband to wife, and student to teacher (Barrett-Lennard, 1986). Though originally developed to be used by counselors, the BLRI has been used to study relationships within couples and families (Barnoski, 1988; Cramer, 1990; Deal, Wampler, & Halverson, 1992; Mills & Zytowski, 1967), between college students (Barrett-

Lennard, 1962), and between students and teachers (Al-Saleh, 2002; Baird, 1972; Collins, 1976; Dillion, 1981; Drevets, Benton & Bradley, 1996).

The BLRI contains four subscales designed to measure an individual's perception of a relationship with a significant person (e.g., client/counselor, student/teacher). Each subscale consists of 16 items, eight of which are positively worded and eight of which are negatively worded. The subscales are: Empathic Understanding (E); Level of Regard (R); Unconditionality of Regard (U); and Congruence (C) (Barrett-Lennard, 1962, 1978). *Empathic Understanding* (E) refers to the extent to which one person is conscious of and able to understand the experience of another, though the other person may not clearly communicate his/her experience. *Level of Regard* (R) refers to the affective response of one person to another; this response includes all of the distinguishable feeling reactions of one person to another, positive and negative. *Unconditionality of Regard* (U) refers to the level of variability in one person's response to another and the conditions that govern variability in that response. *Congruence* (C) refers to the degree to which an honest, direct, sincere, open relationship exists between individuals (Barrett-Lennard, 1962). Table 3.3 provides a sorting key of the BLRI items in each subscale.

Table 3.3
Sorting Key For BLRI Subscales (n = 16 items in each)

Subscale	Item #	Item Direction
Empathic Understanding (E)	2, 10, 18, 30, 34, 42, 54, 62	Positive
	6, 14, 22, 26, 38, 46, 50, 58	Negative
Level of Regard (R)	1, 5, 13, 25, 37, 41, 57, 61	Positive
	9, 17, 21, 29, 33, 45, 49, 53	Negative
Unconditionality of Regard (U)	7, 15, 23, 31, 39, 47, 51, 59	Positive
	3, 11, 19, 27, 35, 43, 55, 63	Negative
Congruence (C)	4, 12, 20, 28, 36, 44, 48, 56	Positive
	8, 16, 24, 32, 40, 52, 60, 64	Negative

(Al-Saleh, 2002)

The BLRI has two forms: Myself to Other (MO) and Other toward Self (OS) (Barrett-Lennard, 1986). The Other toward Self (OS) form of the BLRI was used in this study to measure counselor education students' perception of the student-teacher relationship. The OS form

consists of 64 items measured on a six-point scale ranging from +3 (yes, I feel strongly this is true) to -3 (no, I feel strongly that it is not true) (Barrett-Lennard, 1986).

Validity. Content validity is based on the extent to which a measurement reflects the specific intended content to be measured (Carmines & Zeller, 1991). The original content items of the BLRI were derived from Carl Rogers' paper on the conditions of therapy (Rogers, 1957). BLRI items were written and revised through communication and feedback with staff members at the University of Chicago Counseling Center (Gurman & Razin, 1977). Barrett-Lennard (1962) noted that the development of the instrument involved ongoing interaction between theory and operational expression and resulted in ongoing growth and refinement of the meaning of each concept in the instrument.

Because the BLRI is based upon therapeutic conditions established by Rogers (1957), content validity was established through the use of five judges, who were established to be experts in client-centered counseling. The judges were asked to categorize each item as either a *positive* or *negative* expression of the therapeutic condition it was intended to represent; *neutral* was used to rate items that were unimportant or unclear (Gurman & Razin, 1977). The five judges reached agreement on all but three items, which were subsequently removed from the inventory (Gurman & Razin, 1977).

Reliability. Reliability is the extent to which an experiment, test, or any measuring procedure yields the same result over repeated trials. Internal consistency reliability is the extent to which tests assess the same characteristic; stability reliability, or test re-test reliability, is the agreement of measuring instruments over time (Trochim, 2002). The BLRI has been tested in 14 studies for internal consistency reliability and 10 studies for test-retest reliability (Gurman & Razin, 1977). The mean internal consistency reliability coefficients across these studies were consistently high: Empathic Understanding (E) .84; Level of Regard (R) .91; Unconditionality of Regard (U) .74; Congruence (C) .88; and Total .91 (Gurman & Razin, 1977). Test-retest intervals were approximately one month and showed mean correlations as follows: Empathic Understanding (E) .83; Level of Regard (R) .83; Unconditionality of Regard (U) .80; Congruence (C) .85; and Total .90 (Gurman & Razin, 1977). Table 3.4 provides the reliability coefficients for the BLRI.

Table 3.4
Psychometric Properties of the BLRI

Subscale	# of Items	Reported Alpha	M	Reported Test-Retest	M
Empathic Understanding (E)	16	.64-.92	.84	.66-.91	.83
Level of Regard (R)	16	.83-.93	.91	.74-.91	.83
Unconditionality of Regard (U)	16	.49-.89	.74	.61-.90	.80
Congruence (C)	16	.80-.92	.88	.76-.92	.85
Total (T)	64	.82-.97	.91	.83-.95	.90

(Gurman & Razin, 1977)

Scoring. Barrett-Lennard (1986) suggested scoring the BLRI by considering the subjects' response to each item at face value. Each of the 64 statements evaluates an individual's perception of his/her relationship with another individual on a 6-point scale with numbers ranging from +3 as strongly felt agreement to -3 as strongly felt disagreement (Barrett-Lennard, 1986). When responses are added together, there is a possible total score range of -192 to +192. Barrett-Lennard acknowledges that "half the possible range is negative sometimes creates awkwardness in statistical treatment of scored data" (p. 451). Barrett-Lennard stated that number codes from 1 to 6 may be substituted for the original codes (-3 = 1; +3 = 6) and that "this feature alone appears unlikely to have important effects on association or group differences (p.451).

Relationship of TEQ and BLRI Subscales to Research Questions.

The subscales of the TEQ relate to research question one: *To what extent are counselor education students satisfied with graduate counseling classes delivered via videoconferencing?* The subscales of the BLRI relate to research question two: *What were counselor education students' perceptions of teacher/student relationship development in the VTC classroom environment?* Subscales from both the TEQ and the BLRI relate to research question three: *What is the relationship between student satisfaction and perceived relationship development when counselor education courses are taught via VTC?* Table 3.5 provides an overview of the relationship of TEQ and BLRI subscales to the research questions.

Table 3.5
Relationship of TEQ and BLRI Subscales to Research Questions

Telecourse Evaluation Questionnaire *			Barrett-Lennard Relationship Inventory © **		
Subscale	# of Items	Research Question #	Subscale	# of Items	Research Question #
Instruction/Instructor Characteristics (Factor 1)	16	1, 3	Empathic Understanding (E)	16	2, 3
Technological Characteristics (Factor 2)	7	1, 3	Level of Regard (R)	16	2, 3
Course Management and Coordination Characteristics (Factor 3)	11	1, 3	Unconditionality of Regard (U)	16	2, 3
			Congruence (C)	16	2, 3
Total	34		Total (T)	64	

*Biner, 1993

**Barrett-Lennard, 1968

Data Collection Procedures

Approval from the Human Subjects Internal Review Board (IRB) of Virginia Tech was obtained (see Appendix F). Because this research was conducted in established, commonly accepted educational settings, involving normal educational practices, an Exempt Status form was filed and approved. Exempt research causes minimal risk to subjects and does not involve special classes of subjects (Virginia Polytechnic Institute and State University, 2003). As a part of the IRB process, an informed consent for participants was approved (see Appendix G).

Data collection took place through an online, web-based questionnaire using SurveyMonkey (SurveyMonkey.com, 2004). According to the literature, there are many advantages of online questionnaires when compared to traditional, paper and pencil, mail-in questionnaires. Some advantages are reduced response time, reduced cost, ease of data entry, flexibility of format, and the ability to quickly obtain additional information from respondents (Granello & Wheaton, 2004).

Proposed Data Collection

The original proposal for this research study was a national survey of students attending CACREP programs. First, to gather preliminary data, 159 liaisons at CACREP counselor

education programs in the United States were sent an email in May 2005 requesting their participation in the research study (see Appendix H). Contact information for liaisons was obtained from the Directory of CACREP Accredited Programs (CACREP, 2004). Liaisons were asked to respond to the initial email message and answer the following questions: (1) Did your program offer courses via interactive television (ITV) (e.g., videoconferencing [VTC], telecourse) technology in the 2004-2005 academic year? (2) If so, how many courses have been taught in the 2004-2005 academic year using interactive television? (3) How many Counselor Education students in your program participated in a class using this technology during the 2004-2005 academic year? (4) How many instructors taught courses using this technology during the 2004-2005 academic year? (5) Would you be willing to have your students participate in a survey study to explore student satisfaction and relationship development when Counselor Education courses are taught via interactive television? (6) If so, please provide the name and email contact for the person with whom I can communicate regarding courses taught via interactive television. A follow-up email was sent to the liaisons who had not responded within one week to encourage their responses.

Thirty-three liaisons responded to the initial email, responding immediately upon receipt. Two additional email contacts produced no further responses. Because the timing of the email survey (late in the spring semester) may have effected the response rate (21%), a decision was made to send a paper mailing to liaisons who did not respond to the emailed request. Eight liaisons were unreachable and, of the 118 reachable via post, 95 responded.

From the 128 total responses (33 via email, 95 via post; 81% response rate), 10 CACREP liaisons provided detailed information about the use of VTC technology in their program. A profile of the use of VTC in these 10 CACREP programs is presented in Chapter IV. It should be noted that an additional seven liaisons reported that their university had used or planned to use VTC technology to deliver Counselor Education classes between 2004 and 2006, but they did not provide detailed information about the use of the technology. From the group of liaisons that provided detailed information about the use of VTC in their program, four liaisons agreed to ask their counseling students to participate in the study.

On October 1, 2005, an email was sent to the liaisons (see Appendix I) at these four institutions asking them to forward to their students a subsequent email containing information about the survey, a link to the questionnaire, and a password (see Appendix J). Reminder emails

were sent to liaisons one, three, and five weeks later. Results from this initial survey were poor, with a total of six students completing the online questionnaire. Confirmation that three liaisons forwarded the questionnaire to students was obtained via unsolicited correspondence from student participants. There was an indication that the fourth liaison did not forward the mailing to students at his university. Beyond that, reasons for poor participation are not known.

Due to the poor response to this student survey at four institutions, a decision was made to solicit students from the researchers' parent university, Virginia Tech. Further information about Virginia Tech is presented in Chapter IV.

Data Collection

It was determined that 238 students in Virginia Tech's Counselor Education Program may have taken Counselor Education courses via VTEL, Virginia Tech's video conferencing (VTC) system. A list of email addresses for current and former Virginia Tech Counselor Education students who may have taken a course via VTEL was compiled with the assistance of the Virginia Tech Counselor Education Program Area administrative assistants. Of the 238 students who may have taken a VTEL course, a total of 112 individuals were reachable. Due to university privacy regulations, the primary researcher was not allowed access to the email addresses of prospective participants; hence, it was decided all invitations to participate in the study would be sent by Dr. Pamela Brott, Associate Professor of Counselor Education, and chair of my doctoral committee.

On April 3, 2006, an email inviting participation in the study was sent to the 112 reachable individuals (38 National Capital Region students, 74 main campus students) by Dr. Pamela Brott. The email contained information about the survey, a link to the questionnaire, and a password to access the questionnaire (see Appendix K). When participants clicked the link contained in the email, they were directed to the homepage for the questionnaire on the SurveyMonkey site (SurveyMonkey.com). The homepage welcomed the participants and asked them to enter the password they received. Once participants entered the password, they were directed to an informed consent about the research study (see Appendix G). The informed consent explained (a) rights of participants in the study, (b) benefits and risks associated with participation in the study, (c) that survey responses would remain confidential, (d) that completing the on-line questionnaire would imply their consent to participate in the survey study, and (e) provided contact information for the researcher should participants have questions about

the survey or wish to request survey results. Once participants read the informed consent and indicated their consent to participate, they were directed to the on-line questionnaire (see Appendix E).

Three of the 112 emails requesting participation were returned as undeliverable; so in total, 109 current and former Virginia Tech Counselor Education students were solicited to participate in the study. Of the 109 individuals initially contacted, 22 completed the on-line questionnaire. Follow up emails were sent on April 12, 2006, and May 23, 2006, to encourage others to participate; in response to the follow up emails, an additional 28 online questionnaires were completed. In total, 50 current and former Virginia Tech Counselor Education students participated in the study by completing the on-line questionnaire (46% response rate).

Data Analysis

Data analyses were performed using SPSS for Windows, Version 11. Descriptive statistics were used to describe participant demographic data. Research question one (*To what extent are counselor education students satisfied with graduate counseling classes delivered via videoconferencing?*) and research question two (*What are counselor education students' perceptions of teacher/student relationship development in the VTC classroom environment?*) were answered using descriptive statistics. Pearson correlations were used to answer research question three (*What is the relationship between student satisfaction and relationship development when counselor education courses are taught via VTC?*). Details of the statistical analysis findings are presented in Chapter IV.

Summary

This chapter described the methods, instrumentation, data collection procedures, and data analysis that were used in this research study. Initially, a national study was planned and participants were solicited from 159 CACREP programs across the United States. Poor response from the national solicitation resulted in participation being from one institution, Virginia Polytechnic Institute and State University. The instruments used in this study were the Telecourse Evaluation Questionnaire (TEQ; Biner, 1993) and the Barrett-Lennard Relationship Inventory © (BLRI; Barrett-Lennard, 1962); ten demographic items were also included. Methods for data analysis, using SPSS Version 11 for Windows, were presented.

CHAPTER IV

RESULTS

The purpose of the present study was to explore student perceptions of counselor education courses taught at a distance using video conferencing (VTC); specifically, student satisfaction with course delivery and relationship development in the VTC classroom environment. Chapter IV describes the results of the study. First, a profile of VTC use in CACREP Counselor Education Programs is presented. Next, a profile of the program and participants in the study from Virginia Tech is presented. The main focus of the chapter is a presentation of the findings for each research question.

Profile of VTC Use in CACREP Counselor Education Programs

In response to the national survey of 159 CACREP programs (detailed in Chapter III), responses were received from 128 liaisons (81% response rate). Seventeen program liaisons out of 128 (13%) said they had delivered a course via VTC in the 2004-2005 academic year; 10 program liaisons provided detailed information about their use of the technology. The most meaningful information obtained from the national survey of CACREP liaisons is that relatively few (13%) Counselor Education programs were offering courses via VTC in 2004-2005. Table 4.1 presents a profile of VTC use based on the responses provided by 10 CACREP liaisons.

Table 4.1

Profile of VTC Use in 10 CACREP Counselor Education Programs 2004-2005

University	# VTC Courses	Students Enrolled	# VTC Faculty
Cleveland State (OH)	2	30	2
Columbus State (GA)	4	108	5
Gonzaga (WA)	8	75	5
Idaho State	4	51	4
Indiana	1	8	1
Maryland	2	55	1
Northern Arizona	1	20	5
Texas A&M Commerce	2	48	1
Virginia Tech	4	15	4
Western Illinois	2	50	2
TOTAL	30	460	30

Profile of the Participants

Due to the poor response to the national survey discussed in Chapter III, a decision was made to solicit only students from the researcher's parent university, Virginia Tech. Detailed demographic information about the Counselor Education program at Virginia Tech and a profile of the participants in this study follows.

Virginia Tech Counselor Education Program

The Virginia Tech Counselor Education Program offers a master's degree (M.A.Ed.) in Counseling at the Northern Virginia Center (Falls Church, VA) and at the Roanoke Center; a doctoral degree program (Ph.D.) at the Northern Virginia Center and at the main campus in Blacksburg. Degree programs are accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) and by the National Commission of Accreditation and Teacher Education (NCATE). They are also approved by the Virginia Department of Education for the preparation of school counselors (Virginia Tech, 2006).

Students at all of Virginia Tech's campuses have the opportunity to take courses offered face-to-face, via synchronous, interactive televised instruction (more recently called video conferencing [VTC]), or on-line. This study focused on students' perceptions of courses offered via VTC; the system Virginia Tech uses to offer synchronous televised instruction is called VTEL. Virginia Tech's Counselor Education Program began offering VTEL courses in 1998; to date, nine Counselor Education courses have been delivered a total of 31 times over 21 semesters. More than 238 students in Virginia Tech's Counselor Education Program have taken Counselor Education courses via VTEL. Table 4.2 details the Virginia Tech VTEL course offerings in the Counselor Education Program between 1998 and 2006.

Participants' Profile

Of the 109 reachable students from Virginia Tech who may have taken a Counselor Education VTEL course, 50 responses were received (46% response rate). Of these, 43 had actually taken a VTEL counseling course and this group represents the participants for this study. There were 10 items on the questionnaire related to demographics. Based on these data, a profile of the participants can be detailed. The majority of the 43 respondents were female (60%; $n = 26$), 7 were male (16%), and 10 respondents (23%) chose not to disclose their gender. The greatest number of responses were from doctoral students (47%), 11 respondents were master's

level students (26%), and 12 (28%) did not disclose their level in school. Table 4.3 presents demographic data by gender and level in school.

Table 4.2
Counselor Education Courses Offered via VTEL at Virginia Tech (1998- 2006)

Course	Title	Sections TOTAL	Students TOTAL
EDAE 5604	Substance Abuse Counseling	1	+
EDAE 6914	Special Topics:		
	• Advanced Appraisal	1	8
	• Publishing	5	33
	• Systems	1	1+
EDCO 5374	Community Counseling	4	40
EDCO 6304	Clinical Supervision	5	38+
EDCO 6404	Advanced Counseling Theories	5	37+
EDCO 6414	Advanced Group Counseling	3	27+
EDCO 6484	Legal & Ethical Issues	6	54+
TOTAL		31	238+

+ Exact student enrollment in particular sections of courses is unknown

Table 4.3
Profile of Participants by Gender and Level in School

Gender	Master's	Doctoral	Other	Total
Female	10	16	0	26
Male	1	4	2	7
No Response			10	10
TOTAL	11	20	12	43

The number of VTEL courses each respondent had taken ranged from one to seven, with the average for all students being three ($M = 2.6$) courses. The mean number of VTEL courses taken by doctoral students ($M = 3.6$) was higher than for master's students ($M = 1.1$). Item 102 on the questionnaire asked participants to identify the VTEL Counselor Education course they

considered when completing the survey. Respondents reported that they had considered the following VTEL courses when completing the on-line questionnaire: Advanced Appraisal, Advanced Group Counseling, Advanced Counseling Theories, Community Counseling, Clinical Supervision, and Legal and Ethical Issues.

Overall, students were satisfied by the course workload required of them. The majority of respondents indicated that the course workload was '*just right*' (n = 25; 58%), while only 19% (n = 8) considered the workload to be '*rigorous*'. When asked to provide an overall rating of the VTC course, 28% (n = 12) of the respondents rated the course as '*good*' and 40% (n = 17) rated the course as '*very good*'. However, when asked to compare their VTC course experience to their experience in a traditionally taught course, the majority of respondents reported the VTC course was '*average*' (n = 25; 58%), '*worse*' (n = 4; 9%), or '*much worse*' (n = 2; 5%) than the traditional course experience. Furthermore, 42% (n = 18) of participants indicated that they would not have had access to the course if it had not been offered via VTC. That said, when asked if they would voluntarily enroll in another VTC course, 67% (n = 29) of the respondents reported they would. It should be noted that not all of the 43 participants provided an answer to each of the demographic questions.

Responses to Research Questions

There were a total of three research questions that guided the study. The following sections will restate and provide results for each question.

Research Question One: Student Satisfaction with VTC Courses

To what extent were counselor education students satisfied with graduate counseling classes delivered via videoconferencing (VTC)? Specifically, student satisfaction with the instructor, technology, and course management.

The three subscales from the Telecourse Evaluation Questionnaire (TEQ; Biner, 1993) were used to answer this question. The items in the subscales related to student satisfaction with (a) Instruction/Instructor Characteristics, (b) Technological Characteristics of the class, and (c) Course Management Characteristics.

Overall, students were quite satisfied with their experience in VTC counseling classes. Based on averages from items in each subscale that were rated from 1 (bottom box = *very poor*) to 5 (top box = *very good*), students were most satisfied with the management of the class (M = 4.3), indicating they were pleased with the accessibility of resources and personnel. High levels

of satisfaction were also reported for the course instructor ($M = 4.1$). Students perceived course instructors to be knowledgeable and enthusiastic about the subject matter, as well as professional and organized in their approach to class. The lowest mean score was for satisfaction with the technology ($M = 3.7$), but even that was above the mid point of the scale. This score suggests that students felt comfortable with the technology and did not feel it was a barrier to learning. The following sections provide specific results based on responses to items in each subscale.

Satisfaction with course management characteristics. As seen in Table 4.4, responses to the 11 individual items within the Course Management Characteristics scale were all extremely positive. Students were most satisfied with the user friendliness of the VTC course experience (first four items in Table 4.4). Sixty-five percent (top box %) of students responded they were very satisfied with both their ability to access a computer and the general conscientiousness of the site coordinator. Students were slightly less satisfied with their access to departmental personnel and means of materials exchange with the instructor. Only 42% (top box %) of respondents expressed that they were very satisfied with access to department personnel and just 41% (top box %) felt that the means of materials exchange with the instructor was very good. Overall, students reported a high level of satisfaction with course management.

Table 4.4

Satisfaction with Course Management Characteristics

Management Characteristic	N	Median	Top Box %	Top Box N
27. Ability to access a computer	34	5.00	64.7%	22
28. General conscientiousness of site coordinator	34	5.00	64.7%	22
34. Enrollment and registration procedures	33	5.00	63.6%	21
30. Ability to operate teleresponse system	33	5.00	57.6%	19
26. Ability to access a library	34	4.50	50.0%	17
31. Promptness of course material delivery	34	4.50	50.0%	17
25. Accessibility of labs	4	4.00	75.0%	3
32. Promptness with which back up tapes are provided	18	4.00	50.0 %	17
29. Accessibility of site coordinator	34	4.00	44.1%	15
33. Ability to access departmental personnel	33	4.00	42.4%	14
24. Means of material exchange with instructor	34	4.00	41.2%	14

Satisfaction with the instruction/instructor characteristics. Table 4.5 provides detailed student responses for the Instruction/Instructor Characteristics subscale of the TEQ; results are presented in groupings ranked by both median response and top box percentage. Students were extremely satisfied with their course instructors, reporting the highest levels of satisfaction with the instructors' professional behavior. In fact, 73% of respondents reported they were very satisfied (top box %) with the professional behavior of the course instructor. Additional instructor characteristics that students were most satisfied with included the following: the instructor's level of enthusiasm (top box 70%), organization for class (top box 59%), teaching ability (top box 56%), and communication skills (top box 56%). Fewer students were fully satisfied with the production quality of the graphics used by the instructor (top box 39%) or the time those graphics were left on the VTC screen (top box 32%). Based upon these responses, it can be said that students were more satisfied with the instructor as a person and as a professional, than with the materials instructors used in class. That said, median scores for all items on this subscale were uniformly high.

Satisfaction with technological characteristics. Table 4.6 provides detailed student responses for the Technological Characteristics subscale of the TEQ. Results are ordered from highest to lowest by both median response and top box percentage. Students reported high levels of satisfaction with the technological characteristics of their VTC course, though they were somewhat less satisfied with the technology than with the management and instructor aspects of the course. Students expressed a high degree of confidence that VTC classes would not be cancelled due to inclement weather. However, fewer students were completely satisfied with the audio and visual aspects of the technology; only 35% of respondents selected the top box for quality of sound (item 18) and picture (item 17), respectively. Television screen size received the lowest median score of all items in the scale with only 32 % of respondents selecting the top box in that category.

Table 4.5
Satisfaction with Course Instruction/Instructor Characteristics

Instructor/Instruction Characteristic	N	Median	Top %	Box N
15. Instructor's professional behavior	33	5.00	72.7%	24
11. Instructor's level of enthusiasm	33	5.00	69.7%	23
10. Instructor's organization and preparation for class	34	5.00	58.8%	20
12. Instructor's teaching ability	34	5.00	55.9%	19
9. Instructor's communication skills	34	5.00	55.9%	19
16. Instructor overall	34	5.00	52.9%	18
13. Instructor's ability to encourage class participation	34	4.50	50.0%	17
1. Clarity of communication about class assignments	34	4.00	52.9%	18
5. Timeliness of materials return	33	4.00	48.5%	16
6. Instructional techniques aided student learning	33	4.00	48.5%	16
14. Accessibility of instructor	34	4.00	47.1%	16
3. Degree to which graphics aided in student understanding of material	33	4.00	45.5%	15
8. Instructor made students feel a sense of belonging	33	4.00	42.4%	14
4. Production quality of graphics	33	4.00	39.4%	14
7. Extent to which classroom was distraction free	34	4.00	35.3%	12
2. Student reaction to time graphics were left on screen	34	4.00	32.4%	11

Table 4.6
Satisfaction with Technological Characteristics

Technology Characteristic	N	Median	Top %	Box N
23. Student confidence that classes will not be cancelled due to weather	34	4.00	44.1%	15
22. Promptness with which instructor recognizes calls over the tele-response system	34	4.00	41.2%	14
20. Clarity of the tele-response system audio	32	4.00	37.5%	2
17. Quality of television picture	34	4.00	35.3%	12
18. Quality of television sound	34	4.00	35.3%	12

21. Brevity of talk-back delays	34	4.00	32.4%	11
19. Adequacy of television screen size	34	3.50	32.4%	11

Research Question Two: Student Perceptions of Relationship Development

What were counselor education students' perceptions of teacher/student relationship development in the VTC classroom environment?

This question was addressed using the Barrett-Lennard Relationship Inventory © (BLRI; Barrett-Lennard, 1968) subscales that were designed to measure an individual's perception of a relationship with a significant person and has been used to study client/counselor and student/teacher relationships. Results are based on 40 students who completed the BLRI items. Table 4.7 provides BLRI subscale mean scores for master's students, doctoral students, and total.

Based on a scoring range from 1 (*I feel strongly this it is not true*) to 6 (*I feel strongly this is true*), the highest mean was for Level of Regard (R; M = 4.9), which indicates that students had a highly positive affective response to the instructor/student relationship. The next highest mean was for Congruence (C; M = 4.4) demonstrating that students perceived the student/instructor relationship to be honest, direct, sincere, and open. Empathic Understanding (E) received a mean score of 4.0, indicating that students believed their instructor was conscious of and able to understand their feelings and in-class experience. Of the four subscales, the lowest mean score was for Unconditionality of Regard (U; M = 3.9), indicating that students believe that the instructor's affective response to them may vary under certain conditions. Master's degree level students perceived their course experience slightly better than doctoral level students did, but the mean difference between master's and doctoral level students was negligible and, hence, not statistically significant.

Table 4.7

BLRI Subscales: Master's Students and Doctoral Students

	<i>Master's Students (N =14)</i>	<i>Doctoral Students (N =20)</i>	<i>TOTAL (N = 40*)</i>
Level of Regard (R)	5.12	4.90	4.94
Congruence (C)	4.63	4.33	4.39
Empathic Understanding (E)	4.14	3.89	3.95
Unconditionality of Regard (U)	3.86	3.90	3.87

*six BLRI respondents did not indicate level in school

Research Question Three: Relationship Between Student Satisfaction and Relationship Development

What was the relationship between student satisfaction and perceived relationship development when counselor education courses are taught via VTC?

As Table 4.8 illustrates, a strong relationship was found between the TEQ subscales of Instruction/Instructor Characteristics (I) and Course Management Characteristics (M; $r = .88$). A moderate relationship was found between Instruction/Instructor Characteristics (I) and Technological Characteristics (T; $r = .59$). The least strong correlation of the TEQ factors was between Course Management (M) and Technological Characteristics (T; $r = .53$), but even that relationship was moderately strong.

Table 4.8
Relationship Between TEQ and BLRI Subscales (n = 34)

Scale	Mean	TEQ			BLRI			
		<i>I</i>	<i>T</i>	<i>M</i>	<i>R</i>	<i>E</i>	<i>U</i>	<i>C</i>
<i>I</i>	4.13	(.94)						
<i>T</i>	3.67	.591**	(.94)					
<i>M</i>	4.27	.878**	.534*	(.86)				
<i>R</i>	4.94	.427*	.285	.300	(.90)			
<i>E</i>	3.95	.460**	.323	.341*	.843**	(.82)		
<i>U</i>	3.87	.450**	.207	.467**	.616**	.748**	(.80)	
<i>C</i>	4.39	.476**	.316	.412*	.780**	.879**	.781**	(.91)

** Correlation is statistically significant at the 0.01 level (2 – tailed)

* Correlation is statistically significant at the 0.05 level (2 – tailed)

N = 40 for BLRI and 34 for TEQ and correlations between TEQ and BLRI subscales

TEQ scales: I = Instructor , T = Technological, M = Management

BLRI scales: R = Regard, E = Empathic Understanding, U = Unconditionality, C = Congruence

Numbers on diagonal are Cronbach alpha reliabilities.

Strong correlations were found between BLRI subscales, with the strongest relationship between Congruence (C) and Empathic Understanding (E; $r = .88$). The Empathic Understanding (E) subscale was also strongly correlated to the subscale measuring Level of Regard (R; $r = .84$).

The weakest correlation, between the subscales of Unconditionality of Regard (U) and Level of Regard (R; $r = .62$), was still moderately strong.

Statistically significant relationships were also found between TEQ and BLRI subscales; the strongest relationship was between the TEQ Instructor (I) subscale and the BLRI subscale of Congruence (C; $r = .48$). In fact, the Instructor (I) subscale showed a moderate correlation with each subscale of the BLRI. Moderate relationships were found between the TEQ subscale of Course Management (M) and Unconditionality of Regard (U; $r = .47$), and Congruence (C; $r = .41$). The TEQ Technological (T) factor was not correlated to any of the BLRI subscales at a statistically significant level, meaning that for these participants, the technology used to deliver the course was not related to their feelings about the instructor or to their ability to build a relationship with the instructor.

Reliability Findings

The reliability findings for the TEQ in this study were comparable with those found in the research literature. In 1994, Biner, Dean, and Mellinger computed inter-item consistency estimates (Cronbach alphas) finding Instructor (I) items to have a reliability of .94, the exact reliability score found for Instructor (I) items in this study. Reliability scores found in this research study for Technological (T) items were higher (.94) than in the published work of Biner, Dean, and Mellinger (.83). Likewise, Course Management (M) reliabilities in this study (.86) were higher than those in the literature (.80). When considering these reliability statistics, one must consider that this was a small research study ($N = 43$) with only 36 students completing all parts of the TEQ.

BLRI reliability scores were also comparable to those found in the literature (Gurman & Razin, 1977). Reliabilities found in this research for Level of Regard (R; .90) were very similar to those published by Gurman and Razin (1977; .83-.93). The reported range of reliability statistics for the BLRI subscale of Empathic Understanding (E) was .64-.92, in this study .82. Reliabilities found for Unconditionality of Regard (U; .80) and Congruence (C; .91) were similar to those reported in the 1977 published work of Gurman and Razin ($U = .49-.89$; $C = .80-.92$). Again, it must be considered that only 40 students completed the BLRI in this study.

Summary

Participants in this research study were very satisfied with their experience in VTC counseling classes. Students reported highly positive feelings about the instructor/student

relationship and found that relationship to be honest, direct, sincere, and open. Student satisfaction and relationship development in the VTC class environment were found to be related to one another. However, the technology used to deliver VTC courses was not found to be related to students' feelings about the course instructor or to their ability to build a relationship with the instructor. Reliability scores found in this research study were comparable to published reliability scores for these instruments.

CHAPTER V

RESEARCH FINDINGS, LIMITATIONS, AND RECOMMENDATIONS

The purpose of the study was to explore student perceptions of counselor education courses taught at a distance using video conferencing (VTC), specifically, student satisfaction with course delivery and relationship development. Results indicated that participants in this research study were highly satisfied with their experience in VTC counseling classes. Student satisfaction and relationship development in the VTC class environment were found to be related to one another. However, the technology used to deliver VTC courses was not found to be related to students' feelings about the course instructor, or to their ability to build a relationship with the instructor.

The Telecourse Evaluation Questionnaire (TEQ; Biner, 1993) and the Barrett-Lennard Relationship Inventory © (BLRI; Barrett-Lennard, 1962) were the instruments used to answer the research questions. Data were collected through an on-line questionnaire posted on Survey Monkey (www.surveymonkey.com), a survey website. After a meager response from students in CACREP programs across the United States, participants were solicited from the researcher's parent university, Virginia Polytechnic Institute and State University. Of the 109 reachable students from Virginia Tech who may have taken a Counselor Education VTEL course, 50 responses were received (46% response rate). Of these, 43 (39%) participants reported that they actually had taken a VTEL counseling course, and this group represented the participants for this study.

This final chapter is divided into four sections. The first section summarizes the research findings. Next, the limitations of the study are identified. Recommendations for future research as well as suggestions for counselor educators' teaching and students' learning in the VTC classroom are presented in the third section. The chapter is brought to a close with a conclusion to the study.

Research Findings

The following sections present the research findings obtained from this study. First findings for student satisfaction in the counselor education VTC classroom are discussed and explored. Next, the findings concerning student satisfaction with teacher/student relationship development are presented. Third, student satisfaction related to teacher/student relationship

development is explored. Finally, the lack of correlation between VTC technology and the teacher/student relationship is discussed.

Student Satisfaction with Counselor Education VTC Courses

Simply stated, participant responses from the TEQ and BLRI in this study indicate that students are very satisfied with their VTC course experience. Students liked their course instructor and felt the instructor liked them and treated them with respect. Findings for satisfaction in this study are consistent with those found in previous studies (e.g., Biner et al., 1994; Biner et al., 1996; Biner et al., 1997a; Biner et al., 1997c; DeBourgh, 2003). Though satisfaction scores in this study were uniformly high, participants expressed the most satisfaction with their course instructor, particularly the instructor's professional behavior, including communication skills, teaching ability, and level of enthusiasm for the subject matter.

Access breeds satisfaction. Interestingly, 40% of respondents (n = 17) rated the counselor education VTC course overall as 'very good'. However, when asked to compare their VTC course experience to their experience in a traditionally taught course, the majority of students responded that the VTC course was 'average' (n = 25; 58%), 'worse' (n = 4; 9%), or 'much worse' (n = 2; 5%) than the traditional course experience. One plausible explanation for this response is that many (n = 18; 42%) of the respondents would not have had access to the course without video teleconferencing technology. As cited in the literature (Biner et al., 1994; Biner et al., 1996; Biner et al., 1997a; Biner et al., 1997c; Block et. al., 1999; DeBourgh, 1999, 2003; Lia-Hoagberg, Vellenga, Miller, & Li, 1999), students may report high levels of satisfaction with VTC courses because: (a) they are satisfied, (b) they fear poor evaluations of VTC courses will make the courses go away, or (c) having VTC courses offered in their geographic area provides accessibility to programs they may not have been able to participate in otherwise; a convenience that makes up for the disadvantages of the VTC course environment.

Student Satisfaction with the Teacher/Student Relationship in the VTC Classroom

Respondents expressed a high level of satisfaction with their VTC course instructor relationship. Results from the Barrett-Lennard Relationship Inventory © (BLRI; Barrett-Lennard, 1962) demonstrated that students perceived the teacher/student relationship to be honest, direct, sincere, and open. Respondents perceived their instructor to be conscious of and able to understand their feelings and in-class experience. Overall, participants in this research study were highly satisfied with their VTC course experience.

Course Satisfaction Related to Relationship Development

Statistically significant relationships were found between the subscales of the Telecourse Evaluation Questionnaire (TEQ; Biner, 1993) and the Barrett-Lennard Relationship Inventory © (BLRI; Barrett-Lennard, 1962). Subscales with the strongest relationship ($r = .48$) existed between the TEQ Instructor (I) subscale and the BLRI Congruence (C) subscale. The Instructor subscale showed a statistically significant correlation with each subscale of the BLRI. Moderate relationships were also found between the TEQ subscale of Course Management (M) and Unconditionality of Regard (U; $r = .47$), and between Course Management (M) and Congruence (C; $r = .41$). These relationships suggest that students who are satisfied with their VTC course instructor have a positive feeling about the teacher/student relationship. These findings correlate with research literature which suggests student learning is dependent on an interactive, responsive relationship with the instructor (Johnson, 1999; Phipps & Merisotis, 1999; Ramage, 2002; Saba, 1998, 2000; Woodford et al., 2001). Based upon the aforementioned findings, one could speculate that students who are dissatisfied with their VTC course instructor may have a more negative feeling about the teacher/student relationship, which could have an impact upon learning.

VTC Technology Not Related to Relationship Development

Perhaps the most important finding in this study was that there was no relationship between students' feelings about VTC technology and their feelings about the teacher/student relationship. When I began this study, my concern as a student and future counselor educator was that video conferencing technology could present a barrier to teacher/student relationship development; however, at least for this sample of students from one counselor education program, no such barrier exists. Good news for the CACREP counselor education programs using VTC technology across the country: Rogers (1967) *core conditions* for educational practice can be met in the VTC classroom environment.

Limitations

The limitations for this research study will be presented in the following section. Because one limitation to the generalizability of the study is sample size, possible explanations for poor participation in the national survey, as well as the survey of Virginia Tech students, will be explored.

Limitations of the Study

There are two major limitations to the generalizability of these findings: the size and the homogeneity of the study sample. The sample was comprised of 43 voluntary, student participants. Although a national survey to increase sample size and the generalizability of results was planned, it was unsuccessful. Hence, the sample was comprised of participants from one university, Virginia Polytechnic Institute and State University (Virginia Tech). For this reason, these results may not be generalizable to a larger sample size or another population. Although these results are highly generalizable to this sample of Virginia Tech student participants, the study should be replicated using a larger sample to enhance generalizability.

Possible Explanations for Poor Participation

While it is not possible to confirm the cause for the poor participation in this research study, some possible explanations are explored below. Reasons for poor participation in both the national survey and the survey of Virginia Tech students are discussed.

National survey. Due to university privacy regulations, the primary researcher could not directly access student contact information and, hence, had to depend upon CACREP liaisons to forward correspondence to students. It is possible that some liaisons who agreed to participate simply did not forward to students the email containing the invitation for participation. Another potential scenario is that students did indeed receive the invitation to participate and simply choose not to do so.

VT survey. Less than half (39%) of the target population of Virginia Tech students completed the on-line questionnaire. Reasons for the modest response are not known; however, several possible explanations exist. Students may have had difficulty accessing the on-line questionnaire. They may have lacked the time or interest needed to participate in the study. Because students receive a large number of email solicitations, it is possible that the email message was deleted without being opened. There is also a chance that the email addresses obtained from the university were outdated, incorrect, or unused. Further explanations for poor participation are not known.

Recommendations

Recommendations for future research and practice are presented in this section. First, the importance of attending to the teacher/student relationship is discussed. Next, recommendations

for future research are presented. Finally, practical considerations and suggestions are provided for Counselor Educators and students.

Importance of Relationship Building

Although VTC technology was not found to be related to students' ability to build a relationship with their instructor, findings from this research also suggest that satisfaction with the VTC instructor is related to relationship development. Based upon this correlation, one can speculate that time spent building teacher/student relationships may ultimately result in more satisfied students.

Though participants in this study expressed high levels of satisfaction with their VTC course, they rated the course as 'average' or 'below' when compared to traditionally taught courses. Emphasis on teacher/student relationship development can do nothing to worsen these attitudes and may possibly even improve student perceptions of the VTC course.

Recommendations for Future Research

As the use of videoconferencing continues to increase in higher education, systematic exploration of the impact of this delivery method on counselor education students and, ultimately, the clients they will serve must continue. Suggestions for future research include the following:

1. Replicate this study using a national sample of CACREP Counselor Education programs.
2. Compare and contrast relationship development and student satisfaction in traditionally taught courses versus courses offered via VTC.
3. Compare and contrast relationship development and student satisfaction in courses offered online versus courses offered via VTC.
4. Examine the relative satisfaction of Counselor Education students in the VTC course by age, ethnicity, race, degree level, and gender.
5. Conduct a comparative study between master's level Counselor Education students and doctoral level Counselor Education students considering satisfaction with VTC technology and teacher/student relationship development.
6. Survey Counselor Educators to assess their feelings about teacher/student relationship development in the VTC class environment versus the traditional classroom environment.
7. Examine the impact of multiple transmission sites on student satisfaction and relationship development in Counselor Education courses taught via VTC.

Practical Considerations: Suggestions for Counselor Educators

Foster a sense of connectedness. Carl Rogers (1969) asserted that a positive, connected, personal relationship between teacher and learner must be present for significant learning to take place. Research by Lia-Hoagberg, Vellenga, Miller, and Li (1999) found that students at the remote site in a VTC class may develop a high level of connectedness with one another but not the originating site students. Adult learners have expectations for high levels of interaction and collegiality with the course instructor and peers that may not be met in the VTC class environment (DeBourgh, 1999, 2003). Hence, instructors must spend time building relationships between students at both sites. Methods in which the instructor can foster a sense of connectedness between sites include team-building activities across sites, having students at different sites collaborate on assignments (via internet or phone if distance is a barrier), holding at least one collaborative class meeting (if geographically possible), or the instructor visiting the remote site to teach a class. Sorensen and Baylen (1999) found the presence of an instructor at different sites affected class dynamics. Interaction and verbal expression appeared to increase at sites where the instructor was present. Most importantly, to foster a sense of connectedness, instructors must acknowledge the difficulties presented by this medium and create a climate where students at both sites feel valued for their contributions.

Encourage communication. Teacher/student interaction is of utmost importance in distance education. Student learning is dependent on a positive instructor/student relationship (Johnson, 1999; Phipps & Merisotis, 1999; Ramage, 2002; Saba, 1998, 2000; Woodford et al., 2001). Instructors of VTC courses must be aware that communicating between sites can be difficult for all involved, so they must work to ensure effective communication is taking place. Instructors can do this by limiting distracting noises (e.g., rustling papers, food wrappers, pencil tapping), acknowledging by name the students who are speaking, and insisting on silence when a student is speaking. Instructors should establish 'ground rules' for communication to ensure that talkback delays or other disturbances do not stifle communication.

Practical Considerations: Suggestions for Students

Speak up. Students enrolled in VTC courses must be self-advocates and communicate with their instructor about difficulties they are having seeing, hearing, and/or understanding in the VTC classroom. VTC technology can interfere with student learning if the instructor and students are not vigilant in monitoring communication.

Get Involved. It is relatively easy to feel a sense of disconnect in the VTC classroom (Lia-Hoagberg, Vellenga, Miller, & Li, 1999). Sorensen and Baylen (1999) found that maintaining attention in the distance classroom is more difficult than in the traditional class environment. To remedy this problem, students need to become actively involved in class. Participating in class discussions, posing questions to students at the other site, and generally behaving as active class participants fosters a sense of connectedness with the instructor and peers. Feeling a part of the class can increase learning and overall satisfaction with the class (Biner et al., 1997a; Biner et al., 1997b; DeBourgh, 1999, 2003; Lia-Hoagberg, Vellenga, Miller, & Li, 1999).

Conclusion

Relationship building is one of the most significant aspects of the counseling process (Hayes, 1999; Rogers, 1951). The relationship development skills counselor education students develop in their graduate programs will be modeled in their future interactions with clients. As the use of video conferencing continues to increase in Counselor Education, we must work as a profession to ensure that Rogers' (1967) core conditions for learning are met in the VTC classroom. A marriage of the fundamentals of good practice and technology must be made and maintained to ensure student satisfaction and relationship development in the VTC classroom environment.

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APPENDIX A

Telecourse Evaluation Questionnaire

The following items make up the questionnaire. Each item required a response on a scale as follows: very poor = 1, poor = 2, average, = 3, good = 4, very good = 5.

Instruction/Instructor Characteristics (For Site and Campus Students)

1. The clarity with which the class assignments were communicated
2. Your reaction to the typical amount of time the preprepared graphics (e.g., graphs, tables, pictures, outlines, notes, etc. were left on the screen to be copied down.
3. The degree to which the preprepared (computer-generated) graphics helped you to gain a better understanding of the course material
4. The production quality of the preprepared graphics used for the class
5. The timeliness with which papers, tests, and written assignments were graded and returned
6. The degree to which the types of instructional techniques that were used to teach the class (e.g., lectures, demonstrations, group discussions, case studies, etc.) helped you to gain a better understanding of the class material
7. The extent to which the room in which the class was held was free of distractions (e.g., noise from adjacent rooms, people coming in and out, other students talking to each other, etc.)
8. The extent to which the instructor made the site students feel that they were part of the class and “belonged”
9. The instructor’s communication skills
10. The instructor’s organization and preparation for class
11. The instructor’s general level of enthusiasm
12. The instructor’s teaching ability
13. The extent to which the instructor encouraged class participation
14. The in-person/telephone accessibility of the instructor outside of class
15. The instructor’s professional behavior
16. Overall, this instructor was

Technological Characteristics

17. The quality of the television picture
 18. The quality of the television sound
 19. The adequacy of the screen size of the television set that received the class broadcasts
 20. The clarity of the tele-response system
 21. The brevity of the talkback delays when communicating with the instructor over the tele-response system
 22. The promptness with which the instructor recognizes and answers students calls over the tele-response system
 23. The degree of confidence you have the classes will not be temporarily interrupted or cancelled due to technical problems or inclement weather.
-

Course Management and Coordination

24. Your reaction to the present means of material exchange between you and the course instructor
25. The accessibility of science labs (answer only if lab work was required for your class)
26. Your ability to access a library when and if, needed
27. Your ability to access a computer when, and if, needed
28. The general conscientiousness of the site coordinator (e.g., in delivering materials, unlocking room doors, tuning in broadcasts)
29. The accessibility of the site coordinator
30. The degree to which the site class or someone at the site was able to operate the television and tele-response system on the first day (or night) of class
31. The promptness with which class materials were delivered/sent to either you or the site.
32. The promptness with which a back-up tape of a class session was delivered in the event of broadcast failure or poor broadcast
33. Your ability to access departmental program personnel when needed
34. Class enrollment and registration procedures

APPENDIX B

Selected Items from the Barrett-Lennard Relationship Inventory ©

Below are listed various ways that one person might feel or behave in relation to another person. Please consider each numbered statement with reference to your relationship with your instructor in **one** Counselor Education class delivered through interactive television (ITV) (e.g. videoconferencing, telecourse, etc.).

Mark each statement in the answer column on the left, according to how strongly you feel it is true, or not true, in this relationship. Please be sure to mark everyone. Click a plus number (+3, +2, +1) for each 'yes' answer, and a minus numbers (-1, -2, -3) to stand for 'no' answers.

Here is the exact meaning of each answer number:

+3 Yes, (!), I strongly feel that it is true.

+2 Yes, I feel it is true.

+3 (Yes) I feel that it is probably true, or more true than untrue.

-1 (No) I feel that it is probably untrue or more untrue than true.

-2 No, I feel it is not true.

-3 No (!) I strongly feel that it is not true.

ANSWER

1. ____ My instructor respects me as a person.
2. ____ My instructor wants to understand how I see things.
3. ____ My instructor's interest in me depends on the things I day or do.
4. ____ My instructor is comfortable and at ease in our relationship.
5. ____ My instructor feels a true liking for me.
17. ____ My instructor is indifferent to me.
33. ____ My instructor just tolerates me.
37. ____ My instructor is friendly and warm with me.
48. ____ My instructor is openly himself/herself in our relationship.
55. ____ Sometimes I am more worthwhile in my instructor's eyes than I am at other times.

APPENDIX C**Permission to Use Telecourse Evaluation Questionnaire**

From: "Biner, Paul M." <pbiner@bsu.edu>
To: "Tori Stone" STONETX@pwcs.edu
Date: 3/9/2005 1:04 PM
Subject: RE: Permission to use TEQ

Victoria,

You have my express permission to use the TEQ in whole, in part, or in any manner you deem appropriate.

Good luck w/ your research!!

Dr. Biner

APPENDIX D

Permission to Use Barrett-Lennard Relationship Inventory

Godfrey T. Barrett – Lennard, *Ph.D*
 6 Dover Crescent, Wembley Downs, WA Australia 6019
 Email: G. Barrett-Lennard@murdoch.edu.au
 March 10, 2005

Victoria Stone
 68 Frazier Road
 Warrenton, VA 20186

Dear Ms. Stone

This letter confers my formal permission for your research use of the Barrett-Lennard Relationship Inventory (RI/BLRI), in accord with the conditions mentioned below and assuming payment of the separately indicated charge. Please make careful note of these conditions, and retain this letter.

1. (a) This permission covers your preparation and use of up to three hundred and fifty (350) copies altogether of the Inventory for your present study and any later research that you might conduct, collaborate in or personally supervise.

(b) This agreement covers uses of the instrument in research and training-educational contexts, it *excludes* use of the Relationship Inventory in private fee-paying practice for diagnostic or related practice purposes. (If this exclusion is a barrier to any application you wish to make in the future, write again to explain the further use you seek my agreement to.)

2. An associated condition calls on you to provide for my records the full reference details (as and when they are available), of any research report or publication that includes results from use of the RI under this permission. I would be pleased to have a summary or abstract as well.

3. If you take particular scales from the BLRI, or make any other adjustments to a regular 40-item or 64-item form, my permission depends on you sending me a copy of the amended version as soon as you consider it ready for use and before you begin your main data-gathering. You would need also to include full description of any such modification in your research report(s).

4. The RI includes my last name in its title, and this should appear on all copies. If you wish to include the Inventory in a thesis/dissertation or in any unpublished report of your work available to others, it is essential to clearly note that this inclusion has my consent - which this letter hereby provides in advance.

This consent does not extend to actually publishing any whole or reduced form of the RI in a journal article or book. It could be closely described in print, with a few illustrative items, together with mention of more detailed information sources such as my report in the Greenberg/Pinsof volume (1986) and/or Chapter 8 in my 2003 book.

I will be interested in the way your work with the Relationship Inventory develops, and look forward to knowing its outcomes.

Sincerely,

Godfrey T. Barrett - Lennard, Ph.D

APPENDIX E

Student Satisfaction with and Perceptions of Relationship Development in Counselor Education Videoconferencing Courses

Immediately upon arriving on the survey web-page, students were directed to an Informed Consent (see Appendix G).

1. I have taken a counselor education class via interactive television (e.g. VTEL). *
2. Please select a course from the choices below and consider your student/instructor relationship when answering the questions on the following pages.
1 = Helping Relationships (e.g., skills/or techniques)
2 = Clinical Experience (e.g., Practicum, Internship)

Barrett-Lennard Relationship Inventory ©

Directions:

Below are listed various ways that one person might feel or behave in relation to another person. Please consider each numbered statement with reference to your relationship with your instructor in **one** Counselor Education class delivered through interactive television (ITV) (e.g. videoconferencing, telecourse, etc.).

Mark each statement in the answer column on the left, according to how strongly you feel it is true, or not true, in this relationship. Please be sure to mark everyone. Click a plus number (+3, +2, +1) for each 'yes' answer, and a minus numbers (-1, -2, -3) to stand for 'no' answers. Here is the exact meaning of each answer number:

- +3 Yes, (!), I strongly feel that it is true.
- +2 Yes, I feel it is true.
- +3 (Yes) I feel that it is probably true, or more true than untrue.
- 1 (No) I feel that it is probably untrue or more untrue than true.
- 2 No, I feel it is not true.
- 3 No (!) I strongly feel that it is not true.

Items 3 - 67 from the Barrett-Lennard Relationship Inventory © (BLRI; see Appendix B)

67. I have taken a counselor education class via interactive television (e.g. VTEL). *

Telecourse Evaluation Questionnaire

Directions:

Please respond to the following items using this scale:

1=Very Poor

2=Poor

3=Average

4=Good

5= Very Good

Items 68 – 101 from the Telecourse Evaluation Questionnaire (TEQ; see Appendix A)

General and Demographic Information

102. Title of the course you considered when completing the survey.

103. Overall, the course was...

1=Very Poor

2=Poor

3=Average

4=Good

5=Very Good

104. **Answer only if you have taken a televised course. Compared to a conventional classroom course (i.e. classes that are not televised), this course was:

1=Much Worse

2=Worse

3=Average

4=Better

5=Much Better

105. The workload required by this course was:

1=Too Light

2=Moderate

3=Just Right

4=Rigorous

5=Too Great

106. Would you enroll in a televised course?

1=No

2=Yes

107. **Answer only if you have taken a televised course. Would you have been able to take this course if it had not been offered on TV?

1=No
2=Yes

108. **Answer only if you have taken a televised course. Including this course, how many televised courses have you taken to date?

109. Year in School

1=Master's
2=Doctoral
3=Other

110. Sex:

1=Female
2=Male

111. Any other comments regarding your student/instructor relationship?

* Participants were required to answer this question

APPENDIX F

Request for Exemption of Research Involving Human Subjects




Institutional Review Board

Dr. David M. Moore
 IRB (Human Subjects) Chair
 Assistant Vice President for Research Compliance
 CVM Phase II- Duckpond Dr., Blacksburg, VA 24061-1942
 Office: 540/231-4991; FAX: 540/231-6033
 email: moored@vt.edu

DATE: May 12, 2005

MEMORANDUM

TO: Pamela F. Brock: FLPS 0302
 Victoria Stone: EDCC 0302

FROM: David Moore 

SUBJECT: **IRB Exempt Approval:** "Counselor Education Student Satisfaction with and Perceptions of Relationship Development in Videoconferencing Courses" IRB # 05-341

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 May 12, 2005.

Virginia Tech has an approved Federal Wide Assurance (FWA00000572, exp. 7/2007) on file with OHRP, and its IRB Registration Number is IRB00000667.

cc: File

Department Reviewer: M. D. Alexander

APPENDIX G

Informed Consent for Participants

Dear Colleague,

You have been invited to participate in this study because you are a counselor education student enrolled at a university that offers courses via interactive television (ITV) (e.g., telecourse, videoconferencing). Your participation in this study is voluntary, and your decision to participate will have no influence on your course grade. You will not be compensated for participation in this study. There are no expected risks or direct benefits to you for completing the on-line questionnaire. However, your responses are important to understanding the dynamics of student-faculty relationships in counselor education courses taught via VTC, as well as students overall level of satisfaction with courses taught via VTC.

The on-line questionnaire will take about 30 minutes to complete. When you complete the on-line questionnaire, your consent to participate in this study is implied. Your identity will not be associated with your responses.

If you have any questions or comments about this study, please email them to me at vstone@vt.edu. If you would like to receive a summary of the results of the study when it is complete, you may email me and I will send you a summary at the conclusion of this study.

Thank you for your participation.

Sincerely,
Victoria Stone, M.Ed
Doctoral Candidate, Virginia Tech

APPENDIX H

Invitation to Participate

(Email sent to CACREP Liaisons)

Dear Colleague,

My name is Victoria (Tori) Stone, and I am a doctoral candidate in the Counselor Education and Supervision program at Virginia Polytechnic Institute and State University (Virginia Tech). I am conducting a research study approved by the university IRB exploring student satisfaction with and student/teacher relationship development in counselor education courses taught via interactive television. My research committee members are Drs. Pamela Brott, Gabriella Belli, Hildy Getz, and Tamara Davis. Please take a moment to answer the following six questions regarding the use of interactive television (e.g., ITV, video conferencing, telecourses) in your Counselor Education program. To respond, simply reply to this message with your answers.

1. Did your program offer courses via interactive television (ITV) (e.g. videoconferencing (VTC), telecourse) technology in the 2004-2005 academic year? **Yes** _____ **No*** _____ *** If no, thank you for your participation, please send the email now.**
2. If so, how many courses were taught in the 2004-2005 academic year using interactive television technology?

3. How many Counselor Education students in your program participated in a class using this technology during the 2004-2005 academic year? _____
4. How many instructors taught courses using this technology during the 2004-2005 academic year? _____
5. Would you be willing to have your students participate in a survey to explore student satisfaction and relationship development when Counselor Education courses are taught via ITV? **Yes** _____ **No*** _____ *** If no, thank you for your participation, please send the email now.**
6. If so, please provide the name and email contact for the person with whom I can communicate regarding courses taught via ITV.

Name: _____

Email address: _____

Thank you for your time.

Sincerely,

Victoria Stone
 Doctoral Candidate,
 Virginia Tech

APPENDIX I

Email to Participating CACREP Liaisons

Dear CACREP Liaison,

Thank you for agreeing to have your students participate in a study investigating relationship development in counselor education courses taught via video-conferencing or interactive TV (ITV).

To participate, please complete the following two steps:

1. By the end of the day, I will send you an email containing the link to the questionnaire as well as the password to access the site. Please forward the email to **all** counselor education students enrolled in your program with a note encouraging them to complete the questionnaire.
2. Please respond to this message with the total number of students enrolled in your Counselor Education program broken down by degree (master's, specialist, doctoral).

If you have any questions about this research, please feel free to contact me at vstone@vt.edu.

Thank you for your participation.

Victoria Stone

Doctoral Candidate

Virginia Tech

Pamelia E. Brott, Ph.D.

Doctoral Committee Chair

APPENDIX J**Email to Student Participants**

Dear Counselor Education Student,

Please click the following link or cut and paste the link into your browser to access a brief questionnaire about student/teacher relationship development in counselor education classes. The questionnaire should take no more than 30 minutes to complete. Data obtained from this survey will provide useful information about student/teacher relationship development that may be helpful to the profession of Counselor Education

Clicking the link or cutting and pasting it into your browser will automatically direct you to the questionnaire. Once you reach the site homepage, use the password to access the questionnaire.

Link: <http://www.surveymonkey.com/s.asp?u=76736976147>

Password: Counselor

Thank you for your participation.

Sincerely,

Victoria Stone

Doctoral Candidate

Virginia Tech

APPENDIX K

Email to Virginia Tech Student Participants

Student Satisfaction with and Perceptions of Relationship Development in Counselor Education Videoconferencing Courses

You are invited to participate in the above titled research study because you are or have been a student in the Counselor education program at Virginia Tech. The purpose of this study is to examine student satisfaction with and relationship development in counselor education courses using videoconferencing technology.

Your participation in this study is voluntary, and you will not be compensated for your participation. There are no expected risks or direct benefits to you for completing the on-line questionnaire. There is no cost to you other than your time to participate; you will not be compensated for your participation.

If you choose to participate, your participation will involve completing an on-line questionnaire that will take approximately 30 minutes. You will be asked to provide selected information about yourself, but you will not provide your name or any other information that could be used to identify you. All data are anonymous and will be located on a secure server. Only the principal investigator and the supervising faculty member will have access to the data.

This study has been approved for the Institutional Review Board at Virginia Tech. If you have questions concerning your rights as a research subject, you may call the Virginia Tech Office of Research at (540) 231-6077. You can obtain further information about the study from me, Pamela E. Brott, Ph.D., NCC, at (703) 538-8347 or pbrott@vt.edu.

By participating in this study, you are giving permission for the investigators to use your information for research purposes. If you would like to receive a summary of the results of the study when it is complete, you may email me, and I will send you a summary at the conclusion of this research. You can access the questionnaire at the following web address:

Link: <http://surveymonkey.com/s.asp?u=76736976147>

Password: Counselor

If you would prefer to complete a paper and pencil questionnaire, please hit "reply" to this email and provide your mailing address.

Thank you,

Pamela E. Brott, Ph.D., NCC
Supervising Faculty Member

Victoria Stone, M.Ed., Doctoral Candidate
Principal Investigator

Victoria Stone
vstone@vt.edu

Education

Doctorate of Philosophy, Counselor Education and Supervision
Virginia Polytechnic Institute and State University, Blacksburg, VA

Master of Education, Counselor Education
California University of Pennsylvania, California, PA

Bachelor of Arts, Sociology
California University of Pennsylvania, California, PA

Teaching Experience

Counseling Theories and Practice, Graduate level, Spring 2005, 2006 Fall 2006
Adjunct Faculty, George Mason University, Fairfax, VA

Human Growth and Development, Graduate level, Summer 2004
Adjunct Faculty, Old Dominion University, Troops to Teachers Program, Ft. Myer, VA

Advanced Skills Workshops, Spring 2003, 2004

Doctoral Workshop Series, Virginia Polytechnic Institute and State University

- Taught two annual workshops to graduate and post-graduate students to help them to build existing skills and learn new information relevant to their work as counselors
- Topics: Counseling Adolescents and Transactional Analysis Techniques

Clinical Supervision, Fall 2003

Teaching Assistant, Virginia Polytechnic Institute and State University

- Supervised and assisted in teaching doctoral level counselor education students in Clinical Supervision.
 - Provided doctoral students super-supervision of their graduate level supervisees, helped students to develop informed consent for supervision, monitored progress, conducted research on the delivery method of the class

Counseling Skills and Techniques, Fall 2002

Doctoral Teaching Internship, Virginia Polytechnic Institute and State University

- Taught graduate level class in basic and advanced counseling skills and techniques
 - Textbook Selection, syllabus development, teaching, role play and demonstration of counseling skills and techniques, monitored students progress through use of video taped and live supervision, assigned grades

Practicum Supervisor, Spring 2001

Doctoral Supervision Internship, Virginia Polytechnic Institute and State University

- Supervised graduate level counseling students in practicum
 - Developmental approach; monitored student progress with clients, supervised counseling sessions, ensured compliance with CACREP standards, conducted individual and group supervision sessions with students, assigned readings, reviewed theories, skills and techniques, completed summative evaluation for each student, assigned grades

Clinical Counseling Experience

Substance Abuse Counselor, Deep Run Lodge, Goldvein, Virginia. Fall 2003

Doctoral Clinical Internship, Virginia Polytechnic Institute and State University

- Counseled court adjudicated adolescents in residential substance abuse facility
 - Medical model; intake, individual and group counseling, taught twelve steps of NA/AA, case management, treatment team meetings, coordinated services between insurance companies, case workers, probation officers, parents and guardians

School Counseling Experience

School Counselor, Prince William County, Virginia. January 2000 to Present

Bull Run Middle School, Gainesville, VA 2002-Present

Stonewall Middle School, Manassas, VA 2000-2002

- Use theory driven methods to counsel students on academic, personal, family and peer issues.
- Implement new programs to meet student needs, such as New Student Social, Peer Education Program, Eagle Ambassador Program, Academic Support Program, and Parent Night Program
- Use interactive classroom guidance activities to support students, build character, and teach personal, academic and social skills
- Advocate for family friendly schools with tremendous parent involvement through implementation of 'Parent Coffee' educational series
- Planned and Implemented a comprehensive counseling program in line with ASCA's National Model for School Counseling
- Use data to evaluate effectiveness of school counseling programs
- Provided accountability training to school counselors in Virginia, South Carolina, and Washington, DC
- Served as site supervisor for three counseling interns
- Trained and experienced in dealing with critical incidents in schools

Publications

Stone, V., Graney, E. & Walker, J. (2005). Easy Accountability. Successful solutions to return counseling to the guidance department. *Virginia Counselors Journal*, 28, 52-55.

Selected Presentations

- Barna, J. & Stone, V. (2006). The savvy school counselors' guide to surviving the first years. Presentation to be made the American School Counselor Association Conference, Denver, CO.
- Stone, V., Graney, E. (2006) Solution focused and cognitive techniques that work in schools. Presented at the Virginia School Counselor Association Summer Academy, Charlottesville, VA.
- Brott, P., Barna, J. & Stone, V. (2005). *Get a GRIP (Goals, Results, Impact Statements, Program Implications)*. Presented at the American School Counselor Association Conference, Orlando, FL.
- Stone, V., & Graney, E. (2005). *LOCKDOWN! This is not a drill*. Presented at the Virginia School Counselor Association Conference, Norfolk, VA.
- Stone, V., & Graney, E. (2004). *Easy accountability workshop*. Presented at the South Carolina Counselor Association Conference, Greenville, SC.
- Stone, V., & Getz, H. (2004). *Do I really see you? How counselors use videoconferencing*. Presented at the Southern Association of Counselor Educators and Supervisors Convention, Athens, GA.
- Stone, V., & Graney, E. (2004). *Easy accountability, simple solutions to return counseling to the guidance department*. Presented at the American School Counselor Association Convention, Reno, NV
- Stone, V., & Graney, E. (2003). *Integrating the National Model into the Counseling Department*. Presented at the Student Services Symposium, Prince William County, VA.
- Phillips, J. & Stone, V. (2003). *School counseling rookies, making the most of the first years*. Presented at the Virginia School Counselor Association Convention, Williamsburg, VA.
- Stone, V., & Graney, E. (2002). *When the teacher is your client: Using counseling theory to service the invisible clients in your school*. Presented at the American School Counselor Association Convention, Miami, FL.
- Stone, V., & Graney, E. (2002). *Bad choices, not bad kids*. Presented at the Virginia Counselor Association Convention, Williamsburg, VA.

Service

Virginia Counselor Association

- Conference Programs Co-Chair 2006

Virginia School Counselor Association

- Middle School Vice President 2006-2007
- Summer Academy Planning Committee 2006
- Conference Registration Co-Chair 2006
- Middle School Vice President Elect 2005-2006
- Conference Planning Committee Registration Chairperson 2005-2006
- Secretary 2004-2005
- Conference Planning Committee Registration Chairperson 2004-2005
- Summer Academy Planning Committee 2004-2005
- Secretary Elect 2003-2004
- Conference Planning Committee 2003-2004
- Regional Conferences Committee 2003-2004

Prince William County Counselor Association

- Professional Recognition Committee 2004
- Historian 2001-2002
- Historian Elect 2000-2001

Honors

Virginia Tech 'Outstanding Student in Counselor Education' 2005

Virginia Association of Counselor Education and Supervision '*Emerging Leader*' 2004

Nominee, American School Counselor Association '*Middle School Counselor of the Year*' 2004

Virginia School Counselor Association '*Middle School Counselor of the Year*' 2003

Prince William County, Virginia, '*Middle School Counselor of the Year*' 2003

Professional Affiliations

American Counselor Association

American School Counselor Association

American Association of Counselor Educators and Supervisors

Virginia Counselor Association

Virginia School Counselor Association

Virginia Association of Counselor Educators and Supervisors

Prince William County Regional Counselor Association

Chi Sigma Iota, Honor Fraternity in Counseling

Research Interests

Research interests include: Student/teacher relationship development; Impact of distance technology on counselor education programs; School counselors and accountability; Critical incidents in schools; Personality, relationship and rapport in clinical supervision; Comprehensive school counseling program development; Counseling theory in schools.