

EARLY CHILDHOOD EDUCATION STUDENTS' PERCEPTIONS OF
COMMUNITY COLLEGE DISTANCE EDUCATION COURSES

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By

Tracy Lynn Crump

Director: Dr. Anna McFadden
Associate Professor
Department of Educational Leadership and Foundations

Committee Members:
Dr. Sandra Tonnsen, Department of Educational Leadership and Foundations
Dr. Cathy Grist, Department of Human Services

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DEDICATION

For Mom and Dad

I have learned far more from you than I ever could from any book or classroom.

Your One and Only

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ABSTRACT

EARLY CHILDHOOD EDUCATION STUDENTS' PERCEPTIONS OF
COMMUNITY COLLEGE DISTANCE EDUCATION COURSES

Tracy Lynn Crump, Ed.D.

Western Carolina University (October 2010)

Director: Dr. Anna McFadden

In order for children to receive the best in quality care, early childhood teachers must have a deep understanding of child development and developmentally appropriate teaching methodologies that can only be acquired through accessible and sustainable professional development. This type of professional development for many students comes in the form of web-based course technologies. To this end, this exploratory study sought to identify the perceptions of early childhood education students with regard to community college distance education courses. Multi-factor ANOVA and correlation analysis was performed on participants' responses to an online survey. Results of this study showed the majority of early childhood students have access to computers in the home as well as high speed Internet. Furthermore, while students were satisfied with online learning environments, the lack of social interaction was identified as the least favorite part of participating in distance education courses. Interestingly, students reported frustration with the amount of coursework in web-based courses when compared to traditional courses. It would appear students are beginning to identify disparities among teaching methodologies between course delivery methods, thus supporting the need for continued research in the area of best practices in online course development.

CHAPTER ONE: INTRODUCTION

The field of early childhood care and education has a long history dating as far back as ancient Greece. Philosophers such as Aristotle and Plato believed strongly in the importance of educating Greece's youngest citizens (Essa, 2003). Although early childhood practices have evolved throughout the years, the importance of educating children has remained constant.

High quality early childhood education is the foundation for a successful school experience. Research overwhelmingly shows the quality of child care children receive is inextricably linked to every measure of development (Shonkoff & Phillips, 2000). Private and state-funded programs for children under the age of five are growing exponentially. According to Schweinhart (2008), in the last five years the number of early childhood programs has increased by 40%. The growth can be attributed to the growing body of evidence supporting the long-term beneficial effects of high quality care (Peisner-Feinberg et al., 1999; Schweinhart, 2008; Wortham, 2006). Studies show the positive effects of quality programs for young children, especially those in poverty, include higher graduation rates, increased adult earnings, fewer teenage births, lower crime participation, fewer children placed in special education classes, as well as decreased participation in welfare programs (Schweinhart, 2004; Trail & Wohl, 2004). With the preschool years having such an influence on future success, there can be no doubt the quality of a child care environment is linked to the level of teacher education and training.

Ironically, although teacher knowledge and training are instrumental in future classroom success, early childhood teachers have historically had low educational requirements for employment. Parent cooperatives and nursery schools in the early 1900s provided a place for children to learn social skills while taking care of their basic needs. Gordon and Browne (2007) note that teachers of young children during this time were expected to be nurturing and capable of taking care of personal hygiene routines. The focus of cooperatives was custodial care rather than education. The attitude that teaching young children is merely babysitting and does not require sufficient education and training still continues today. The care giving workforce must deal with the challenges of low wages, no benefits, and long hours. Compounding these issues is “the public perception that anyone can provide care” (Ripple, 2000, p. 6).

Pressed by an ever increasing demand for higher quality childhood education, legislation is requiring early childhood teachers to obtain more formal training and education. With such initiatives as the No Child Left Behind Act of 2001 (NCLB) and Good Start Grow Smart (Administration of Children and Families, n. d.), states are recognizing the importance of providing teacher professional development (Campbell, 2002; Morrison, 2009; Wortham, 2006). Most recently, the H.R. 1429: Improving Head Start for School Readiness Act of 2007 mandates “...that 50 percent of head start teachers nationwide have a minimum of a bachelor’s degree in early childhood education or a related field by 2013” (Morrison, 2009, p. 202). Additionally, by 2010 all teacher assistants must hold an associate degree.

Teachers with advanced education and training can provide better classroom environments for their students. Studies show that caregivers with advanced education

provide care that is more stimulating as well as activities that are developmentally appropriate (Vandell & Wolfe, 2000; Whitebook, 2003). Sweeping state and local educational reforms have focused attention on the need for highly qualified teachers. It is unquestionable that teacher training is fundamental to ensuring young children are prepared for school, but does a haste to educate have to mean compromising on student needs? As suggested by Marsick and Watkins (1992), “Adults have worked hard to become who they are; continuous learning demands that they continuously unlearn past lessons and become anew, which leaves them vulnerable” (p. 12). This being said, early childhood teachers are typically reluctant to attend professional development activities. Many childcare workers are confronted daily with the challenge of long hours and family obligations that negate the idea of attending yet another function. The early childhood workforce and community college career and technical programs must find a balance between online access and course offerings if children are ultimately to benefit. With the push for ease of access to higher education increasing, community college technical programs must offer alternatives to the traditional classroom-based courses if these same programs are expected to remain relevant to community needs.

Fleet and Patterson (2001) note that attending traditional courses has proven problematic to many in the early childhood workforce. As with many of the working poor, obstacles such as taking time off work to attend class, making arrangements for childcare, and even transportation to and from campus prove insurmountable for many wishing to further their education. Distance learning courses enable those groups previously excluded or discouraged from attaining advanced training the opportunity for professional growth and career advancement. The field of web-based instruction in higher

education is not a new phenomenon; however, the use and subsequent research of computer-mediated course delivery in career and technical education (CTE) is fairly new. According to Zirkle (2003), “There has been no collective analysis of this distance education research in CTE” (p. 161). Therefore, the results extrapolated from this research can possibly improve upon and expand what is currently proposed about how early childhood students view online education methodologies thus enhancing future teaching methods in career and technical education.

Statement of the Problem

This study is concerned with examining early childhood education students’ perceptions of community college online learning courses. More specifically, this study will address the following research questions:

1. What are early childhood education students’ perceptions of community college online learning?
2. Is there a difference in perceptions between the early childhood education traditional student and the early childhood education non-traditional student?
3. Is there a difference in perceptions between early childhood education students who access web-based courses most often from home and early childhood education students who do not access web-based courses most often from home?
4. Is there a relationship between early childhood education students’ comfort level with computers and feelings of success in web-based courses?

5. Is there a relationship between early childhood education students' comfort level with the Internet and feelings of success in web-based courses?

Definitions

For the purposes of this study, the following definitions apply:

Asynchronous Communications – Technology-based communications where interaction between the instructor and student does not occur in real time

(e.g., email, threaded post).

BlackBoard – Computer-mediated software used as a course management system to develop and deliver educational course content via the Internet.

Blog – An abbreviation of the term “web log”; a type of publically shared online journal, usually maintained by an individual with regular entries of commentary.

Broadband – High capacity communications network that is capable of transmitting data at speeds up to millions of bits per second.

Career and technical education – A collective term for all occupational, vocational, and technical studies within a community college setting; CTE programs lead to a “terminal” two year degree, diploma or certificate and are designed for students not wishing to pursue additional studies leading to a baccalaureate degree but rather prepares students for direct employment.

Chat room - A real-time electronic forum where visitors can meet others and share ideas on a particular subject.

College transfer – Terms used to describe community college degree programs designed for persons who are planning to transfer to four-year colleges or universities. College transfer programs provide opportunities to complete the first two years of general college

courses and culminate with earning an Associate of Arts, Associate of Fine Arts or Associate of Science degree.

Comprehensive community colleges – Term used to describe the collective curricular functions of a community college including academic transfer preparation, career and technical programs, continuing education, remedial coursework as well as community service.

Continuing education – Education and training opportunities offered to the general public to meet the needs and interests of businesses, industries, agencies, and the community. College credit is not earned but emphasis is placed on improving employment skills or personal enrichment.

Computer-mediated instruction – When computers are used as the media that delivers the course content from the instructor to the student (e.g., web-based courses, e-mail, chat rooms, and videoconferencing).

Correspondence Course – A distance learning environment where the course materials and communications between the teacher and the student are provided using a postal system.

Curriculum students – Those students enrolled in courses that earn college credit

Digital divide – The gap in access to personal computers and Internet service between groups. The divide may be based on socioeconomic or geographic factors.

Distance learning – An inclusive term used to describe education delivered where the instructor and the student are separated by location, time or both. Access to the instructor is gained through technology such as the Internet, interactive videoconferencing and satellite.

Early childhood education – The education of children age birth to age eight.

Hybrid course – A course that combines both distance learning and face-to-face components

Internet – The global collection of inter-connected networks that allows computers worldwide to connect and exchange information through the use of standard Internet Protocol Suite (TCP/IP) language.

Non-traditional student – Students who are older than the historically typical undergraduate student, usually aged 18-25. Other characteristics may include attends school part-time, works full-time or at least 35 hours a week, and has dependants other than a spouse.

Online course – A course in which instruction is delivered via the Internet.

Pod-cast – Posting content on-line, either audio, video, or a combination of both, that is created for an audience that wants to listen in a portable digital format.

Satisfaction – An individual's perceived comfort level and feelings regarding the effectiveness of the web-based course environments.

Synchronous Communications – Technology-based communications where interaction between the instructor and student can occur in real time (e.g., videoconferencing, chat rooms, instant messaging).

Teleconferencing – A method of communication that uses telephone-based technologies, allowing interactions between the instructor and student in real time at multiple locations.

Telecourse – An approach to distance learning that delivers instruction to the students

using television broadcasts, pre-recorded tapes, print or any combination of these delivery systems.

Text Messaging – Method of transmitting short messages via electronic devices such as a cell phone.

Traditional Learning Environment – A learning environment, typically a classroom, where the instructor and the student communicate face-to-face.

Traditional Student - Students of the typical undergraduate student age of 18-25. Other characteristics include attends school full-time and does not work or may work part-time.

Twitter - Multimedia blogging service that enables users to send and read brief text updates or micromedia such as photos or audio clips. Content is displayed on the author's profile page and may either to be viewed by anyone or by a restricted group which can be chosen by the user.

Videoconferencing – Communications in real time with two or more people at different locations using computers, video cameras, and a network such as the Internet, to conduct a live conference.

Virtual chat room – A way of communicating in real-time online by sending text messages to people in the same chat room. Virtual chat rooms add graphics to the chat experience in either 2-D or 3D. The graphic representation of the user can be moved around the chat room and communicate with others.

Web-based Courses – Courses of study that are delivered in part or whole via the Internet using a computer-mediated software program such as WebCT and BlackBoard.

World Wide Web – A system of integrating hypertext documents and multimedia such as graphics, video files and audio files for use on the Internet.

Significance of the Study

As previously noted, the education of children from birth to age five has been in the ever increasing spotlight of public and political interest (Kagan & Neuman, 1997) Research shows teachers can improve skills through education and professional development opportunities. Professional development allows novice teachers an opportunity to acquire or expand a knowledge base as well as establish a network of colleagues that share similar professional interests. Ayers (1992) states “the portrait of the early childhood professional . . . usually a woman, increasingly a person of color, often a member of the working poor—is an essential part of reconceptualizing the field of early childhood education” (p. 266).

For today’s early childhood student, the limitations of time and distance are no longer a barrier to obtaining an education. According to Donohue, Fox, and LaBonte (2004), “Online courses, credentials, and degree programs in early childhood education have become a significant way to deliver teacher education and professional development” (p. 79). As reported by North Carolina community college early childhood faculty, 52 % plan to increase the number of online course offerings (North Carolina Institute for Early Childhood Professional Development, 2007). The increasing demand for early childhood education distance courses brings with it the need to research the early childhood online student (Donohue et al., 2004).

With the apparent proliferation of distance education offerings among institutions of higher education, there still remains a divide between the college bound and technical student. Although traditional college students have had access to web-based instruction since the early 1990s (Benson et al., 2008; Cejda, 2007a, 2007b; Levin, 2001), for an

early childhood student the thought of taking an online course is still in the infancy stage. While much has been written about the characteristics and performance of the online general education student, little can be said for the career and technical student. Research on distance education in career and technical education (CTE) is limited at best (Zirkle, 2003). Due in part to the academic and funding priorities of the 1970s and 1980s, distance learning research in vocational or technical education has historically not been a priority when compared to other curriculum areas. While numerous national studies have been conducted in recent years addressing issues of use, instructional quality, and effectiveness of distance learning courses, these studies fail to provide focused attention on the effective delivery and practice of computer-mediated learning instruction in postsecondary career and technical education (CTE) (Benson, et al., 2008). Despite the steady growth of online coursework in teacher education programs, the use of distance education in CTE teacher preparation is still in its beginning stages (Zirkle, 2004). Therefore, supplementary research conducted specifically on early childhood education students is undoubtedly needed if community colleges are to maximize the effectiveness of technical distance education.

As the need for greater ease of access to higher education, learning beyond the typical schedule constraints, and childcare workforce standards increase, the demand for distance education within technical programs will most certainly rise. To this end, “the perception of pre-service teachers in distance education programmes is germane to the planning and delivery of distance education courses in teacher education departments in the future” (Young & Lewis, 2008, p. 601).

Limitations of Study

Participants in this study were limited to those students who enrolled in Caldwell Community College, Catawba Valley Community College, and Western Piedmont Community College during the fall semester of 2009. As a result, the study has the following limitations:

1. Due to convenience sampling generalizability may not be possible; therefore, the findings from this study may only apply to the three participating community colleges and students participating in this study.
2. The responses were limited to those students who actively monitor school email accounts and, therefore, access the survey during the allotted time frame.
3. Due to electronic distribution of the survey, the researcher was unable to track or code individual responses.
4. The researcher was unable to control for quality of instruction which can affect student perception.
5. As an instructor at one of the participating colleges, the researcher may be viewed as a participant in the study. Measures to eliminate communications with current students regarding the research, such as not discussing or encouraging participation, were established.

CHAPTER TWO: REVIEW OF THE LITERATURE

The purpose of this chapter is to (a) explore the history of early childhood education and its growing importance throughout the centuries, (b) review the literature concerning the demand for early childhood professional development, and (c) examine and report the impact of distance education on higher education students.

History of Early Childhood Education

There is a sense of support that comes from knowing the history of a profession. The practices and beliefs of the past have evolved into the methods used to educate young children today. Exploring the roots of early childhood education provides practitioners with perspective and the ability to create a professional expression or philosophy. Modern ideas of education are founded in the thoughts and ideas expressed by such ancient philosophers as Socrates, Plato, and Aristotle (Gordon & Browne, 2008). By looking into the past, we can clearly see the influences and understand the changes that have taken place over the centuries.

Lessons From the Past

The role and value of children have changed over time, and the change is reflected in how those children are educated. The meaning of the term “early childhood” has varied greatly throughout history. Children in Western Europe as early as the nineteenth century were in many cases not viewed as persons, but rather as property, with the death of infants not even being recorded (Miller, 2007). Current educational practices evolved from the Greek and Roman schools established to teach wealthy boys governing and military strategies. Gordon and Browne (2007) report that as the Roman Empire fell, so too did the value of educating its people. In the several hundred years that followed,

education became more of an apprenticeship, with children learning the value of work outside the home. Childhood was virtually nonexistent, with children being encouraged to move into adulthood as quickly as possible. The Middle Ages was a particularly difficult time to be child (Essa, 2003). It was not until the rise of such child advocates as Martin Luther and John Locke during the sixteenth century that attitudes truly changed toward the education of young children in Europe. Educators during this period demanded that all children, regardless of wealth or social influence, be educated.

The American educational system began with the New England colonies at the turn of the seventeenth century. The focus was primarily on morality with the text most often used being the Bible (Follari, 2007; Henniger, 2009; Morrison, 2009). Children were not valued as individuals, but as future contributors to the family and society as a whole. Establishing civilization required hard work, and children contributed heavily to the labor force. A new world must be built, and for many children early life in the colony was harsh and rigid. It is estimated that nearly 60-70% of children under the age of four died during this time known as “the starving season” (Gordon & Browne, 2008, p. 20). The Colonists needed law abiding, Bible reading, hardworking citizens, and in 1647 Massachusetts enacted a law to see that these goals were accomplished through the creation of dame schools (Follari, 2007). Wortham (2006) provides a description of dame schools as being led by women in the community, where students were taught lessons in piety and the value of a hard day’s work, as well as a skill that would benefit the Colony upon reaching maturity.

The eighteenth- and early nineteenth-century works of educational pioneers Rousseau, Pestalozzi, and Froebel once again wove many threads of change into the fabric

of education. Attention was given to the idea that schools should be less rigid and more flexible to meet the needs of children. Teachers were to guide self-selected activities through intuition and use group teaching methods rather than individualized, one-on-one instruction (Gordon & Browne, 2008; Henniger, 2009). Teachers were to be educated and aware of the distinct phases of child development and plan lessons accordingly. It was Rousseau who transformed education to spotlight the early years with the belief that “sacrifice a little time in early childhood, and it will be repaid to you with usury when your scholar is older” (Emile, 1761, as cited in Gordon & Browne, 2008, p. 16). Friedrich Froebel, one of the major contributors to early childhood education, spent his life creating a system of education for children under the age of six. A few such as Gordon and Browne (2008) and Morrison (2009) suggest one of the radical ideas advocated by Froebel was the notion that young children needed trained teachers who facilitated learning. It was no longer improbable to have a teacher who was both caring as well as educated; the two were not mutually exclusive. Teachers of the nineteenth century were to model the mother-child nurturing relationship while using the group teaching method extolled by Rousseau. With group instruction of multiage children, a teacher who was knowledgeable in sequencing curriculum and meeting children’s readiness needs was crucial to a successful classroom experience.

Toward the end of the nineteenth century, John Dewey (1916) ushered in a change in American education with influences that reach into today’s classroom. The Progressive movement touted that living and learning are inseparable. Children needed to have meaningful experiences with materials that were facilitated by a knowledgeable teacher. The role of the teacher was no longer to keep order and inflict harsh punishment

as in colonial days, but rather to engage children's interests and plan challenging, appealing activities around those interests (Follari, 2007; Wortham, 2006). With the responsibilities of the teacher in the classroom expanding, the need for trained teachers was still surfacing. Dewey's idea of teaching included asking questions to expand prior knowledge and integrate the curriculum across multiple subject areas. The days of primarily custodial care were over, and the beginnings of developmentally appropriate practices were emerging (Roopnarine & Johnson, 1993).

In the early 1900s, as the writings of Dewey and the Child Study movement were permeating the halls of education, courageous individuals Lucy Sprague Mitchell and Abigail Elliot, as well as the McMillian sisters, Margaret and Rachel, were creating the foundation of what we now know as the traditional nursery school (Gordon & Browne, 2008; Henniger, 2009; Wortham, 2006). Early education was looked upon as the key to social reform during this time. Schools were built as local community centers, as well as a place where children could learn to think. The turn of the century also witnessed Patty Smith Hill's creation of the curriculum upon which the first kindergarten in the United States was founded (Jackman, 2005). Teachers were encouraged to not only teach children, but to become parent educators pointing out the importance of early childhood education and their role in the process (Roopnarine & Johnson, 1993). Parent cooperative and college laboratory schools were established to meet the needs of working mothers and those wanting to learn more about child development and research. With the creation of these schools, the need for qualified staff became more evident, with Stolz (1978) describing the purpose of the movement: "the purpose was to improve nursery schools, and, therefore, we brought in the people who were studying children, who were learning

more about them, so we could do a better job” (as cited in Gordon & Browne, 2008, p. 26).

The field of early childhood education had reached professional status by the 1930s. Teachers united together to share common experiences, and under the leadership of Patty Smith Hill, formed the National Association of Nursery Education (Gordon & Browne, 2008). One of the traits of a profession is an adherence to a particular set of standards. Whether it is a code of ethics, specialized training, or the existence of an organization to which members belong, a profession is different than a job. Early childhood teachers in the mid 1900s were beginning to develop a clearer vision of their role in the lives of young children not as a job, but as a career worthy of respect. Early childhood as a profession was on its way and as Essa (2003) points out, today the National Association for the Education of Young Children is the largest association of early childhood educators, with over 100,000 members worldwide.

As early childhood education was spreading its fledgling wings as a profession, the American economy was facing a national crisis. The Great Depression brought the focus on children and child development to a grinding halt. Emphasis was on getting adults working and stimulating the market. The Work Projects Administration (WPA) created nursery schools across the country with great success, but at what cost? The goal of WPA schools was reminiscent of the custodial care in colonial days. The focus was on supporting the adult workforce rather than the child’s intellectual development (Gordon & Browne, 2008; Jackman, 2005). Unfortunately for the early childhood profession, teacher qualifications and professional standards fell considerably. It was not uncommon for teachers seeking employment at WAP schools to have a paltry two-week training

period with liking children being the major criteria for becoming a teacher (Henniger, 2009; Roopnarine & Johnson, 1993).

The Depression was not the only national crisis to affect early childhood education. World War II saw the formation of the Lanham Act nursery schools and Kaiser Child Care Centers (Jackman, 2005). These programs were also plagued with the same low standards and poor teacher quality as the WPA schools, but the stigma of attendance for the mostly poor or working class was gone (Gordon & Browne, 2008). These schools appealed to the widespread feeling of patriotism occurring across the nation, and those involved felt as though they were personally contributing to the war effort. Lanham Act schools and Kaiser Centers provided more than nursery schools had in the past. Lanham schools were open ten to twelve hours a day six days a week, while Kaiser Centers ran 24 hours all year long (Gordon & Browne, 2008; Henniger, 2009; Jackman, 2005). Services at Kaiser Centers included an infirmary for both mother and child, convenient locations directly outside of the shipyards, and hot meals to take home after a hard day's work. Though the circumstances were ideal for working mothers, the end of the war spelled defeat for these innovative programs, and it can be said "the Kaiser experience has never been equaled, either in the universal quality of care or in the variety of service" (Gordon & Browne, 2008, p. 28).

Pushing Toward the Future

The launch of Sputnik in 1957 accelerated the crash of Progressive ideas. The United States was apprehensive about the lack of basic skills being taught in public schools, and with the help of Jean Piaget, the push toward constructivism was born. Like Dewey before him, Piaget wrote prolifically on the subject of educating children, more

specifically on child development and how children construct learning (DeVries & Kohlberg, 1990; Piaget, 1896). The constructivist view of education assumes the child is an active participant in his or her own learning, constructing knowledge independently rather than from information passed from teacher to child (Follari, 2007). The constructivist teacher is knowledgeable in child development theory and practices as well as skilled in the use of questioning strategies to extend knowledge and prompting children to reflect on their experiences. Constructivist teachers also use observation to evaluate progress and adapt the curriculum as needed.

In the years to follow, the formation of Project Head Start opened the doors to education for many low income and minority children across America. Gordon and Browne (2008) note that although the programs provided medical, dental, nutritional, and mental health services, the qualifications of Project Head Start teachers were neither adequately maintained nor stressed. At its inception, the goal of Project Head Start was one of social competence, rather than true educational reform. Teachers were drawn from the local community to mirror the diversity outside of the classroom, and competency standards varied widely (Roopnarine & Johnson, 1993). Parents, who worked in the classrooms as part of Project Head Start's mandatory parental involvement policy, often became lead teachers with little or no educational qualifications.

Henniger (2009) suggests the shift in early childhood education came in 2001 when the Bush administration signed the No Child Left Behind Act. Although this legislation focuses primarily on public schools, it also draws needed attention to the care and education children receive before they reach kindergarten. When children are provided high quality environments and stimulating interactions with competent adults,

they are better prepared for school. The emphasis on providing quality early care continued with the H.R. 1429: Improving Head Start for School Readiness Act of 2007. Among the mandates outlined in the legislation, of particular interest to early childhood teachers are the following stipulations:

by 2013 at least 50 percent of Head Start teachers and education coordinators will have a baccalaureate or advanced degree in childhood education and all teaching assistants will have an associate's degree, and that by 2010, all teachers providing direct services to children and families participating in Early Head Start programs (which provide services for children from 0-3 years of age) located in Early Head Start centers have a minimum of a child development associate credential.

(GovTrack, 2007, para. 4)

The national spotlight on quality experiences for children birth through five years of age is only growing brighter. If America is to expect higher standard for its children, it likewise must expect more from those providing their care. The qualifications of the 1900s are no longer sufficient. Early childhood teachers must do more than provide "custodial care," but rather focus on developing the whole child in all developmental areas: cognitively, linguistically, physically, and emotionally. This being said, "research tells us that teachers are at the heart of any successful reform initiative" (Jones, 2003, p. 22). Knowing the history of a profession can become the first step in the journey to becoming a true professional as the following proposes:

Early childhood education has a rich and exciting history. The story of its development is also the chronicle of courageous people who took steps toward improving children's lives. . . . Knowing that early childhood philosophy has deep

roots can be an inspiration and helps teachers develop professional expression.

(Gordon & Browne, 2008, p. 6)

Professional Development

Historically, early childhood education teachers have struggled to be identified as professionals. From the early sixteenth century, caregivers of young children needed little or no training in order to work as a teacher (Gordon & Browne, 2008). For most, the only qualification was to like children. This perception has changed very little over the decades. Unfortunately, teachers' feelings of significance can diminish as the age of the child they work with decreases. In education circles, as well as in the eye of the general public, a high school teacher has more value and worth than a preschool teacher. The early childhood teacher has been looked upon as merely a babysitter, not requiring advanced training or education. Rust (1993) asserts one of the barriers to overcome "is that early childhood education is not widely recognized as a distinct and well-articulated field of education. It is perceived as 'women's work', with concomitant low status and low pay" (p. 104). Compounding the issue is the lack of consistent educational standards within the profession. The level of education in early childhood settings can vary from individuals with graduate degrees to those with a high school diploma (Spodek & Saracho, 2006). These attitudes and opinions are beginning to change with the sweeping national reforms occurring across the country. With new developments in brain research and school reform, efforts such as the reauthorization of the Elementary and Secondary Education Act in 2001 (NCLB) have drawn attention to the importance of a well-educated early childhood teacher, and this issue is beginning to get the attention it has so long deserved. As the following statements illustrate, with the vast number of children in

America receiving care from someone other than a parent, would it not behoove us to ensure that those entrusted with such an important task be competently trained and well qualified for such a job?

Early childhood, which is the period in a child's life from birth through age 5, is a critical time for children to develop the physical, emotional, social, and cognitive skills they will need for the rest of their lives. These children receive care in a wide variety of settings. While 38 percent receive care solely from their parents, the remaining 62 percent receive care through a variety of arrangements, including care by nonparental relatives, by non relatives, and by center-based programs. (US Department of Agriculture, n. d., para. 2)

Numerous studies confirm that high quality early childhood environments have a tremendous impact on a child's ability to learn, as well as having a positive influence on the community as whole (Frasier, 2003; National Association for the Education of Young Children, 2003; Peisner-Feinberg et al., 1999; Schweinhart, 2004). As Whitebook (2003) shows, it can be no coincidence that the level of classroom quality is significantly related to the level of education and training of the teacher. Research on quality early childhood environments, an increase in public perception and value in early care and education, coupled with a surge in political initiatives, serve to support the need for higher educational standards for today's early childhood teacher. "Second only to the immediate family, child care is the context in which early development unfolds, starting in infancy and continuing through school entry for the vast majority of young children in the United States" (Shonkoff & Phillips, 2000, p. 297).

Why Professional Development?

Most professions have a training program which licenses or degrees individuals to do a particular type of work. The requirements for early childhood professionals should be no less stringent or be of no less importance than other fields of work (Spodek & Saracho, 2006). This degree of license cannot guarantee quality in all cases, but can, with some measure of certainty, establish a baseline of knowledge and skill that has been attained. Professional development for early childhood teachers also benefits the community at large. Studies show that in high quality preschools, well-trained early childhood teachers use developmentally appropriate practices that not only match, but challenge children's development. A review of three major early childhood longitudinal studies focusing on high quality care, the High/Scope Perry Preschool Project, the Abecedarian Project, and the Chicago Child-Parent Centers, found that these programs saved taxpayers between \$2.69 and \$7.14 for every dollar invested by reducing special education, law enforcement, and other costs (Galinsky, 2006).

Due to changes in work and family dynamics, as well as national preschool initiatives, the need for competent early childhood care is growing exponentially. The National Center for Education Statistics reports that in 2001, "66% of all 4-year-olds attended an early childhood education program, which is a 23% increase from 30 years ago" (as cited in Spodek & Saracho, 2006, p. 424). In 2006, the North Carolina Division of Child Development (DCD) reported that 310,532 children were enrolled in various types of early childhood programs in North Carolina (North Carolina Division of Child Development, 2007). The state and national spotlight is currently directed toward early care and education. With the numerous initiatives and public policy debates over

preschool quality, today's early childhood educator is feeling the pressure to have young children learn formal academic skills (Helterbran & Fennimore, 2004). As noted in the research by Phillips, Crowell, Whitebook, and Bellm (2003),

fundamental to this goal is a workforce of early childhood educators who are themselves literate: able to become well-informed about child development, to organize learning strategies for young children, to assess children's progress, and to offer the language rich environments in which children thrive. (p. 1)

Amid the push for more rigorous educational standards for children, the educational requirements for teachers cannot be ignored. Higher standards for children can only be met if a qualified, competent teacher is available. "A beautiful space and elaborate curriculum... can be impressive, but without skilled and stable child care providers, they will not promote positive development" (Shonkoff & Phillips, 2000). To stay relevant as an educator, professional development must be a part of teacher retention. Professional development is gaining both state and national attention as one of the most fundamental ways of improving the quality of care and education in the field of early childhood education (Martin & Trueax, 1997). Professional development is an expansive term used to describe a variety of training, education, and teacher development opportunities. Types of professional development vary in length and intensity and can include college coursework, in-service training by external organizations, local and national conferences, and in-house mentoring programs (Project, 2004). Early childhood professionals are now being required through various state and national mandates to further their education and training. There is mounting evidence that suggests the quality of care young children receive is tied to the education level of the teacher. Park-Jadotte,

Golin, and Gault (2002) articulate it best when espousing “children’s school readiness hinges on the education, training and stability of the early care and education workforce” (p. 10). Professional development efforts in the field of early childhood are essential when compared those of public school teachers. When examining the baseline qualifications for employment, early childhood professional are often overlooked, as the following quote emphasizes:

How can the recently enacted No Child Left Behind Act emphasize the need for stronger performance standards and financial incentives to attract bright and highly motivated teachers, while we simultaneously tolerate large percentages of inadequately trained and poorly compensated providers of early child care and education who have an important influence on the foundation of school readiness? (Testimony to the U. S. Senate Committee on Health, Education, Labor and Pensions, February 12, 2002, p. 3, as cited in Whitebook, 2003)

Unlike K-12 teachers, childcare teachers do not necessarily have to have specialized training other than one credentialing class in some states. Sadly, as reported by Ackerman (2004), only 18 states require early childhood teachers to receive training prior employment. With the public demanding improved educational standards for younger children, the need for a qualified early childhood workforce must follow. The opportunity professional development training affords preschool teachers can mean more in-depth knowledge about child development, working with families, as well as putting into practice an appropriate curriculum for diverse learners (Cassidy, Hicks, Hall, Farrean, & Gray, 1998). Simply put, “education empowers the teaching workforce” (North Carolina Institute for Early Childhood Professional Development, 2005, para. 27). Research points

to the value of an educated childcare workforce. High quality early childhood classrooms do not happen by coincidence, but rather through careful planning and execution by a well-trained teacher. High quality environments for young children benefit all of society, and early childhood care and education is crucial to North Carolina's economic future as the following clearly shows:

1. Early childhood education generates \$1.77 billion annually and provides more than 47,000 jobs.
2. Early childhood education benefits all industries in the state by enabling parents to work productively outside the home and attend higher education programs to update their skills.
3. Early childhood education lays the groundwork for North Carolina's economic future by preparing upcoming generations for school and workplace success and attracting businesses to the state's skilled workforce.

To benefit every North Carolina resident, child care industry stakeholders—businesses, government and the child care industry—must work and plan together to reach innovative solutions to the barriers that the industry and its consumers face (North Carolina Partnership for Children, 2008).

Confronting the Barriers

Change is never easy. Unfortunately, in the field of education, change happens very slowly and is often criticized heavily in the beginning. This can also be said for professional development. Many professional development efforts have been condemned for their inability to make lasting changes in both student outcomes and teacher practice

(Feist, 2003). Research points to several causes for the difficulties teachers, especially early childhood teachers, face when trying to obtain continued training.

For many students, college is an arduous time. This fact is compounded for the full-time employed childcare student. Many of these students are first generation or non-traditional students who must contend with factors such as personal and financial issues, as well as work demands, unlike many of the typical entering freshmen. Reports indicate that “80% of community college students are first generation college students” (Grimes & David, 1999, p. 3). It can be surmised that of this 80%, a significant number of students are enrolled in early childhood training programs. A student is labeled “first generation” if neither parent of the student has a four-year degree. Of the numerous challenges these students face, one of the most damaging can be from within themselves. Research suggests that first-generation students often have lower self esteem, a lower sense of self-efficacy (Inman & Mayes, 1999; Nunez, 1998; Pascarella, Pierson, Wolniak, & Terenzini, 2004) and “doubted they were academically prepared for college” (McConnell, 2000, p. 4).

Early childhood professionals must often endure ridicule from friends and family over the choice to advance personal knowledge. Many of these students are the first in their family to enroll in higher education or to seek additional job training. Isolation and feelings of a “lack of fit” can occur when transitioning from one environment into another. Students feel the pull from family and friends to remain at their current level of education while simultaneously struggling with dreams for furthering their education and creating a better life for themselves and their family. It is no wonder that nontraditional and first generation students are at high risk for dropping out of college. Findings suggest

that “the pressure from friends and family encouraging these students not to go to college is often intense” (Inman & Mayes, 1999, p. 2). Family and work pressures also compete for attention, often placing the student at a disadvantage (Spodek & Saracho, 2006).

Further barriers to early childhood professional development occur within institutions of higher learning themselves. Many four-year institutions, with terminal degree and established research credential qualifications, have difficulty attracting diverse and knowledgeable faculty within the early childhood field (Early & Winton, 2001). Four-year institutions also pose a problem due to the lack of acceptable transfer credit allowed from community college early childhood programs (Neugebauer, 2006). Teachers with a desire to attain a Bachelor’s degree in many instances must begin coursework again from the freshman level, preventing many competent and willing students from pursuing four-year degrees. This lack of a clear “career ladder” continues to be a problem and limits many centers and teachers from meeting initiative requirements.

The changing demographics of students enrolling in early childhood programs today compels colleges to accommodate the needs of this new generation of early childhood student. The new early childhood education student is “more diverse in terms of ethnicity, age, language, and educational preparation” (Neugebauer, 2006, p. 22). The gap in educational preparation, more specifically a lack of reading and writing skills, remains a deterrent to many seeking professional development (Neugebauer, 2006). The lack of basic reading and writing skills is further compounded by many colleges requiring educational placement tests and subsequent developmental coursework prior to enrolling in degree courses. As recent as 2008, North Carolina community college early childhood

departments, through a statewide curriculum improvement project, established statewide developmental reading and English prerequisites on all but one course in early childhood degree programs. For many early childhood students, the idea of taking, not to mention paying for, up to four developmental courses prior to starting an early childhood program creates an attitude of defeat before even starting.

With the overwhelming barriers today's community college students are facing, colleges desiring to increase enrollment must be creative. Distance education has become the answer to competing for today's tech-savvy, geographically bound, and time-deficient student. "The impracticality of attending conventional institutions, scheduling conflicts, and preference for the distance education system itself is what motivates students to choose distance education courses" (Tucker, 2003, para. 2).

Distance Learning

Residential instruction or traditional teaching occurs at a set time and location with students and teachers interacting face to face. This method served as the primary modus operandi for hundreds of years. However, shifts in student demographics, declining enrollments and reduced state budgets are sending higher education administrators searching for an alternative (Barker, Frisbie, & Patrick, 1993). Distance education has the answer. According to Matthews (1999) distance learning has a long history of serving the isolated, underrepresented, and often non-traditional learner.

Community colleges serve nearly half of all undergraduate students among American colleges and universities, with 75% of those undergraduates being classified as nontraditional students (Kim, 2002). As previously noted, many nontraditional students must overcome a multitude of obstacles when attending institutions of higher learning. In

an age of declining state budgets and unprecedented local job loss, colleges must seek new avenues to attracting and retaining students. Professional development for the working student must not only be relevant to workforce requirements, but also must offer convenience for the already overscheduled and often underpaid early care and education teacher. Many early childhood students are “generally nontraditional college students and may need flexibility and support in order to succeed in higher learning” (McMaken, Kauerz, DeCesare, & Hale, 2002, p. 7). Distance education allows the flexibility students are seeking in today’s time-crunched environment. Online classes are increasingly becoming a standard course offering within community college schedules as the following statement postulates:

Two- and four-year institutions are moving rapidly to put more courses online, and there has been a significant increase in the number of online certificate, credential, and degree programs available to early childhood teachers and administrators. Higher education institutions are recognizing the need to offer flexible and convenient options for working child care professionals who want to continue their education or complete a degree. (Donohue, as cited in Neugebauer, 2006, p. 24)

Growth and Development of Distance Education

Distance education is not a new phenomenon. The terms may have changed over the years but people have been learning from a distance for centuries. The term distance education can be used to describe a type of learning where teacher and student are separated by time and geographic distance utilizing various electronic technologies. Distance learning has evolved from the print based communications of the early

nineteenth century into the computer-mediated, synchronous virtual classrooms of today.

Moore and Kearsley (2005) outline five distinct historical generations through which distance learning has evolved:

1. The first generation relied on text and instruction while using the postal service as a means to correspond, hence the term correspondence education.
2. The second generation is characterized by teaching by way of broadcast radio and television.
3. The third generation focused on new ways of organizing technology and education with the development of the Open University.
4. The fourth generation made use of audio and video teleconferencing allowing real time interaction.
5. The fifth, and most current generation, employs Internet technologies to offer students a virtual classroom experience.

During the 1880s the first generation of distance education, typically called correspondence study, enabled people who desired to study at home or work the opportunity to do so without having to travel to a brick and mortar university (Bower & Hardy, 2004; Casey, 2008; Johnson, 2003; Moore & Kearsley, 2005). The development of correspondence courses was to serve populations previously excluded from educational opportunities or “who were otherwise unprovided for” (Moose & Kearsley, 2005, p. 26). Students were afforded the convenience of learning at their own pace while fulfilling the need to further their education. Correspondence study typifies learning through print material such as workbooks, texts and study guides. With the proliferation

of the new postal service as well as the railroad, corresponding through print spread exponentially. With this particular method of study, students mailed assignments and received written feedback from the instructor (Mehrotra, Hollister, & McGahey, 2001).

The growing demand for education was not lost on the correspondence education movement. During the first two decades of the nineteenth century Thomas Foster, founder of the International Correspondence Schools, witnessed his enrollment swell from 225,000 in 1900 to more than 2,000,000 in 1920 (Schlosser & Anderson, 1994). Although correspondence education was used in both New York and Pennsylvania colleges as a means of conferring degrees at distance, the United States was not alone in this type of methodology. Countries such as England, Germany, France and Sweden were also offering educational opportunities via the mail (Schlosser & Anderson, 1994; Schlosser & Simonson, 2006).

Europe, while experiencing a steady growth of distance learning, began to employ more sophisticated methods of technology. Thus, the broadcast and communication generation of distance education was born. While Europe was using audio to instruct the blind and supplying laboratory kits in various subjects, the United States was advancing in both radio and television communications (Johnson, 2003; Schlosser & Anderson, 1994; Schlosser & Simonson, 2006; Simonson, Smaldino, Albright, & Zvacek, 2009). Education was moving to the airways and during this period it was reported “almost two hundred American radio stations delivered distance education to the masses” (Bower & Hardy, 2004, p. 7). This new medium of course delivery was welcomed universally due to its ability to offer some semblance of social interaction between teacher and student. Casey (2008) notes “live educational radio shows reduced instructional delivery time and

increased classroom immediacy by allowing students to hear their instructor” (p. 46). Shifting to the 1930s, the University of Iowa, Purdue University and Kansas State College established experimental television teaching programs. Giltrow (1989) espouses that the mushrooming of television ownership in the 1950s coupled with satellite technology in the 1960s served to further instructional television efforts. Enduring proof of this productive time in history are the current offerings of the Public Broadcast System (PBS) which continue to provide adult learning programs throughout today’s colleges and universities (Maeroff, 2003).

Bower and Hardy (2004) conclude that the late 1960s and early 1970s mark the transition into modern distance education with the opening of the British Open University in 1969. This era, commonly called the third generation of distance education, witnessed the birth of Open Universities and a surge in respect for distance learning programs. Spurred on by new found acceptance, similar institutions were established around the globe in nations such as West Germany, Japan, and Canada, as well as the lesser-developed countries of Sri Lanka and Pakistan. Matthews (1999) suggests the British Open University was unique in that it offered a “mix-media approach to teaching” (p. 54). Learning materials included texts, as well as audio and video materials supplemented with television and radio broadcasts. The rudimentary correspondence courses of the late 1800s and the subsequent innovative developments of radio and television broadcasts paved the way for the Open University concept.

The fourth generation of distance education began during the late 1980s and early 1990s. Fiber-optic communications and teleconferencing allowed the expansion of live two-way communications. Most notably, this new development represented a

fundamental shift in how distance education was conducted between student and teacher as Moore and Kearsley (2005) illustrate:

unlike previous forms of distance education, which were primarily one-to-one exchanges between learner and the teacher by correspondence, or were receive-only transmissions of broadcast lessons by radio or television, audio-conferencing allowed students to answer back, and for instructors to interact with students, in real time and in different locations. (p. 38)

As a means to organize and afford the emerging teleconferencing technologies, consortiums were formed. Consortiums are groups of independent institutions that work together to share the work, cost, and ultimately the results of creating and delivering educational courses. The National University Teleconferencing Network (NUTN) was one of the first consortia in the United States. Over the next ten years, NUTN extended programs to nearly 6,000 people at a time in over 200 locations. In addition to extending educational opportunities to large numbers of students, because NUTN was an assembly of several universities, they could also provide a boarder selection of courses to students than any single institution.

As video technologies continued to flourish within college and university settings, the educational milieu was on the verge of changing forever. The advent of the Internet and the World Wide Web “allowed a document to be accessed by different computers separated by any distance, running different software, operational systems, and different screen resolutions” (Moore & Kearsley, 2005, p. 43). Mirroring its predecessor, fiber optics, Internet technologies and computer-mediated instruction practices were increasing in power while decreasing in cost to operate. The world was witnessing a

digital revolution and educational institutions seized the opportunity to expand to new audiences in greater number than ever before. With the affordability of personal computers on the rise and geographic location no longer a barrier to obtaining an education, institutions of higher learning not only embraced but encouraged the proliferation of distance education programs. Internet has become the most current vehicle through which colleges and universities are meeting students' needs. Bower & Hardy (2004) posit "the Internet has allowed for a variety of asynchronous . . . as well as synchronous . . . activities, such as chat sessions and online discussions, which can be used to engage learners in student-to-student as well as student-to-instructor interactions" (p. 8). Community colleges are unique in their ability to adapt to ever changing demographic and economic demands. The adoption of distance education is no exception, and since its inception, "community colleges have consistently been on the forefront of offering online education" (Garza Mitchell, 2009, p. 81).

The Digital Divide

Distance education appeared to be the future for rural community colleges during the mid-1990s. In a number of instances, rural community colleges served as the first choice for college matriculation and in many cases, remained the sole institution of higher learning within the colleges' service areas. With geographic isolation as well as time and family constraints no longer a barrier for the community college student, distance education would undoubtedly increase the educational opportunity for all. While distance education was poised to become the "great equalizer", enabling the previously underserved and undereducated a chance to attend post-secondary education, a subtle, yet debilitating disparity began to emerge. Sink and Jackson (2000) became the first to point

out the “digital divide” between urban and rural community colleges. Rural community colleges were not as well-funded nor wired for new technologies as their urban counterparts. Katsinas and Moeck (2002) offered data from government reports stating the urban and rural digital divide was actually widening. Although North Carolina serves as a leader in education, particularly higher education, the digital gap within the state can no longer be ignored as the following illustrates:

In higher education and economic development, North Carolina is viewed by the rest of the nation as a progressive state. The highly recognized University of North Carolina, strong tradition of small private colleges and the North Carolina Community College System have contributed to the state’s robust economy through research and workforce development programs. In the middle of North Carolina, however, is an island of prosperity surrounded by a sea of unrealized potential. Although political leaders have generated financial support for the acclaimed Research Triangle Park in the Raleigh-Durham-Chapel Hill area and the major population centers of the Piedmont, little assistance has been provided for the less populated eastern coastal and western mountainous regions. Counties in the far east and far west lack high-speed tele-communications, placing them in the other side of the digital divide. (Sink, Jackson, Boham & Shockely, 2004, p.322)

Concern over the digital “haves and have nots” began in the 1980s with the arrival of the personal computer and has accelerated into the Internet access and broadband connection challenge witnessed today. A report from the United States Department of Commerce titled *Falling Through the Net: A Survey of the “Have Nots” in Rural and Urban*

America, first published in 1995 (McConnaughey, Nila, & Sloan, 1995) with subsequent reports in 1998, 1999, and 2000 (McConnaughey & Lader, 1998; McConnaughey, Everette, Reynolds, & Lader, 1999; Rohde & Shapiro, 2000) clearly showed lower penetration rates of telephone usage, personal computer ownership, and Internet access and usage exists in rural communities. Bell, Reddy, and Rainie (2004) espouse that between 2000 and 2003 fewer rural residents used the Internet than urban and suburban residents as illustrated in Table 2.1.

Table 2.1

Internet Penetration in the United States by Percentage

Community Type	2000	2001	2002	2003
Urban residents	51	62	58	67
Suburban resident	55	62	63	66
Rural residents	41	50	49	52

In more recent studies, as shown in Table 2.2, Horrigan and Murry (2006) and Horrigan and Smith (2007) postulate the digital gap is widening with less than 25% of rural residents having access to high-speed broadband technologies as compared to 38% of urban resident.

Table 2.2***Broadband Connection in the United States by Percentage***

Community Type	2001	2002	2003	2004	2005
Urban residents	9	18	21	29	38
Suburban resident	9	17	23	29	40
Rural residents	3	6	9	16	24

With home broadband adoption in rural areas, now 31% in 2007, continuing to lag high speed adoption in urban centers coupled with 60% Internet usage in rural areas trailing the national average of 71%, research can empirically confirm the unfortunate truth; rural American is being left behind.

Discrepancies between rural and urban residents' Internet use and access can be attributed to several demographic factors such as age, income, and education level. Internet users are typically younger, have higher incomes, and possess at least a bachelor's degree. By contrast, rural community populations tend to be older, earn less than \$30,000 a year, and have a higher percentage of people who have not completed high school. Compounding the access challenge are findings from Bell, et. al (2004) that showed nearly 29% of rural Internet users have only one Internet service provider (ISP) therefore, severely limiting not only choice but complete usage rates. The span between the information "haves and have nots" can be best described by the following:

In virtually every location in the world, an elite group enjoys the best information technology that their society has to offer. Today, these individuals often own the

most powerful computers, can access the best Internet services, and live in areas with powerful telephone systems that provide broadband access to powerful streams of continuous information. Most importantly, they possess the requisite base level of education and understanding to operate all of this technology to their best benefit. In stark contrast, nearly every location in the world possesses another group of people. These people do not have access to the most modern computers. They lack access to high quality Internet service, and the areas in which they live lack high quality telephone and cable services needed to transmit information streams. Even if the computer equipment and connecting technology were available, persons from this group typically do not possess the requisite education needed to maximize the advantages of the technological applications.

(Katsinas & Moeck, 2002, p. 207-208)

Technological progress will force all of society to confront the gulf that exists between urban and rural communities. The Internet is increasingly becoming central to life, work, and play. Online access facilitates job opportunities, strengthens community networks, and plays an integral role in educational advancement (Norris, 2001) Digital inequities become even more important when specific groups or areas are systematically excluded, such as low-income households, poorer neighborhoods, and the peripheral rural communities. Distance education and advanced Internet technologies have the potential to reach many students in rural communities who otherwise would not be able to access high education due to a multitude of barriers. Institutions may not be capable of eliminating all obstacles, but helping the rural student navigate the digital world more

successfully can begin to narrow the divide between the information “haves and have nots.”

Closing the Gap

Research conducted by Johnson, et al (2004) exposed a vulnerability of distance education among rural community colleges; the two most pressing issues regarding distance learning are student access to both computers and the Internet. Despite these obstacles, community colleges are advancing efforts to increase distance learning opportunities for students with the hope that by providing support services to alleviate, to some degree, the barriers students face once enrolled in an online course, that the student will see the benefits of online learning outweigh the drawbacks.

Offering services such as 24 hour technical support, extended hours in open computer labs and course management orientation prior to enrollment are but a few of the ways institutions can provide the technology apprehensive or fearful student some measure of comfort and security. It is important not to underestimate the fear of a new user of distance education (Wahlstrom, Williams, & Shea, 2003).

Fear is an important element in every novice user’s first attempts to use a new machine or new software: fear of destroying data, fear of hurting the machine, fear of seeming stupid in comparison to other users, or even to the machine itself. (Rheingold, 1995, p10)

Many students enroll in online courses without the necessary developmental reading and writing skills needed to effectively communicate in a virtual environment and therefore, become understandably intimidated at the thought of posting ideas for the rest of the class to read. Institutions would do well to advertise writing services as well as technology

tutors for the distance student prior to enrollment. Due to the isolated nature of the distance learner, it is easy to become disenfranchised and discouraged when faced with challenging material or unfamiliar technology requirements. Students need to know there is a place to go to for help before a problem arises.

It is easy to assume the online student is both at ease and knowledgeable when it comes to distance education methodologies: however, this is not always the case. As previously noted, community colleges, distance education programs in particular, typically attract the non-traditional student who may lack the necessary computer skills and training needed to be successful. For this reason, institutions should provide the necessary technology training before and during online coursework (Johnson, 2003). Motteram and Forrester (2005) postulate the first hurdle online students encounter is becoming acclimated with the course access procedures and how to navigate the site. Instructors can alleviate these initial stumbling blocks by providing embedded practice exercises into the course, posting help files with both audio and video examples of how to access course materials, and even adding a frequently asked questions section to the resources list. Offering orientation sessions or virtual tours prior to enrollment allows students the opportunity to explore software, set up user accounts, and practice using the various communication tools (Huber & Lowry, 2003; Johnson, 2003; Mehrotra et al., 2001; Menlove & Lignugaris, 2004). Students left to navigate an unfamiliar online environment become quickly frustrated, anxious and even distressed and subsequently do not complete the course.

Many distance learning students report feelings of isolation and disconnection with classmates. Contributing to this problem is the fact that the social interaction and

reflective dialogue that occurs within the traditional or face-to-face classroom is largely missing in the online environment. For distance students to be successful, communication must be frequent and meaningful. The rate and rapidity of the instructor's response affects students' feelings of connection (Brewer, DeJonge, & Stout, 2001; Mehrotra et al., 2001). It is imperative for online instructors to communicate with students both individually and as large groups to build and maintain motivation. Incorporating community building strategies such as chat rooms, group assignments, electronic bulletin boards or virtual coffee houses where student can discuss non-course related events help to facilitate the exchange of student ideas and feelings of belonging. Students who are successful report receiving feedback early and often. In many cases, open and clear communication between the online student and instructor can prevent confusion with assignment requirements and increase retention rates.

A fundamental purpose of distance education is to provide greater ease of access to those students whose work or home lives negate the opportunity to attend traditional on-campus courses. Ironically, many of these same students lack Internet access at home, are financially unable to keep up with the advancing hardware and software applications required for online coursework and do not possess the technological skills to navigate an online environment. Nevertheless, society's underserved and underprivileged have always found a way to rise to a challenge, with the community college leading the way. With a reputation for being highly adaptable and swift to respond to both community and workforce needs, community colleges will no doubt work diligently to meet the needs of today's distance learning student.

Perceptions of Satisfaction

Distance education is making a significant impact on learning and teaching in institutions of higher education around the world. Although a growing number of studies have been conducted on student perceptions and satisfaction with online learning, the results of these studies have been markedly mixed (Bower, 2001; Carr, 2000; McFarland & Hamilton, 2006; Zhang, 2005). While the vast majority show no difference in satisfaction levels between web-based instruction and traditional instruction, still others show a distinct preference for one over the other, either online or traditional. Furthermore, most online learning research conducted over the past decade has focused primarily on perceptions of graduate students or university undergraduates (Carnevale, 2000; Hughes & Daykin, 2002; Kim, Liu, & Bonk, 2005; Lim, Kim, Chen, & Ryder, 2008; Palmer & Holt, 2009; Tanner, Noser, & Totaro, 2009). While the results of these studies are expanding what is known about distance education, perceptions with regard to the community college student remain limited.

Ham (2002) studied 269 graduate students enrolled in web-based courses at three doctoral granting universities. Findings concluded a correlation existed between undergraduate overall satisfaction with web-based courses and students' attitudes toward the Internet, computers and instructor feedback. Additionally, no positive correlation was reported between available technical support and student's overall satisfaction. Shockley (2005) studied community college learning styles and student perceptions of satisfaction with web-based courses. Results showed students were comfortable with computers and the Internet and were satisfied with the level of instructor feedback. However, data analysis revealed students were not satisfied with the level of social interaction in web-

based courses. Moreover, 20.2% (n = 30) of the participants who responded to the open-ended questions (n = 148) reported that social interaction was their least favorite characteristic of a community college web-based course.

Research has well documented both the favorable and unfavorable perceptions of students concerning online learning. Factors such as instructor feedback, social interaction and feelings about technology can influence a student's perception of distance learning. That being said, an understanding of the variables that influence learner satisfaction with online learning can undoubtedly be used to establish appropriate virtual learning environments for the future distance education student.

Distance Education and the Community College

The community college "has traditionally been referred to as the peoples' college" and it is committed to providing open access and educational opportunity to those who attend (Bower & Hardy, 2004, p. 8). Hale (2007) suggests that "online education is particularly well-suited to the needs of community college students" (p. 28). Research suggests community college students are often low income, first generation students, who may find the transition to college arduous, if not downright scary. It can be construed that many early childhood education students fall into this category. With a significant number of early care and education students returning to college, many after earning a GED and maintaining a 20 years absence from any type of formal schooling afterward, it is no wonder most are reluctant to even show up on campus. Cox (2009) exposes a sentiment shared by many first generation students:

from this perspective, assuming the identity of college student involves thinking of one's self as someone who will succeed at college-level work. Failure therefore

constitutes a huge blow to this self-concept. If the individual invests heavily in this identity, works hard to succeed in the new position, and then fails, the result is that the person's expectations and self-conceptions have been built up and then shattered . . . students who enter college for the first time enter a new social involvement and take on a new social status: someone who attends college. The loss or failure that could prove most debilitating to the ego is the one that definitively proves that the student is not “college material”. (p. 54)

Student from all walks of life and diverse cultural and educational backgrounds must successfully navigate the processes and challenges of attending institutions of higher learning if they wish to retain current job skills. Unfortunately, currently high attrition rates prove many underserved students are not able to overcome the obstacles to obtaining a traditional education.

Community college students often have outside pressures such as family obligations, as well as transportation and time constraints which severely limit the possibility of attending a traditional face-to-face class on campus. Many rural community populations are made up of the working class, who traditionally are not afforded the luxury of flexible scheduling. As a result, most are not allowed to leave work to physically attend classes, thus prohibiting the opportunity for professional growth. Through the ease of access which online courses provide, “individuals are able to improve their social and economic well being as well as to raise their educational attainment level” (Tucker, 2003, para. 1).

Community colleges are excellent at adapting to both economic and community needs. Rural community colleges know all too well the pressures and constraints of

having to adjust to economic downturns as well as unexpected surges in employment. An established yet fluid curriculum affords community colleges the ability to meet the changing needs of the community it serves. As Cejda (2007a) points out, “with their reputation for responsiveness, adaptability, and flexibility, one could easily assume that community colleges would lead the way in implementing and refining distance education offerings” (p. 87). As the following statements outline, community colleges are on the cusp of tradition meets technology:

the application of technology to education represents a critical factor in the success of community colleges meeting the education and training needs of the citizens of North Carolina. Whether it is to meet the demands of employers for workers with the latest high-tech skills or to meet the growing demand for education and training from people throughout the state, the community colleges must continue to integrate technology into the way programs are delivered and upgrade faculty on the uses of the new technology. (North Carolina Community College System, 2008, p. 87)

With a commitment to open access and a mission to provide education at anytime and from anywhere, community colleges emerge as the leaders in providing distance education to the masses.

Today’s student relies heavily on various forms of technology to send and receive information. From text messaging, pod-casts, blogs, twitter, and virtual chat rooms, students possess and desire the ability to stay connected to others throughout the day and night (Shin & Lee, 2009). In order to remain relevant in technology driven world, community colleges must offer alternatives to the traditional face-to-face method

of teaching. Community colleges have recognized and are beginning to meet this need as observed in the mid-1990s when distance education was poised to be the future of the rural community college (MacBrayne, 1995).

The escalation in distance education at two-year colleges is unquestionable. Data from the U. S. Department of education revealed in 2000-01 nearly 90 percent of public community colleges offered 55,900 courses through various types of computer- mediated technologies (Cejda, 2007b). In 2007-08 North Carolina community colleges enrolled 35,299 student in one or more online courses “which represented 29.5 percent increase over 2006-07 figure” (North Carolina Community College System, p. 88) as well as 97,107 students in hybrid courses, a combination of online and face-to-face methods, for an increase of 27.4 percent over the previous year. Although community colleges are offering more courses online, a gap exists between offerings of colleges transfer courses (those transferring to senior institutions) and offerings in career and technical education (CTE). Vocational or career and technical education (CTE) “includes both credit and non-credit offerings and ranges from a single course providing specific skill training to certificates and associate of applied science (AAS) degrees” (Cejda, 2007b, p. 294). With regard to CTE, Johnson et al. (2004) state:

To some people, it refers to a single course that provides specific skill training for job employment or advancement, while to others, it refers to a lifelong learning pathway that is used to obtain, update, and extend the knowledge, skills, and attitudes required to pursue a career successfully. Career and technical education imparts both specific occupational skills to those students wishing to enter

employment directly and the academic skills they need for advancement and further postsecondary education. (p. 23)

This being said, it can be surmised that many CTE students are already employed and needing to enhance workforce skills. Many of these employed students are unable to leave work to attend traditional face-to-face instruction and therefore need the flexibility and convenience that distance education can provide. Because community colleges offer a variety of certificate and diploma tracks in CTE programs such as early childhood education, many full-time child care workers are able to earn college credit through distance education opportunities. These students, many of whom are considered semi-skilled workers with minimal education, seek out community college CTE programs due in part to the increasing availability of online courses. As Bragg (2001) makes clear, “the purpose and role of postsecondary vocational education have changed as well in terms of traditional vocational preparation and with respect to new goals for and approaches to curriculum and instruction” (p. 5).

In many rural areas, CTE departments are seeing a surge in enrollment due to massive job loss and the retraining efforts established by the Workforce Investment Act of 1998 (U. S. Department of Labor, 2006). Regrettably, however, distance education research in career and technical education has not had much attention due to the academic and funding priorities of the 1970s and 1980s (Benson et al., 2008). Although studies from the National Center for Education Statistics (NCES, 2000, 2003), the Institute for Higher Education Policy (2000), and the Computing Project’s annual survey (Green, 2000) address the use and effectiveness of distance education, all “fail to address specifically the delivery of postsecondary career and technical education distance

education courses” (Benson et al., 2008, p. 667). As a result, the need to examine students in career and technical education courses will only serve to enhance current programs and practices. Feedback for monitoring both quality and program effectiveness necessitates more focused research in career and technical education.

The lack of substantive literature in the field of career and technical distance education combined with a shortage of research on CTE teacher education leaves those seeking to bring professional development to early childhood teachers at a significant loss. Therefore, it is my hope this research will improve upon and possibly expand what is currently known about how early childhood students view online education methodologies thus enhancing future teaching methods in career and technical education.

CHAPTER THREE: METHODOLOGY

The purpose of this chapter is to describe the participants in the study, the instrument applied, the method of data collection, and the statistical methods that were used to analyze the data. The researcher extrapolated and analyzed data from the survey instrument to answer the following research questions:

1. What are early childhood education students' perceptions of community college online learning?
2. Is there a difference in perceptions between the early childhood education traditional student and the early childhood education non-traditional student?
3. Is there a difference in perceptions between early childhood education students who access web-based courses most often from home and early childhood education students who do not access web-based courses most often from home?
4. Is there a relationship between early childhood education students' comfort level with computers and feelings of success in web-based courses?
5. Is there a relationship between early childhood education students' comfort level with the Internet and feelings of success in web-based courses?

Research Design

After careful consideration of the participant group and the proposed research questions, it was determined that quantitative analysis was the best fit for this research project. The components of this exploratory study consisted of both descriptive and inferential analysis. The first analysis was based on the descriptive data collected from

community college early childhood education students who were currently enrolled in coursework from the three participating community colleges. Frequencies and percentages were calculated as well as mean responses for descriptive information. The second part of the research utilized Multi-factor ANOVA and Pearson's-r statistical analysis and focused on the participant's perceptions of satisfaction with community college web-based learning environments. Both the first and second analyses were based on the participants' responses to Ham's (2002) web-based version of Hiltz's (1994) Distance Learning Perception Survey (see Appendix F for HDLPS Survey).

Research Variables

Independent Variable

In this study, the independent variables for questions two and three were the early childhood education traditional student, the early childhood education non-traditional student, the early childhood education student who accesses web-based courses from home and the early childhood education student who does not access web-based courses from home. For question four, the independent variable was early childhood education students' comfort level with computers. For question five the independent variable was early childhood education students' comfort level with the Internet.

Dependent Variable

In this study, for questions two and three the dependent variable was early childhood education students' perceptions. Each of the dependent variables was created by compiling several questions on the survey. Instead of using one question to measure a variable, it was more valid to use several related questions that measure slightly different aspects of the same variable and then combine them into composite scales (Hiltz, 1994).

For this study, the HDLPS questions were grouped into five composite scales, or variables, (see Appendix C for Composite Variables) by students' attitudes about computers and the Internet (CEFFICACY and IEFFICACY), the level of student interaction within an online learning environment (SINTERACT), the perceived level of interaction with instructors (IRESPONSE), and overall satisfaction with web-based courses (SATISFY). For questions four and five the dependent variable was early childhood students' perceptions of overall satisfaction with web-based courses.

Research Sites

Three community colleges in rural, western North Carolina were used for the purpose of this study. Caldwell Community College & Technical Institute (Caldwell) in Hudson, Catawba Valley Community College (Catawba Valley) in Hickory, and Western Piedmont Community College (Western Piedmont) in Morganton, all located in North Carolina, share similar characteristics in both student population and curriculum offerings. Each offers early childhood education courses online and in a hybrid format. These community colleges also make up what is known as the Hickory-Morganton-Lenoir Metropolitan Statistical Area, commonly called the Unifour Area (Catawba County Government, n.d., p. 3).

The 326,499 persons inhabiting the region consist of predominantly white (85.5%), Protestant (56.9%) members of the working class with an average of 75.6% obtaining a high school diploma. Although the regional economy has traditionally been based on the furniture and textile industries, "Since 2001, nearly 29 percent (207,000) of manufacturing jobs in the state have been eliminated" (Key, 2008, p. 3A). In April 2009,

the Unifour area maintained the state's highest unemployment rate of 15.4% (Lindsey, 2009).

Caldwell, Western Piedmont, and Catawba Valley are comprehensive community colleges that are part of the North Carolina Community College System. Each college offers a variety of programs including college transfer, technical, and continuing education. The colleges are similar in size, with Caldwell serving 4,782 curriculum students, Western Piedmont serving 3,247 curriculum students, and Catawba Valley serving 5,434 curriculum students during the spring 2010 semester. The three colleges are also comparable in the number of early childhood education students currently attending courses (Table 3.1). In addition to following the course content guidelines established in the common course library of the North Carolina Community College System, establishing general consistencies in program competences, each college offers both online and hybrid versions of early childhood classes through the use of Blackboard, a computer-mediated software system used to create and deliver web-based courses.

Subjects

The target population of this study included all early childhood students enrolled in courses for the 2010 spring semester at Caldwell, Catawba Valley, and Western Piedmont community colleges. The researcher obtained permission to administer the student survey instruments from the president of each participating community college (see Appendix A for Presidents' Permission Letters). The researcher also obtained permission from Western Carolina University's Institutional Review Board for the use of human subjects in research. The introduction to the survey (see Appendix E for Survey Cover Letter) informed potential participants of the goals of the research, and as a

measure to ensure the confidentiality of the students, a guarantee of anonymity was provided on the survey as well as contact information for questions. Response to the survey constituted informed consent in the study. According to the administrative records provided by each community college, there were 432 early childhood students enrolled in the 2010 spring semester. A summary of early childhood students enrolled at each college is listed in Table 3.1.

Table 3.1

Early Childhood Education Students Enrolled at Each Community College

Spring 2010

College	Enrollment
Caldwell	140
Catawba Valley	181
Western Piedmont	111
Target Population	432

Instrumentation

Perceptions of Distance Learning Courses Survey

In the late 1980s, Hiltz (1994) developed the Hiltz's Distance Learning Perception Survey (HDLPS) instrument to evaluate the effectiveness of distance learning programs delivered in a closed network system. A revised version of this instrument was used in Ham's (2002) students' perceptions of web-based distance learning courses study. Ham was investigating student satisfaction levels with their web-based learning experience. In addition to general demographic questions, the survey covers five major topic areas:

experience with computers and the Internet, course participation, instructor feedback, and perceptions of satisfaction and success. Furthermore, the HDLPS instrument contains open ended questions to address students' likes and dislikes with distance learning courses. The researcher received written permission to use Ham's web-based distance learning version of the HDLPS (see Appendix B for HDLPS Permission Letter).

HDLPS Reliability

The acceptable values for Cronbach alpha is $\alpha \geq .70$ with higher values indicating higher reliability (Flynn, et. al, 1990; Nunnally, 1978). The reliability coefficients for the measures in the HDLPS as reported in 2002 by Ham were .81 (Current feelings about computers), .83 (Current feelings about the World Wide Web), .78 (Social interaction), .81 (Instructor feedback), and .89 (Overall satisfaction). As shown in Table 3.2, the Alpha coefficients were all well within acceptable range.

Table 3.2

Reliability for HDLPS

Composite Scale	Cronbach's Alpha
Current Feelings about Computers	.81
Current Feelings about the World Wide Web	.83
Social Interaction	.78
Instructor Feedback	.81
Overall Satisfaction	.89

Data Collection

In February 2010, the researcher submitted a letter to the presidents of each participating college requesting the mailing and student email addresses for all early childhood education students currently enrolled in courses for the 2010 spring semester. Creswell (2005) suggests that pre-notifying participants that a survey will be coming in the near future is one technique to increase response rates. Therefore, on March 1, of 2010, the researcher mailed 432 pre-notification postcards (see Appendix D for Pre-notification Postcards) explaining to students that they would be receiving a survey via email in the coming week and would have until March 31, 2010 to complete it. On March 8, 2010, the researcher emailed an electronic survey link to 432 early childhood students enrolled in the 2010 spring semester at the participating community colleges. After one week, the researcher emailed follow-up reminders to all non-respondents along with another link to the survey. In week three of the survey, a second reminder was emailed to all non-respondents along with another link to the survey. A final reminder email and accompanying survey link was sent on March 29, 2010 to all non respondents requesting the survey be completed by the March 31, 2010 deadline. While many leading educational journals report at least a 50% response rate (Creswell, 2005), the researcher accepted the notion that with electronic surveys, the response rate may be as low as 30%. By utilizing several well published techniques such as using a brief instrument, studying an issue of interest to the participants, and implementing a three-phase survey administration procedure (Creswell, 2005; Fink, 2006; Fowler, 2002), the researcher anticipated between a 30% and 50% response rate before moving forward with data analysis. On March 31, 2010, the researcher had received 207 survey of the 432 surveys

emailed to participants. Before analysis could begin, the researcher excluded 24 surveys due to lack of experience in web-based courses. Students who had not completed at least one online or hybrid course were excluded from the survey regarding online course environments. The researcher received a cumulative response rate of 42%. Table 3.3 shows the response rate for each of the participating colleges.

Table 3.3

Community College Response Rate

Spring 2010

College	Subjects	Response	Response Rate
Caldwell	140	89	48.6%
Catawba Valley	181	64	35%
Western Piedmont	111	30	16.4%
Target Population	432	183	42.3%

Data Analysis

This study examined early childhood education students' perceptions of community college online courses. More specifically, Ham's revised Distance Learning Perceptions Survey (HDLPS) used in this study focused on five categories to gather data concerning students' perceptions of satisfaction in web-based courses including:

1. Section one - current feelings about computers (CEFFICACY),
2. Section two - current feelings about the Internet (IEFFICACY)
3. Section three - social interaction (SINTERACT) (items 1-12 and 14)
4. Section four - instructor feedback (IRESPONSE) (items 13 and 15-20)
5. Section five - overall satisfaction (SATISFY) with web-based course environments (items 21-34).

The instrument also incorporated open-ended questions concerning students' likes and dislikes of distance education course. The researcher included seven demographic questions to provide the research community at large with a more in-depth understanding of the target population. Once the survey period ended, data stored in the survey text files were loaded into a separate Excel spreadsheet. All string data in the Excel spreadsheet were recoded into numeric variables then imported into SPSS data files for analysis. Responses to negatively worded questions on the Likert scales were reversed so that positive responses for all questions were on the higher end of the scale and negative responses were on the lower end of the scale, thus ensuring that all scaling corresponded within composite variables (see Appendix C for Composite Variables and Reversed Questions). Furthermore, the researcher ran additional reliabilities on the assessment instrument and each of the five composite variables was tested for reliability using the Cronbach's Alpha reliability scale. Results yielded levels well above the accepted values for Cronbach Alpha of $\alpha \geq .70$. As shown in Table 3.4, the Alpha coefficient values ranged between .82 and .92 and were all well within acceptable range.

Table 3.4***Crump 2010 Reliability for HDLPS***

Composite Scale	Cronbach's Alpha
Current Feelings about Computers	.84
Current Feelings about the Internet	.84
Social Interaction	.84
Instructor Feedback	.82
Overall Satisfaction	.92

In this study, frequencies, percentages, and mean responses for each of the five survey categories were used to answer research question one. Multi-factor ANOVA analysis was used to answer question two and to identify whether or not a statistically significant difference existed between the early childhood education traditional student and the early childhood non-traditional student. Multi-factor ANOVA analysis was used to answer question three and identify whether or not a statistically significant difference existed between early childhood education students who access web-based courses from home and early childhood education students who do not access web-based course from home. Statistical significance was set at an alpha level of $p < .05$. Correlation analysis, more specifically Pearson's-r, was used to answer questions four and identify the strength and direction of the relationship between student comfort level with computers and feeling of success in web-based course. Pearson's-r was used to answer questions five and identify the strength and direction of the relationship between student comfort level

with the Internet and feeling of success in web-based course. Open-ended questions were coded using frequency of response analysis. A visual representation of the statistical procedures by question is found in Table 3.5 below:

Table 3.5

Data Analysis for Each Research Question

Research Question	Survey Sections	Statistical Method
Question 1	CEFFICACY IFFICACY SINTERACT IRESPONSE SATISFY	Descriptive Frequency, Percentage, Mean
Question 2	CEFFICACY IFFICACY SINTERACT IRESPONSE SATISFY	MANOVA
Question 3	CEFFICACY IFFICACY SINTERACT IRESPONSE SATISFY	MANOVA
Question 4	CEFFICACY SATISFY	Pearson's r
Question 5	IFFICACY SATISFY	Pearson's r

CHAPTER FOUR: DATA ANALYSIS

The purpose of this chapter is to report early childhood education students' perceptions of community college distance education courses. The researcher disseminated an electronic survey to early childhood education majors enrolled in the three participating research sites during the spring 2010 semester to gather data to answer the following research questions:

1. What are early childhood education students' perceptions of community college online learning?
2. Is there a difference in perceptions between the early childhood education traditional student and the early childhood education non-traditional student?
3. Is there a difference in perceptions between early childhood education students who access web-based courses most often from home and early childhood education students who do not access web-based courses most often from home?
4. Is there a relationship between early childhood education students' comfort level with computers and feelings of success in web-based courses?
5. Is there a relationship between early childhood education students' comfort level with the Internet and feelings of success in web-based courses?

The data and subsequent findings are presented in the following sequences:

1. Demographic data regarding participants are presented to show characteristics of the target population.

2. Perceptions of satisfaction about community college distance education courses generated using the HDLPS are presented to show early childhood students' perceptions about computers (CEFFICACY), feelings about the Internet (IEFFICACY), attitudes about social interactions in an online learning environment (SINTERACT), attitudes about instructor feedback in an online course (IRESPPONSE) and overall perceptions of satisfaction with online learning (SATISFY).
3. Also presented is an analysis of data produced using multivariate analysis of variance to show the differences between identified demographic differences in the target population and perceptions of satisfaction about community college distance education courses generated using the HDLPS to show early childhood students' perceptions about computers (CEFFICACY), feelings about the Internet (IEFFICACY), attitudes about social interactions in online learning (SINTERACT), attitudes about instructor feedback in an online course environment (IRESPPONSE) and overall perceptions of satisfaction with online learning (SATISFY).
4. Presented also is an analysis of association data produced using Pearson correlation coefficient to show the associations between early childhood education students' comfort level with computers and feelings of success in web-based courses.
5. Also presented is an analysis of association data produced using Pearson correlation coefficient to show the associations between early childhood

education students' comfort level with the Internet and feelings of success in web-based courses.

Demographics

Description of Subjects

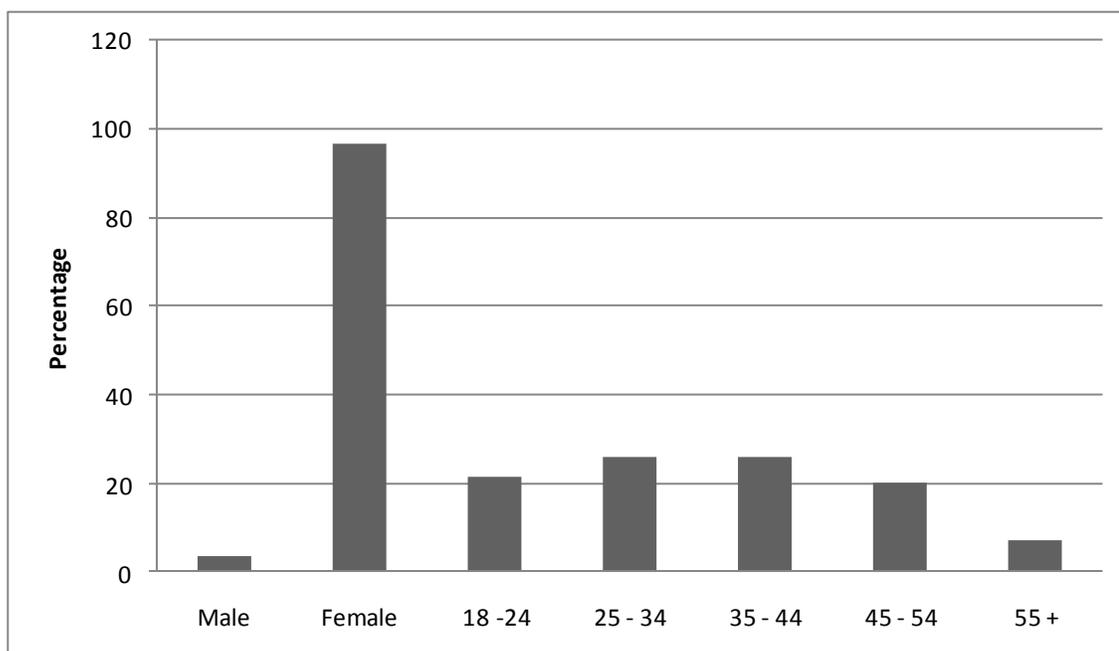
The target population of this study consisted of 432 early childhood education students enrolled in courses for the 2010 spring semester at Caldwell, Catawba Valley, and Western Piedmont community colleges. The researcher received 183 completed surveys from the target population. The researcher utilized well-established techniques such as using a concise instrument, studying an issue of particular interest to the participants, and implementing a three-phase survey administration procedure (Creswell, 2005; Fink, 2006; Fowler, 2002), and received a cumulative response rate of 42%.

Descriptive frequency analysis for gender showed 96.7% (n = 177) of participants were female while 3.3% (n = 6) of participants were male. The North Carolina Community College System's (NCCCS) 2009 early childhood enrollment by gender showed of the 11,576 students, 97% (n = 11,279) were female and 3% (n = 297) were male. Data in this study reflected similar percentage rates for both males and females when compared to the NCCCS 2009 early childhood program enrollment figures by gender.

Descriptive frequency analysis for age showed that 21.3% (n = 39) of participants were between the ages of 18 and 24, 25.7% (n = 47) were between the ages of 25 and 34, 25.7% (n = 47) of participants were between the ages of 35 and 44, 20.2% (n = 37) were between the ages of 45 and 54, and 7.1% (n = 13) of participants were 55 and older. Numbers were fairly evenly distributed between the age ranges of 18 to 34 with a total of

53% (n = 97) of participants responding to the survey being over the age of 35. Figure 4.1 provides an illustration of participants by both gender and age.

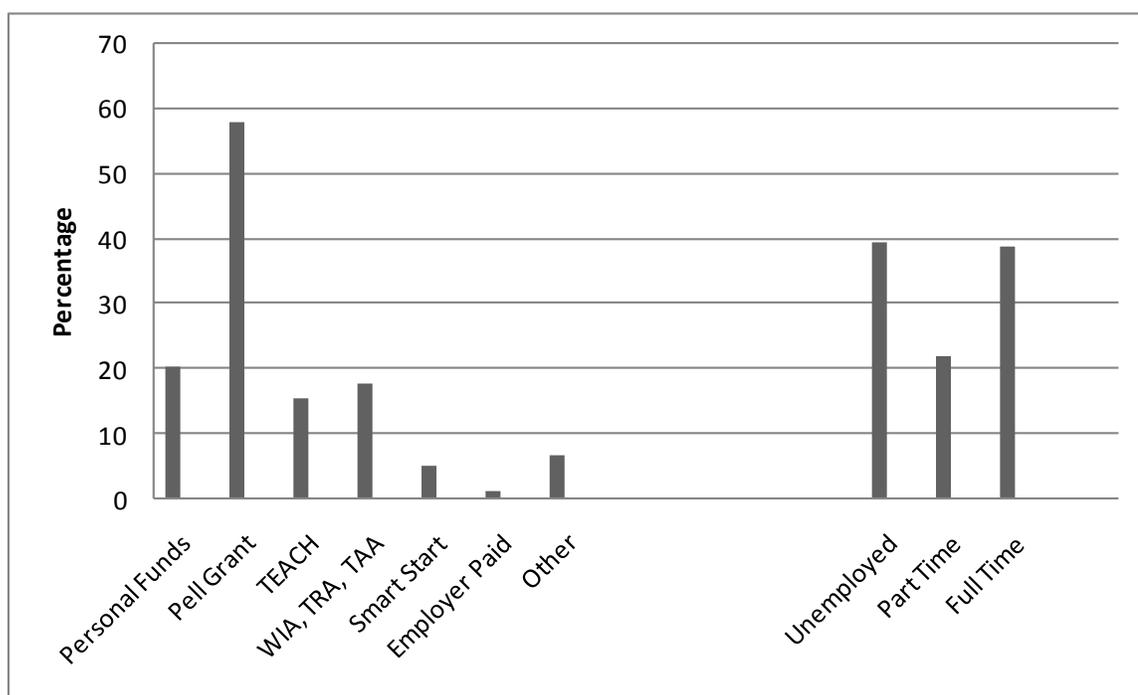
Figure 4.1 Age and Gender of Participants



In addition to age and gender questions, students were asked to identify employment status, method of tuition payment, and family education level. Forty-one percent of participants (n = 75) reported being the first in their family to attend college; however, the highest percentage of participants 59% (n = 108) were not first generation college students. As illustrated in Figure 4.2, the majority of participants were unemployed 39.3% (n = 72) and received federal financial assistance 57.9% (n = 106) in the form of a Pell Grant in order to pay for their education. Personal 20.2% (n = 37) and Workforce Investment Act funds 17.5% (n = 32) account for the next two highest percentages of method of payment. Six percent (n = 12) of participants reported paying

for tuition using scholarships, the North Carolina Education lottery grant, parental funds, and loans. These items were self reported under the title of other. Thirty-eight percent (n = 71) of participants work full-time and 21.9% (n = 40) work less than forty hours a week. While high, the number of unemployed completing this survey mirrors the soaring unemployment numbers reported by the counties in which the research sites are located.

Figure 4.2 Method of Payment and Employment Status



Experience with Online Learning Environments

Students were asked to identify the number of online and hybrid courses previously completed to establish the level of experience participants had with online learning environments. As illustrated in Table 4.1, the majority of students were previously enrolled in two or more online courses and had completed two or more hybrid

courses. The frequency statistics showed participants had a better than average level of experience in online learning environments.

Table 4.1

Number of Courses Previously Taken

Type of course	One Course		Two or More Courses	
	Frequency	Percentage	Frequency	Percentage
Online course	24	13.1	135	73.8
Hybrid course	44	24	103	56.3

Table 4.2 indicates the majority of students were experienced in the use of computers and the Internet. Frequency analysis showed that 43.7% (n = 80) of participants felt computers were central to their studies, 37.2% (n = 68) reported frequent use of computers, 9.8% (n = 18) reported occasional computer use, 8.2% (n = 15) felt computers were central to their profession, and 1% (n = 2) reported being a novice or seldom using a computer. Furthermore, 45.4% (n = 83) of participants consider the Internet as central to their studies, 34.4% (n = 63) use the Internet regularly, 14.2 (n = 26) use the Internet occasionally, 4.4% (n = 8) feel the Internet is central to their profession, and 1.6% (n = 3) seldom use the Internet.

Table 4.2***Participants' Computer and Internet Experience***

Experience Level	Computers		Internet	
	Frequency	Percentage	Frequency	Percentage
Central to my studies	80	43.7	83	45.4
Central to my profession	15	8.2	8	4.4
Frequent user	68	37.2	63	34.4
Occasional user	18	9.8	26	14.2
Seldom user	2	1.1	3	1.6

Overall, the majority of students 64% (n = 117) reported spending between three and nine hours per week completing online assignments. This was computed by adding the following responses: 41% (n = 75) spent three to five hours per week and 23% (n = 42) spent six to nine hours per week completing online assignments. Thirteen percent of participants (n = 25) spent two hours or less per week completing online assignments while 22.4% (n = 41) spent more than ten hours a week completing assignments.

Students were also asked to identify the types of learning activities that were included in the web-based course in which they had participated. Reading assignments 68.3% (n = 125) and discussion boards 63.9 (n = 117) were reported with the greatest frequency. Student-created resource lists 44.8% (n = 82) and web pages 35% (n = 64) made up the next highest percentages. Surprisingly, however, even with all the research pointing to the need for students to interact with each other within online environments,

live online chat discussions and small group collaborative projects together made up only 47% (n = 86).

Access

A portion of this study focused on student technology accessibility. Participants were asked to identify whether or not a home computer was available, what type of Internet connection was in the home, and in what location online courses were accessed most frequently. The majority of participants 94.5% (n = 173) owned a home computer with high speed Internet access 87.4% (n = 160). Six percent (n = 11) of students still access online courses using dial-up Internet services while 4.9% (n = 9) have no Internet connection in the home. As Table 4.3 shows, students access coursework most often from home 84.7% (n = 155) and in the college computer lab 8.7% (n = 16). The location identified by participants in the other category 3.3% (n = 6) was the public library.

Table 4.3

Location From Which Course Was Accessed Most Often

Type of Access	Frequency	Percentage
Personal computer in the home	155	84.7
Friend or relative's computer in their home	2	1.1
Computer at work	4	2.2
College computer lab	16	8.7
Other	6	3.3

Early Childhood Students' Perceptions

This exploratory study sought to examine early childhood education students' perceptions of community college online courses. The Ham (2002) revised version of the Hiltz's Distance Learning Perceptions Survey (HDLPS) used in this study focused on five categories to gather data concerning students' perceptions of satisfaction in web-based courses including: Section one - current feelings about computers (CEFFICACY), Section two - current feelings about the Internet (IEFFICACY), Section three - social interaction in online learning environments (SINTERACT) items 1-12 and 14, Section four - instructor feedback (IRESPONSE) items 13 and 15-20, and Section five - overall satisfaction (SATISFY) with distance education courses items 21-34.

Research Question 1: What are early childhood education students' perceptions of community college online learning?

Frequencies, percentages, and mean responses for each of the five composite survey sections were used to answer research question one. Table 4.4 shows students' feelings about computers (CEFFICACY) using frequency distribution to identify the strong to moderate variables on the HDLPS computer efficacy scale.

Table 4.4

Frequency Statistics for Current Feelings About Computers

Perception								Perception
	Strong 1	Moderate 2	Neutral 3	Neutral 4	Moderate 5	Moderate 6	Strong 7	
Dull	.5 (1)	2.2 (4)	3.3 (6)	15.3 (28)	18.6 (34)	24.6 (45)	35.5 (65)	Stimulating

Table 4.4***Frequency Statistics for Current Feelings About Computers (continued)***

Perception	Perception							Perception
	Strong 1	Moderate 2	Neutral 3	Neutral 4	Moderate 5	Strong 6	Strong 7	
Dreary	1.1 (2)	2.7 (5)	4.4 (8)	18.6 (34)	16.4 (30)	16.9 (31)	39.9 (73)	Fun
Difficult	3.3 (6)	1.1 (2)	7.7 (14)	19.7 (36)	19.1 (35)	23 (42)	26.2 (48)	Easy
Impersonal	3.8 (7)	3.3 (6)	6 (11)	21.3 (39)	21.3 (39)	15.8 (29)	28.4 (52)	Personal
Hindering	2.2 (4)	6 (11)	16.9 (31)	15.3 (28)	12 (22)	16.4 (30)	31.1 (57)	Helpful
Threatening	3.3 (6)	5.5 (10)	10.4 (19)	35 (64)	14.2 (26)	9.8 (18)	21.9 (40)	Unthreatening
Inefficient	1.6 (3)	1.1 (2)	4.9 (9)	16.9 (31)	12 (22)	26.8 (49)	36.6 (67)	Efficient
Demanding	10.4 (19)	10.9 (20)	21.3 (39)	32.2 (59)	8.2 (15)	5.5 (10)	11.5 (21)	Obliging
Unreliable	1.1 (2)	1.1 (2)	5.5 (10)	20.8 (38)	17.5 (32)	29.5 (54)	24.6 (45)	Reliable

Overall, data showed that early childhood students' perceptions about computers were positive. Reliability analysis revealed an Alpha of .84 on the HDLPS computer efficacy scale. Individual variables reported on the computer efficacy scale are described below.

1. Data showed that 35.5% (n = 65) of participants felt computers were stimulating while 15.3% (n = 28) felt neutral about computers being stimulating. Less than one percent, .5% (n = 1), felt that computers were dull.
2. Data showed that 39.9% (n = 73) of participants felt computers were fun, 18.6% (n = 34) communicated feelings of neutrality about computers, and 1.1% (n = 2) felt computers were dreary.
3. The data showed that 26.2% (n = 48) of participants felt computers were easy, 19.7% (n = 36) displayed feelings of neutrality about computer ease and 3.3% (n = 6) felt computers were difficult.
4. The data revealed that 28.4% (n = 52) of participants felt computers were personal, 21.3% (n = 39) felt neutral about computers being personal and 3.8% (n = 7) felt computers were impersonal.
5. The data showed that 31.1% (n = 57) of participants felt computers were helpful, 15.3% (n = 28) had feelings of neutrality toward computers being helpful and 2.2% (n = 4) felt computers were hindering.
6. Data showed that 21.9% (n = 40) of participants felt computers were unthreatening, 35% (n = 64) felt neutral about computers being unthreatening, and 3.3% (n = 6) felt computers were threatening.
7. The data showed that 36.6% (n = 67) of participants felt computers were efficient, 16.9% (n = 31) expressed feelings of neutrality about computers being efficient, and 1.6% (n = 3) felt computers were inefficient.
8. The data revealed that 11.5% (n = 21) felt computers were obliging, 32.2% (n = 59) expressed feelings of neutrality about computers being obliging, and 10.4% (n = 19)

felt computers were demanding.

9. The data showed that 24.6% (n = 45) of participants felt computers were reliable, 20.8% (n = 38) expressed feeling of neutrality about computers being reliable, and 1.1% (n = 2) of participants felt computers were unreliable.

Students' feelings about the Internet (IEFFICACY) were identified using the HDLPS Internet efficacy scale. Frequency distribution and descriptive statistics were used to identify the strong to moderate variables on the HDLPS Internet efficacy scale as illustrated in Table 4.5.

Table 4.5

Frequency Statistics for Current Feelings About the Internet

Perception								Perception
	Strong 1	Moderate 2	Neutral 3	Neutral 4	Moderate 5	Moderate 6	Strong 7	
Dull	1.6 (3)	0 (0)	4.9 (9)	18 (33)	17.5 (32)	25.7 (47)	32.2 (59)	Stimulating
Dreary	2.2 (4)	1.6 (3)	4.4 (8)	18.6 (34)	14.2 (26)	24 (44)	35 (64)	Fun
Difficult	3.3 (6)	.5 (1)	8.7 (16)	18 (33)	17.5 (32)	19.7 (36)	32.2 (59)	Easy
Impersonal	2.2 (4)	2.7 (5)	8.2 (15)	27.9 (51)	21.9 (40)	19.1 (35)	18 (33)	Personal
Hindering	3.8 (7)	6 (11)	15.8 (29)	19.1 (35)	13.1 (24)	13.1 (24)	29 (53)	Helpful
Threatening	5.5 (10)	4.4 (8)	16.9 (31)	32.2 (59)	17.5 (32)	7.1 (13)	16.4 (30)	Unthreatening

Table 4.5***Frequency Statistics for Current Feelings About the Internet (continued)***

Perception								Perception
	Strong 1	Moderate 2 3		Neutral 4	Moderate 5 6		Strong 7	
Inefficient	1.1 (2)	.5 (1)	6 (11)	20.2 (37)	18.6 (34)	23.5 (43)	30.1 (55)	Efficient
Demanding	12 (22)	5.5 (10)	19.7 (36)	35 (64)	8.2 (15)	8.2 (15)	11.5 (21)	Obliging
Unreliable	.5 (1)	.5 (1)	7.7 (14)	22.4 (41)	18 (33)	24.6 (45)	26.2 (48)	Reliable

Overall, data showed that early childhood students' perceptions about the Internet were positive. Reliability analysis revealed an Alpha of .84 on the HDLPS Internet efficacy scale. Individual variables reported on the Internet efficacy scale are described below:

1. Data showed that 32.2% (n = 59) of participants felt the Internet was stimulating while 18% (n = 33) felt neutral about the Internet being stimulating and 1.6% (n = 3) felt that the Internet was dull.
2. Data showed that 35% (n = 64) of participants felt the Internet was fun, 18.6% (n = 34) communicated feelings of neutrality about the Internet, and 2.2% (n = 4) felt the Internet was dreary.
3. The data showed that 32.2% (n = 59) of participants felt the Internet was easy, 18% (n = 33) having feelings of neutrality about the Internet being easy and 3.3% (n = 6) felt the Internet was difficult.
4. The data revealed that 18% (n = 33) of participants felt the Internet was personal,

- 27.9% (n = 51) felt neutral about the Internet being personal and 2.2% (n = 4) felt the Internet was impersonal.
5. The data showed that 29% (n = 53) of participants felt the Internet was helpful, 19.1% (n = 35) had feelings of neutrality toward the Internet being helpful and 3.8% (n = 7) felt the Internet was hindering.
 6. Data showed that 16.4 % (n = 30) of participants felt the Internet was unthreatening, 32.2% (n = 59) felt neutral about the Internet being unthreatening, and 5.5% (n = 10) felt the Internet was threatening.
 7. The data showed that 30.1% (n = 55) of participants felt the Internet was efficient, 20.2% (n = 37) expressed feelings of neutrality about the Internet being efficient, and 1.1% (n = 2) felt the Internet was inefficient.
 8. The data revealed that 11.5% (n = 21) felt the Internet was obliging, 35% (n = 64) expressed feelings of neutrality about the Internet being obliging, and 12% (n = 22) felt the Internet was demanding.
 9. The data showed that 26.2% (n = 48) of participants felt the Internet was reliable, 22.4% (n = 41) expressed feelings of neutrality about the Internet being reliable, and .5% (n = 1) of participants felt the Internet was unreliable.

The third composite section of the HDLPS consisted of students' perceptions of social interactions in online learning environments. Perceptions were gathered using HDLPS questions 1-12 and 14 of the survey. Table 4.6 indicates students' perceptions of social interactions in web-based courses from strongly satisfied to strongly dissatisfied. Reliability analysis for the social interaction (SINTERACT) section of the HDLPS revealed an Alpha of .84. Overall, participants expressed feelings of neutrality about

social interactions as shown in eleven out of the thirteen SINTERACT variables (Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, and Q14). Two of the SINTERACT variables (Q1 and Q12) dealing with online discussions and the availability of lecture notes, showed that a majority of participants were strongly satisfied with these components of social interaction in online learning environments. Only two of the thirteen variables (Q5 and Q7) showed that participants were dissatisfied with online social interactions, more specifically with the use of chat rooms and collaborative group activities.

Table 4.6

Frequency Statistics for Social Interaction

Variable (SINTERACT)	SD 1	MD 2	D 3	N 4	A 5	MA 6	AS 7
Q1	12 (22)	5.5 (10)	10.4 (19)	21.3 (39)	12.6 (23)	14.8 (27)	23.5 (43)
Q2	6.6 (12)	8.7 (16)	8.2 (15)	31.7 (58)	12.6 (23)	15.3 (28)	16.9 (31)
Q3	7.1 (13)	9.3 (17)	7.7 (14)	24 (44)	14.2 (26)	16.9 (31)	20.8 (38)
Q4	16.4 (30)	8.2 (15)	8.2 (15)	33.3 (61)	9.8 (18)	10.4 (19)	13.7 (25)
Q5	26.8 (49)	10.9 (20)	9.3 (17)	30.6 (56)	8.2 (15)	4.4 (8)	9.8 (18)
Q6	9.8 (18)	6.6 (12)	7.7 (14)	36.1 (66)	7.7 (14)	10.9 (20)	21.3 (39)
Q7	19.7 (36)	7.1 (13)	10.4 (19)	30.1 (55)	10.9 (20)	11.5 (21)	10.4 (19)

Table 4.6***Frequency Statistics for Social Interaction (continued)***

Variable (SINTERACT)	SD 1	MD 2	D 3	N 4	A 5	MA 6	AS 7
Q8	11.5 (21)	9.3 (17)	7.7 (14)	33.9 (62)	9.8 (18)	14.8 (27)	13.1 (24)
Q9	3.3 (6)	5.5 (10)	4.9 (9)	26.2 (48)	14.8 (27)	19.7 (36)	25.7 (47)
Q10	8.7 (16)	8.2 (15)	8.7 (16)	38.3 (70)	9.3 (17)	13.7 (25)	13.1 (24)
Q11	7.7 (14)	3.8 (7)	8.2 (15)	23 (42)	16.4 (30)	20.2 (37)	20.8 (38)
Q12	2.7 (5)	4.4 (8)	4.9 (9)	18.6 (34)	11.5 (21)	26.2 (48)	31.7 (58)
Q14	9.8 (18)	3.8 (7)	4.4 (8)	25.7 (47)	16.4 (30)	20.8 (38)	19.1 (35)

The fourth composite section of the HDLPS consisted of students' perceptions about instructor feedback in online learning environments. Perceptions were gathered using HDLPS questions 13 and 15 - 20 of the survey. As illustrated in Table 4.7, the majority of participants expressed positive feeling about instructor feedback. Reliability analysis for the instructor feedback (IRESPONSE) section of the HDLPS revealed an Alpha of .82. Five of seven IRESPONSE variables (Q13, Q15, Q16, Q17, and Q20) showed the plurality of participants had positive feelings about instructor feedback. Questions 18 and 19, pertaining to the use of a frequently-asked-questions guide and waiting for an email

from an instructor, were the only variables in which the majority of participants expressed feelings of neutrality.

Table 4.7

Frequency Statistics for Instructor Feedback

Variable (IREPONSE)	SD 1	MD 2	D 3	N 4	A 5	MA 6	AS 7
Q13	4.9 (9)	2.2 (4)	4.9 (9)	10.9 (20)	10.9 (20)	21.3 (39)	44.8 (82)
Q15	4.9 (9)	2.7 (5)	2.2 (4)	10.4 (19)	7.1 (13)	19.7 (36)	53 (97)
Q16	3.8 (7)	2.7 (5)	4.4 (8)	13.1 (24)	12 (22)	23 (42)	41 (75)
Q17	4.4 (8)	3.8 (7)	3.8 (7)	17.5 (32)	9.8 (18)	21.3 (39)	39.3 (72)
Q18	15.8 (29)	15.3 (28)	19.1 (35)	21.9 (40)	6 (11)	10.4 (19)	11.5 (21)
Q19	9.3 (17)	6.6 (12)	5.5 (10)	30.1 (55)	16.9 (31)	14.8 (27)	16.9 (31)
Q20	4.9 (9)	3.3 (6)	3.8 (7)	14.2 (26)	10.4 (19)	25.7 (47)	37.7 (69)

The fifth and final composite section of the HDLPS consisted of students' perceptions of overall satisfaction with online learning environments. Perceptions were gathered using HDLPS questions 21 – 34 of the survey. Table 4.8 indicates students' perceptions

of overall satisfaction in web-based courses from strongly satisfied to strongly dissatisfied. Reliability analysis for the overall satisfaction (SATISFY) section of the HDLPS revealed an Alpha of .92. Table 4.8 showed the majority of participants expressed feelings of satisfaction about online learning environments. Twelve of the fourteen SATISFY variables (Q21, Q22, Q24, Q26, Q27, Q28, Q29, Q30, Q31, Q32, Q33 and Q34) identify the plurality of participants were strongly satisfied with online learning environments. Two of the SATISFY variables (Q23 and Q25) showed that a majority of participants had feelings of neutrality about online learning environments. Question 23 concerns students becoming busy with other things and not completing work and question 25 pertains to students' identifying web-based courses as better learning experiences than most face-to-face courses. It is interesting to note that when looking at collective responses for question 25, the plurality of students 40.5% (n = 74) did not agree that web-based courses are a better learning experience than most face-to-face courses. This suggests that while web-based courses are convenient, many students continue to perceive courses delivered in a traditional format as an optimal learning environment.

Table 4.8

Frequency Statistics for Overall Student Satisfaction

Variable (SATISFY)	SD 1	MD 2	D 3	N 4	A 5	MA 6	SA 7
Q21	6.6 (12)	7.1 (13)	4.4 (8)	18 (33)	9.8 (18)	14.2 (26)	39.9 (73)

Table 4.8***Frequency Statistics for Overall Student Satisfaction (continued)***

Variable (SATISFY)	SD 1	MD 2	D 3	N 4	A 5	MA 6	SA 7
Q22	7.7 (14)	7.7 (14)	4.9 (9)	14.2 (26)	11.5 (21)	18 (33)	36.1 (66)
Q23	10.9 (20)	13.1 (24)	11.5 (21)	25.7 (47)	11.5 (21)	10.9 (20)	16.4 (30)
Q24	8.7 (16)	3.8 (7)	4.9 (9)	15.8 (29)	5.5 (10)	9.8 (18)	51.4 (94)
Q25	19.7 (36)	7.7 (14)	13.1 (24)	27.3 (50)	12.6 (23)	8.7 (16)	10.9 (20)
Q26	6.6 (12)	4.9 (9)	8.2 (15)	22.4 (41)	11.5 (21)	16.4 (30)	30.1 (55)
Q27	6 (11)	3.8 (7)	5.5 (10)	15.8 (29)	8.7 (16)	13.1 (24)	47 (86)
Q28	5.5 (10)	5.5 (10)	9.3 (17)	17.5 (32)	9.8 (18)	10.9 (20)	41.5 (76)
Q29	8.2 (15)	6 (11)	5.5 (10)	17.5 (32)	8.7 (16)	14.8 (27)	39.3 (72)
Q30	10.4 (19)	6.6 (12)	8.2 (15)	19.1 (35)	7.7 (14)	18.6 (34)	29.5 (54)
Q31	5.5 (10)	2.7 (5)	4.9 (9)	15.3 (28)	10.9 (20)	19.1 (35)	41.5 (76)
Q32	8.7 (16)	5.5 (10)	6 (11)	18 (33)	4.9 (9)	14.8 (27)	42.1 (77)
Q33	4.4 (8)	7.1 (13)	5.5 (10)	15.3 (28)	16.4 (30)	22.4 (41)	29 (53)
Q34	6 (11)	4.9 (9)	4.9 (9)	19.1 (35)	5.5 (10)	16.4 (30)	43.2 (79)

As illustrated in Table 4.9, descriptive analysis for the five composite variables of the HDLPS showed that, on a range from one to seven with 1 strongly disagree, 7 strongly agree and 4 neutral, mean responses were on the whole relatively positive. Only one of the five composite variables, social interaction (SINTERACT) showed mean responses in the neutral range ($M = 4.43$, $SD = 1.05$).

Table 4.9

Descriptive Statistics for HDLPS Composite Variables

Variable	N	Mean	SD
CEFFICAY	183	5.12	1.03
IEFFICAY	183	5.03	1.01
SINTERACT	183	4.43	1.05
IRESPONSE	183	5.16	1.20
SATISFY	183	5.02	1.36

Research Question 2: Is there a difference in perceptions between the early childhood education traditional student and the early childhood education non-traditional student?

As shown in Table 4.10, Multivariate analysis of variance (MANOVA) yielded p-values that were less than the .05 alpha level in one of the five HDLPS composite variables. As a result, there was only one composite variable, instructor feedback (IRESPONSE) with a statistically significant difference between the early childhood traditional and the early childhood non-traditional student. The non-traditional early childhood student was

significantly more satisfied with instructor feedback when compared to the traditional early childhood student. Although the remaining composite variables did not show a significant difference between students, data revealed the traditional students were more comfortable with computers and the Internet than the non-traditional students, while the non-traditional students were more satisfied with social interaction and overall satisfaction than the traditional student.

Table 4.10

Difference Between Early Childhood Traditional and Non-Traditional Student

DEPENDENT VARIABLE	P-Value	INDEPENDENT VARIABLE	
		Traditional Mean	Non-Traditional Mean
CEFFICACY	.215	5.30	5.07
IEFFICACY	.279	5.19	4.99
SINTERACT	.175	4.22	4.48
IRESPONSE	.046*	4.82	5.25
SATISFY	.058	4.65	5.12

*p < .05.

Research Question 3: Is there a difference in perceptions between the early childhood education students who access web-based courses most often from home and early childhood education students who do not access web-based courses most often from

home? As shown in Table 4.11, Multivariate analysis of variance (MANOVA) yielded p-values that were equal to or less than .05 alpha level in two of the five HDLPS composite variables. As a result, there were two composite variables, feelings about computers (CEFFICACY) and overall satisfaction (SATISFY), with statistically significant differences between the early childhood students who access web-based courses most often from home and early childhood education students who do not access web-based courses most often from home. Students who accessed courses most often from home expressed significantly more positive feelings about computers and stronger overall satisfaction with web-based learning environments than students who did not access courses most often from home. Furthermore, among the three remaining composite variables, students who access coursework most often from home are more satisfied. It is clear from the results of this study that students who are able to access web-based coursework most often from home are, as a whole, more satisfied with online learning experiences than those who do not access coursework most often from home.

Table 4.11

Difference Between Access at Home and Access Away From Home

DEPENDENT VARIABLE	P-Value	INDEPENDENT VARIABLE	
		Home Mean	Away Mean
CEFFICACY	.020*	5.20	4.70
IEFFICACY	.056	5.09	4.68
SINTERACT	.169	4.48	4.17

Table 4.11***Difference Between Access at Home and Access Away From Home (continued)***

DEPENDENT VARIABLE	P-Value	INDEPENDENT VARIABLE	
		Home Mean	Away Mean
IRESPONSE	.114	5.23	4.82
SATISFY	.010**	5.13	4.39

*p < .05. **p < .01.

Research Question 4: Is there a relationship between early childhood education students' comfort level with computers and feelings of success in web-based courses?

Research Question 5: Is there a relationship between early childhood education students' comfort level with the Internet and feelings of success in web-based courses?

Correlation analysis was used to examine the direction of the relationship in research question 4 and question 5. Table 4.12 shows the results of the test for correlations between students' comfort level with computers and feelings of overall satisfaction as well as students' comfort level with the Internet and feelings of overall success in online learning environments. Analysis showed that students' feelings about computers were positively correlated with their overall feelings of satisfaction about web-based courses ($r = .387, p < .01$). The more comfortable the participants were with using computers, the more satisfied they were with their experiences in online learning environments.

Correlation analysis also revealed that there was a significant correlation between students' comfort level with the Internet and participants overall feelings of success in

web-based courses ($r = .410, p < .01$). It would appear that the more comfortable participants are with using the Internet, the more satisfied they are with online learning courses.

Table 4.12

Correlation Between Student Feelings About Computers and Overall Satisfaction and Student Feelings About the Internet and Overall Satisfaction

VARIABLE		CEFFICACY	IEFFICACY	SATISFY
CEFFICACY	Pearson Correlation	1	.897*	.387*
	Sig. (2 tailed)	-	.000	.000
	N	183	183	183
IEFFICACY	Pearson Correlation	.897*	1	.410*
	Sig. (2 tailed)	.000	-	.000
	N	183	183	183
SATISFY	Pearson Correlation	.387*	.410*	1
	Sig. (2 tailed)	.000	.000	-
	N	183	183	183

* $p < .01$

Open-Ended Questions

Participants were asked to identify what they liked “best” and what they liked “least” about web-based distance education courses. As illustrated in Table 4.13, frequency analysis was used to identify coded responses. There were a total of 163 responses to the “likes best” question from the 183 respondents who completed the survey. Of the 163 responses, the plurality 39% (n = 64) reported the convenience of taking web-based courses as the most desirable characteristic. Being self-paced 29% (n = 47) and not having to come to campus, whether for reasons such as cost of gas or work interference, were also reported as a positive by participants 7% (n = 11).

Table 4.13

Open-Ended Question Responses

	Frequency	Percentage
LIKED BEST		
Convenience	64	39
Self-paced	47	29
Not Having to Come to Campus	11	7
LIKED LEAST		
Lack of Face-to-Face Interaction	31	20
Increased Work-load Compared to Seated	18	12
Technical Difficulties	12	8

Analysis for the “liked least” question revealed a total of 155 responses from the 183 total participants. Based on the 155 responses, the plurality of participants felt the lack of actual face-to-face interaction with others as the least favorite characteristic of web-based courses 20% (n = 31). Respondents expressed an increased workload as compared to seated classes 12% (n = 18) and experiencing technical difficulties 8% (n = 12) as negatives of online course environments.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

While distance education is not a new phenomenon, the rate at which community college technical program students are enrolling in web-based courses is increasing. For this reason, it is imperative for educators and college instructional leadership to assess the attitudes and needs of this particular segment of the distance learning student population. The purpose of chapter five is to offer an overview of the study, key findings and conclusions, recommendations, and implications.

Overview of the Study

The purpose of this exploratory study was to discover the perceptions of early childhood education students with regard to community college distance education courses. This study was conducted at three community colleges, Caldwell Community College and Technical Institute, Catawba Valley Community College, and Western Piedmont Community College, in a region of North Carolina commonly known as the Unifour Area. The target population for this study were 432 early childhood education students enrolled in the 2010 spring semester at the three participation community colleges. An online survey was used to collect students' perceptions of web-based learning environments.

The elements of this study consist of both inferential and descriptive analysis. The initial analysis was completed on descriptive data collected from participants currently enrolled at the three participating community colleges. Descriptive variables included participants' gender, age, employment status, computer and Internet accessibility, level of education, and level of experience with distance education courses. In the second phases of analysis, the researcher employed Multi-factor ANOVA and Pearson's-r statistical

methodologies to examine participants' perceptions of satisfaction with community college web-based learning environments. Analyses were based on the participants' responses to Ham's (2002) web-based version of Hiltz's (1994) Distance Learning Perception Survey. The researcher used both descriptive and inferential statistical methodologies to analyze data from the survey instrument to answer the following research questions:

1. What are early childhood education students' perceptions of community college online learning?
2. Is there a difference in perceptions between the early childhood education traditional student and the early childhood education non-traditional student?
3. Is there a difference in perceptions between early childhood education students who access web-based courses most often from home and early childhood education students who do not access web-based courses most often from home?
4. Is there a relationship between early childhood education students' comfort level with computers and feelings of success in web-based courses?
5. Is there a relationship between early childhood education students' comfort level with the Internet and feelings of success in web-based courses?

Key Findings and Conclusions

In examining the descriptive data from this study, the researcher found the majority of the population surveyed were non-traditional students who were receiving federal financial aid to pay for tuition. The plurality of students were unemployed, with

the next highest level of respondents, 38% (n = 71), working full-time. This demographic profile echoes the population characteristics of many rural community colleges.

However, the descriptive findings of this study did not support the research conducted by Johnson, et al (2004) which indicated the two most pressing issues regarding distance learning in rural community colleges are student access to both computers and the Internet. The data revealed that the majority of participants, 94.5% (n = 173) own a home computer with high speed Internet access 87.4% (n = 160). While a small percentage of participants, 6% (n = 11), continue to access online courses using dial-up Internet services, the data suggest access to a home computer and reliable high speed Internet services is not as significant a problem as it may have been in years past. When a computer is not available in the home, data indicated students accessed coursework most often from the college computer lab 8.7% (n = 16).

It is possible the high percentage of home computer ownership and access to high speed internet might be due in part, to personal computers becoming more affordable as well as North Carolina state-wide initiatives aimed specifically at increasing connectivity for rural residents. In 2003, Governor Michael Easley signed into law House Bill 1194, Session Law 2003-425 creating the e-NC Authority. This organization was established to continue the work begun by the Rural Internet Access Authority, created by the N.C. General Assembly in 2000, to increase broadband access in rural area across the state. The creation of e-NC reaffirmed “North Carolina's commitment to improving economic opportunity and quality of life by addressing technology needs” (e-NC, 2010, para. 2). In 2004 MCNC, an independent, non-profit organization founded to increase technology-based economic development across North Carolina, “paid the final installment, \$3.5

million, of a \$30 million donation to the e-NC Authority... in order to further the spread of high-speed Internet access across North Carolina” (MCNC, 2009, para. 1). Most recently, on August 18, 2010, Governor Bev Perdue announced that North Carolina had received \$115 million in federal Recovery Act grants to extend broadband connectivity in North Carolina. Through such grants, it seems likely that broadband access will increase across the state in the coming years as this press release from the Office of Governor Bev Perdue (2009) suggests:

These funds will create jobs and help spur economic development through expanded access to high-speed Internet in underserved areas. Increasing broadband access will create new jobs up front and provide a boost for local economies to create even more jobs and a better quality of life in the near future. These improvements are especially important in rural and underserved areas of North Carolina...this award will allow MCNC to offer affordable middle-mile broadband service in 69 of the most economically disadvantaged rural counties along the northern and southern borders of North Carolina. (para. 1)

While it is encouraging to note that data from this study shows a lack of access to both a home computer and high speed Internet may no longer be the barrier it once was, the rural community college student still faces challenges associated with technology. More specifically, students may have difficulty maintaining the technology such as updating software and equipments as well as paying the monthly bills for high speed cable access. As broadband infrastructures spread across the state carrying Internet access to rural communities across North Carolina, perhaps future priorities will shift from that of accessibility to maintenance.

Participants expressed feelings of comfort with computers and the Internet. Furthermore, with the exception of social interaction, subjects were satisfied with distance education courses available at the three participating community colleges. The majority of participants had feelings of neutrality about social interaction in web-based environments. While evidence suggests that students are not dissatisfied with the level of interaction within distance education courses, the open-ended questions revealed that a lack of face-to-face interaction is the least favorite, 20% (n =31), aspect of participation in a web-base course. Perhaps more needs to be done to engage learners and reduce the feelings of isolation that students can feel when taking distance education courses. Options such as virtual live classrooms, pod-casts, Pronto instant messaging systems, and video conferencing software such as Elluminate and Wimba can provide online collaboration that allows live synchronous class sessions, thus decreasing feeling of separation between students and faculty. However, distance education instructors must be cautious when constructing courses and not become overzealous and assume that when it comes to interaction, more is always better. As some research advocates, "Interaction is important, and the potential for all involved in teaching and training to be able to confer is essential. However, forced interaction can be as strong a detriment to effective learning as its absence" (Simonson, Smaldino, Albright, and Zvacek, 2009, p. 82).

It is interesting to note that in this study, open-ended questions also exposed students' frustration with the increased workload in web-based learning environments when compared to a traditional course. The increased workload for faculty preparing online courses is well-documented, but the inequitable practice some instructors employ of overloading a web-based course with assignments when compared to the same or

similar traditionally delivered course has not been sufficiently explored in the literature. While distance education is on the rise in higher education, results in this study show students are beginning to express negative feelings related to perceived inequalities between traditional and online course environments with regard to workload. More investigation is needed concerning comparisons of rigor in online verses face-to-face courses. Instructors must find creative ways to engage learners and maintain equal rigor to on-campus courses without making the online student more accountable than their traditional counterpart as the following points out:

Not all content is suitable for the online environment. What works in the classroom face-to-face may not work online. Content and learning processes need to be adapted to the online environment without losing effectiveness. Until more research is available about what works and what doesn't in online content and instruction, many of the design issues are trial and error. (Killion, 2001, para.26)

A small percentage of students reported technical difficulties were what they liked least about taking web-based courses. Results imply that institutions are doing a better job of preventing and responding to technical problems. Data from this study related to comfort levels with computers and the Internet suggest that students are entering web-based courses with a better understanding of the skills necessary to be successful. It is no revelation to say that technology is the underpinning upon which distance education is built. Throughout the literature, researchers advise that in order for online students to feel active and engaged in the learning process, technology cannot become an impediment: "The bottom line is that the gap between the learner and instructor cannot be bridged if

the technology, for whatever reason, does not work properly or the student cannot figure out how to use it” (Ham, 2002, p. 102).

Thirty-nine percent of participants who responded to the open-ended questions reported convenience as the best part of a distance education course. Further analysis of open-ended questions confirmed that participants select web-based courses because the delivery format offers students the ability to work on assignments at their own pace and at a time and place that is more convenient than coming to campus (Tucker, 2003).

Statistically significant differences were found between the early childhood traditional and the early childhood non-traditional student with regard to instructor feedback (IRESPONSE), with non-traditional students expressing higher levels of satisfaction than traditional students. The differences might be attributed to the unique characteristics of the traditional or millennial student. Millennials were born after 1981 and were very much protected and sheltered by both parents and authority figures. This generation has a desire for immediate feedback and a strong sense of entitlement (Gleason, 2008; Monaco & Martin, 2007). When the need for instant feedback is not met, millennials may perceive instructors are less available and therefore, may explain the reported lower levels of satisfaction. Furthermore, non-traditional students reported more positive feelings pertaining to social interaction and overall satisfaction in web-based courses. While distance education courses are attractive to a variety of students, data from this study suggest that traditional students are more comfortable with the mechanics of online learning such as computers and the Internet while non-traditional students are more satisfied with the methodological aspects of web-based education. Additionally, statistically significant differences were found between the early childhood students who

access web-based courses most often from home and early childhood education students who do not access web-based courses most often from home with regard to feelings about computers (CEFFICACY) and overall satisfaction (SATISFY). Universally across all five composite variables, more positive feelings were reported by students who access courses most often from home than students who do not access courses most often from home. As a result, community college advisors could inform students who wish to enroll in web-based courses that it is advantageous to secure reliable computer and Internet access from home before choosing to register in a distance education course.

Based on the results of this study, there was overwhelming evidence that a positive association ($r = .387, p < .01$) existed between students' feelings about computers and overall feelings of satisfaction about web-based courses. Findings support the concept that the more comfortable participants are with using computers the more satisfied they are with their experiences in online learning environment (Hiltz, 1994; Lim 2001). Furthermore, a significant correlation ($r = .410, p < .01$) between students' comfort level with the Internet and overall feelings of success in web-based courses was identified. Similar to the relationship between computer self-efficacy and satisfaction, results substantiate that the more comfortable participants are with using the Internet, the more satisfied they are with online learning courses (Ham, 2002)

Recommendations for Future Research

Additional research is needed with other rural community colleges to identify if results are similar to those found in this study. While the three research sites used in this study are located in rural areas, research conducted in rural counties in the far eastern and far western part of the state may yield difference results. This approach to research could

be expanded to examine if a difference in perception exists between early childhood education students who attend rural community colleges and those who attend urban community colleges. Future research could also explore if a difference in perception exists specifically between perceptions of satisfaction within online courses and perceptions of satisfaction within hybrid courses. Furthermore, when comparing course delivery formats, more focused research is needed comparing the effectiveness of early childhood education face-to-face courses to early childhood education online courses. Early care and education impacts the lives of children, parents and the community therefore, research should be not limited to the early childhood student, but must include research to identify the perceptions of administrators of early childhood centers about teachers obtaining their education and training through distance education.

While distance education is not a new method of course delivery at the community college, it is however relatively new in the career and technical fields. Consequently, qualitative research is needed to more deeply explore early childhood education students' experiences with distance education. Qualitative research is also needed to more acutely investigate the reasons why students are more satisfied with accessing online courses from home rather than alternative locations. Lastly, universities have faculty development centers and staff dedicated to addressing the specific needs of faculty navigating the creation of online course environments. Community college instructors have no such resources. The data extrapolated from this study related to social interaction and perceptions of excess work necessitates the need for research on faculty development for community college instructors related to best practices in engaging students in the online environment.

Summary

Childcare is a necessity for most American families. Every morning millions of parents leave childcare facilities with hopeful expectations that their child will experience an environment that promotes healthy development. Without a doubt, “Parents, educators, and policy makers expect these programs to be good for our nation’s youngest citizens” (Hooks, Scott-Little, Marshall, & Brown, 2006, p. 399). Clearly a well-trained and knowledgeable teacher is fundamental to a high quality learning environment. The review of literature further supports the belief that teachers can hone skills and teaching methodologies through continued education and training.

For many rural career and technical education students, distance education is the best, or only, option in obtaining an education beyond high school. If community colleges wish to stay relevant in the distance education race, those involved in the design and implementation of web-based courses must recognize and respond appropriately to factors related to the retention and satisfaction of online learners.

Distance education holds great potential for rural institutions of higher education as well as the career and technical student whose work and family constraints may limit the opportunity to attend the traditional on-campus college course. Today’s community college student is looking for an institution that can not only meet the need for career training and education, but can also meet the unique needs of the non-traditional student. For many rural community college students, an opportunity to further their education while simultaneously working a full-time job and meeting family obligations is what has positioned them on the distance education trajectory.

As DiPaolo states, “In the industrial age, we went to school. In the communication age, the school comes to us” (as cited in “Technology Watch,” 1999, p. 25). With colleges competing for enrollment and geographical boundaries no longer a concern, the need for administration to understand the profile of a satisfied online learner is inextricably tied to decisions that will be made regarding the continued investment of time and resources into the development of quality career and technical distance education courses and programs.

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APPENDIX A

Permission Letters from Community College Presidents

Dear Dr. Kenneth A. Boham,

My name is Tracy Crump and I have been a full-time instructor in the Early Childhood Department at Caldwell Community College and Technical Institute for the past six years. I am currently a doctoral student at Western Carolina University in the Department of Educational Leadership and Foundations.

I am requesting your permission to conduct my research using early childhood students currently enrolled at Caldwell Community College and Technical Institute for the Spring 2010 semester. My dissertation will focus on early childhood students' perceptions of community college distance education courses. Although computer-mediated instruction is not a new phenomenon, studies show a lack of research in the area of career and technical education. It is my hope that my research will improve upon and possibly expand what is currently known about how early childhood students view online education methodologies thus enhancing future teaching methods in career and technical education.

For the purpose of my research I will be conducting an online survey. I am requesting students' college email and home mailing addresses. The survey will be sent electronically with pre-notification postcards being mailed using traditional postal methods. I will be using a survey instrument that addresses students' self-assessed perceptions of online courses as well as demographic information such as age, gender, and number of online courses taken.

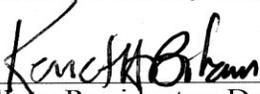
Participation in this study will be voluntary and students will be provided a guarantee of anonymity. Furthermore, the data collected will be stored securely and made available only to persons conducting this study.

If you have any further questions concerning this research please contact me at 726-2270 or trump@cccti.edu.

Thank you,

Tracy Crump
Instructor, Caldwell Community College and Technical Institute
2855 Hickory Blvd.
Hudson, North Carolina 28638
828-726-2270

I have read and understand the above information. I have received a copy of this form. I grant permission for my college to participate in this study.



College President or Designee Signature

2/8/10

Date



Principal Investigator Signature

2/8/10

Date

Dear Dr. Garrett D. Hinshaw,

My name is Tracy Crump and I have been a full-time instructor in the Early Childhood Department at Caldwell Community College and Technical Institute for the past six years. I am currently a doctoral student at Western Carolina University in the Department of Educational Leadership and Foundations.

I am requesting your permission to conduct my research using early childhood students currently enrolled at Catawba Valley Community College for the Spring 2010 semester. My dissertation will focus on early childhood students' perceptions of community college distance education courses. Although computer-mediated instruction is not a new phenomenon, studies show a lack of research in the area of career and technical education. It is my hope that my research will improve upon and possibly expand what is currently known about how early childhood students view online education methodologies thus enhancing future teaching methods in career and technical education.

For the purpose of my research I will be conducting an online survey. I am requesting students' college email and home mailing addresses. The survey will be sent electronically with pre-notification postcards being mailed using traditional postal methods. I will be using a survey instrument that addresses students' self-assessed perceptions of online courses as well as demographic information such as age, gender, and number of online courses taken.

Participation in this study will be voluntary and students will be provided a guarantee of anonymity. Furthermore, the data collected will be stored securely and made available only to persons conducting this study.

If you have any further questions concerning this research please contact me at 726-2270 or tcump@cccti.edu.

Thank you,

Tracy Crump
Instructor, Caldwell Community College and Technical Institute
2855 Hickory Blvd.
Hudson, North Carolina 28638
828-726-2270

I have read and understand the above information. I have received a copy of this form. I grant permission for my college to participate in this study.


College President or Designee Signature

2/8/10
Date


Principal Investigator Signature

2/8/10
Date

Dear Dr. Jim W. Burnett,

My name is Tracy Crump and I have been a full-time instructor in the Early Childhood Department at Caldwell Community College and Technical Institute for the past six years. I am currently a doctoral student at Western Carolina University in the Department of Educational Leadership and Foundations.

I am requesting your permission to conduct my research using early childhood students currently enrolled at Western Piedmont Community College for the Spring 2010 semester. My dissertation will focus on early childhood students' perceptions of community college distance education courses. Although computer-mediated instruction is not a new phenomenon, studies show a lack of research in the area of career and technical education. It is my hope that my research will improve upon and possibly expand what is currently known about how early childhood students view online education methodologies thus enhancing future teaching methods in career and technical education.

For the purpose of my research I will be conducting an online survey. I am requesting students' college email and home mailing addresses. The survey will be sent electronically with pre-notification postcards being mailed using traditional postal methods. I will be using a survey instrument that addresses students' self-assessed perceptions of online courses as well as demographic information such as age, gender, and number of online courses taken.

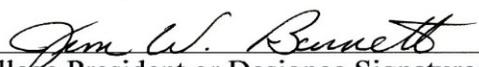
Participation in this study will be voluntary and students will be provided a guarantee of anonymity. Furthermore, the data collected will be stored securely and made available only to persons conducting this study.

If you have any further questions concerning this research please contact me at 726-2270 or tc Crump@cccti.edu.

Thank you,

Tracy Crump
Instructor, Caldwell Community College and Technical Institute
2855 Hickory Blvd.
Hudson, North Carolina 28638
828-726-2270

I have read and understand the above information. I have received a copy of this form. I grant permission for my college to participate in this study.


College President or Designee Signature

2-8-10
Date


Principal Investigator Signature

2/8/10
Date

APPENDIX B

Permission to Use HDLPS

Subject:	RE: Requesting Letter of Permission
Created By:	ham@ohio.edu
Creation Date:	8/31/2009 4:41 PM
From:	"Marsha Ham" < ham@ohio.edu >

Hello Tracy,

You have my permission to use all or part of the Students' Perceptions of Web-based Distance Learning survey instrument from my 2002 dissertation, provided that you attribute the original survey to Dr. Starr Roxanne Hiltz at NJIT and the revised version to me.

Dr. Hiltz is now Professor Emerti in Information Systems at NJIT. You might want to check out her website (<http://web.njit.edu/~hiltz/>) to find out more about her work as a part of your literature review. She has done some very interesting research and has been very active in the Sloan-C Asynchronous Network over the years.

At the time of my research, very little cross institutional research on students' perceptions of online learning had been done, and little or no research existed for perceptions of career and technical education students. Good luck with your research and your dissertation. I would be interested in your findings when you complete your study.

Best wishes,
Marsha

APPENDIX C

Composite Variables and Reversed Questions

Table C 1

Current Feelings About Computers (CEFFICACY)

Stimulating	Dull (R)
Fun	Dreary (R)
Easy	Difficult (R)
Personal	Impersonal (R)
Hindering	Helpful
Threatening	Unthreatening
Efficient	Inefficient (R)
Demanding	Obliging
Reliable	Unreliable (R)

Notes: (R) indicates item was reversed for scoring. Scales = 1-7, Alpha = .84

Table C 2

Current Feelings About the Internet (IEFFICACY)

Stimulating	Dull (R)
Fun	Dreary (R)
Easy	Difficult (R)
Personal	Impersonal (R)
Hindering	Helpful
Threatening	Unthreatening
Efficient	Inefficient (R)
Demanding	Obliging
Reliable	Unreliable (R)

Notes: (R) indicates item was reversed for scoring. Scales = 1-7, Alpha = .84

Table C 3
Social Interaction (SINTERACT)

1. Using online discussion made me communicate more with my fellow students.
 2. I felt inhibited in taking part in online discussion sessions. (R)
 3. The discussion board made a positive contribution to my learning.
 4. The web conference discussions made a positive contribution to my learning.
 5. The use of a chat room helped me to learn the course materials.
 6. I found participating in live chats to be frustrating. (R)
 7. Collaborative online group activities helped me succeed in the course.
 8. Online collaborative activities took too much of my time. (R)
 9. Identifying additional web sites to supplement course materials positively contributed to my learning.
 10. Having student home pages helped me feel part of the class.
 11. There were sufficient opportunities to interact online with students.
 12. Access to online lecture notes made a positive contribution to my learning.
 14. Computer conferencing gave me timely feedback from my instructor.
-

Notes: (R) indicates item was reversed for scoring. Scales = 1-7, Alpha = .84

Table C 4
Instructor Feedback (IRESPONSE)

13. Having email provided timely access to my instructor.
 15. I like having email connection with my instructor.
 16. I received responses to my email questions within 24 hours from my instructor.
 17. Receiving responses to my email in a timely manner motivated me to complete assignments.
 18. I waited for an email response to my question from my instructor before continuing my online participation. (R)
 19. The posing of Frequently-Asked-Questions (FAQ's) on the website helped me to move forward with my online studies.
 20. In general, my instructor returned graded assignments in a timely manner.
-

Notes: (R) indicates item was reversed for scoring. Scales = 1-7, Alpha = .82

Table C 5
Overall Satisfaction (SATISFY)

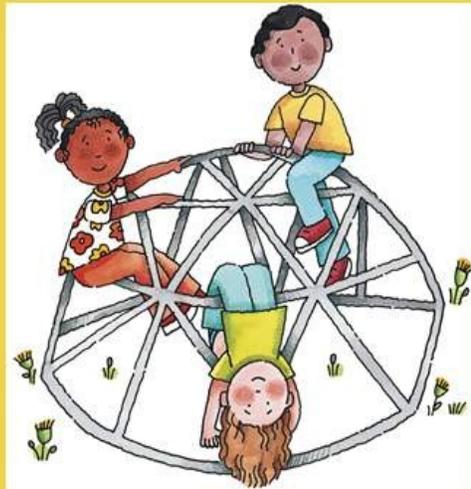
21. Taking a web-based course is more convenient.
 22. Taking a web-based course is boring. (R)
 23. When I became very busy with other things, I was more likely to stop. (R)
 24. I would NOT take another web-based course. (R)
 25. I found the web-based course a better learning experience than most face-to-face courses.
 26. I gained skills that are useful in my actual or chosen profession.
 27. I spent too much time trying to log onto the course website. (R)
 28. I spent too much time surfing the Web instead of studying. (R)
 29. I would recommend taking a web-based course to friends or associates.
 30. I found learning online to be very frustrating. (R)
 31. This course contributed to my educational, professional or professional development.
 32. The course did not meet my expectations. (R)
 33. The pace of the course was just about right for me.
 34. Overall, I was very satisfied with the web-based learning experience.
-

Notes: (R) indicates item was reversed for scoring. Scales = 1-7, Alpha = .92

APPENDIX D

Pre-Notification Postcards

CCC & TI Early Childhood Student



You will receive a short survey in your CCC&TI student email account in a few days.

Please complete the survey by March 31, 2010.

Your participation is important!

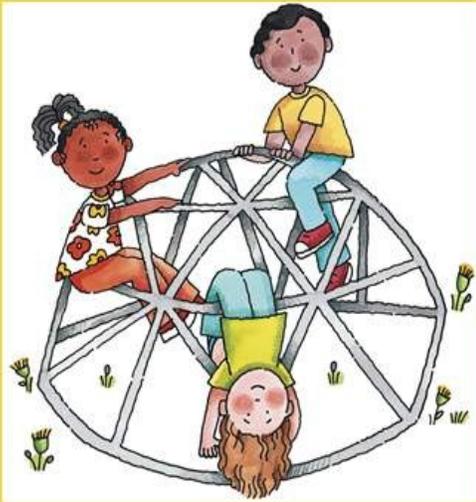
The information gained hopes to enhance future teaching methods in early childhood education.

Thank you, Tracy Crump

Doctoral Student, Western Carolina University
Early Childhood Instructor, Caldwell Community College and Technical Institute

CVCC

Early Childhood Student



You will receive a short survey in your CCC&TI student email account in a few days.

Please complete the survey by March 31, 2010.

Your participation is important!

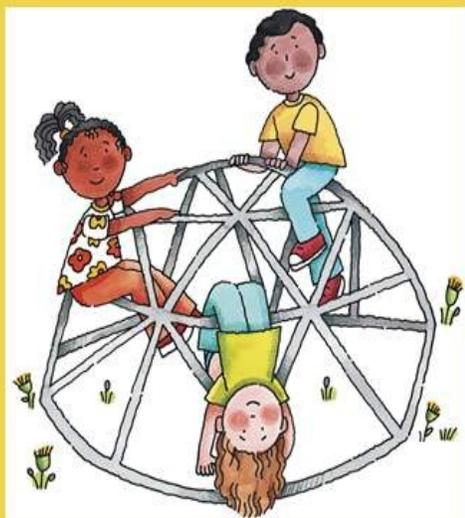
The information gained hopes to enhance future teaching methods in early childhood education.

Thank you, Tracy Crump

Doctoral Student, Western Carolina University
Early Childhood Instructor, Caldwell Community College and Technical Institute

WPCC

Early Childhood Student



You will receive a short survey in your CCC&TI student email account in a few days.

Please complete the survey by March 31, 2010.

Your participation is important!

The information gained hopes to enhance future teaching methods in early childhood education.

Thank you, Tracy Crump

Doctoral Student, Western Carolina University
Early Childhood Instructor, Caldwell Community College and Technical Institute

APPENDIX E
Survey Cover Letter

Dear Participants,

My name is Tracy Crump and I am a full-time instructor in the Early Childhood Department at Caldwell Community College and Technical Institute. I am currently a doctoral student at Western Carolina University in the Department of Educational Leadership and Foundations.

You are invited to participate in a research study. The purpose of this study is to examine early childhood students' perceptions of community college distance education courses. It is my hope that my research will improve upon and possibly expand what is currently known about how early childhood students view online education methodologies thus enhancing future teaching methods.

You will be asked to complete a short survey which is a self assessment of your satisfaction with online learning. The survey will take approximately 5 to 10 minutes to complete.

You will not be at physical or psychological risk and should experience no discomfort resulting from answering the questionnaire.

Your responses will be anonymous and the information you provide cannot be linked back to you as an individual. Any references to your identity that would compromise your anonymity will be removed or disguised prior to the preparation of the research reports and publications. Results of the survey will in no way link you to survey responses or institutions attended.

Participation in this study is voluntary; refusal to participate will involve no penalty. You are free to withdraw consent and discontinue participation in this project at any time without prejudice from your institution.

If you have any questions concerning this research project or your participation in it please contact the principal researcher, Tracy Crump at trump@cccti.edu or 828-726-2270. Questions regarding rights as a person in this research project should be directed the Western Carolina University Institutional Review Board at 828-227-7212.

Thank you,

Tracy Crump
Instructor, Caldwell Community College and Technical Institute
2855 Hickory Blvd.
Hudson, North Carolina 28638
828-726-2270

APPENDIX F

HDLPS Survey

HDLPS: Students' Perceptions of Distance Learning Courses

Important Note: The purpose of this survey is to gather information about early childhood students' perceptions of satisfaction and participation in web-based distance learning courses. Participation in this survey is voluntary. Your responses are anonymous. Non-participation in this study will not jeopardize your progress at the participating institution. If you are under 18 years of age, you may not participate in this study. Completion of the survey below will constitute informed consent in this study.

If you have any questions concerning this research project or your participation in it please contact the principal researcher, Tracy Crump at trump@cccti.edu or 828-726-2270.

Instructions: To complete the survey, click on your choice of response for each question or item. Several items will request that you rate perceptions about a statement on a scale with each end of the scale labeled. Pick the number along the continuum that represents how strongly you disagree or agree with the statement. Once you have completed the survey, ***be sure to click the "SUBMIT" button to save your responses.*** You can make changes of any individual answers by clicking on your new choice of answer prior to click the ***"SUBMIT" button.***

Which of the following best describes your experience with computers?

- I am a novice: seldom or never use computers
- I occasionally use computers
- I frequently use a computer at home
- Use of computers is central to my professional work
- Use of computers is central to my studies

Which of the following best describes your experience with the Internet?

- I am a novice: seldom if ever surf the Internet
- I occasionally surf the Internet
- I frequently surf the Internet at home

22. Taking a web-based course is boring.	<input type="radio"/>						
23. When I became very busy with other things, I was more likely to stop.	<input type="radio"/>						
24. I would NOT take another web-based course	<input type="radio"/>						
25. I found the web-based course a better learning experience than most face-to-face courses.	<input type="radio"/>						
26. I gained skills that are useful in my actual or chosen profession.	<input type="radio"/>						
27. I spent too much time trying to log onto the course website.	<input type="radio"/>						
28. I spent too much time surfing the Web instead of studying.	<input type="radio"/>						
29. I would recommend taking a web-based course to friends or associates.	<input type="radio"/>						
30. I found learning online to be very frustrating.	<input type="radio"/>						
31. This course contributed to my educational, professional or professional development.	<input type="radio"/>						
32. The course did not meet my expectations.	<input type="radio"/>						
33. The pace of the course was just about right for me.	<input type="radio"/>						
34. Overall, I was very satisfied with the web-based learning experience.	<input type="radio"/>						

What one or two things did you like BEST about your web-based course?

What one or two things did you like LEAST about your web-based course?

What type of Internet connection do you have at home?

- High speed
- Dial-up
- No Internet connection at home

I am:

- Female
- Male

My age at my last birthday:

- 18-24
- 25-34
- 35-44
- 45-54
- 55 or older

How many online courses have you previously taken?

- None
- One
- Two or more

How many hybrid courses have you previously taken?

- None
- One
- Two or more

I am the first in my family to attend college:

- Yes
- No

My current employment status is:

- Unemployed
- Work Part-time (less than 40 hours a week)
- Work Full-time (40 hours a week or more)

Estimate how much time you spend **EACH WEEK** on this course including all online and offline activities associated with the course?

- Less than one hour
- 1-2 hours
- 3-5 hours
- 6-9 hours
- 10-12 hours
- 13 or more hours

I am currently enrolled in courses at:

- Caldwell Community College and Technical Institute
- Catawba Valley Community College
- Western Piedmont Community College

I paid for this course using: **Check all that apply**

- Personal funds
 - Pell Grant
 - (TEACH)
 - WIA or TRA or TAA funds
 - Smart Start Voucher
 - Employer is paying for the class
 - Other
- Other, please specify

Exiting the survey without clicking the "SUBMIT " button will erase your answers.

SUBMIT