The purpose of this study was to determine the influence of the cohort on persistence in and withdrawal from an online cohort graduate certificate program. Three questions were explored: (1) reasons adult learners enroll in an online cohort graduate certificate program, (2) influence of the cohort to persistence in an online cohort graduate certificate program, and (3) factors that differentiate completers and non-completers. Semistructured interviews were conducted during the summer of 2003 with twenty-four respondents from the 2001 cohort representing teachers in an eighteen-month online cohort graduate certificate program at a large Southeastern university. The program includes five web-based courses, two teleconferences, one three-day academy, one on-site practicum course, and one optional four-day summer institute. Twenty-two interviews were conducted face-to-face, one interview was conducted via phone, and one interview was conducted via e-mail. Eighteen respondents completed the program while six respondents withdrew from the program for unique personal reasons or after early goal achievement. Results of this study show that the cohort had minimal influence on persistence and no influence on enrollment or withdrawal. Two factors—employment
options and the convenience and flexibility of online learning—help explain why these adults chose to enroll in the online cohort graduate certificate program. Four factors—goal proximity, support, relevance of program content, and adaptation to online learning—help explain why the majority of these adults completed the program. Unique personal circumstances and early goal accomplishment differentiate non-completers and completers. These results lead to the following conclusions: (1) the cohort is not an essential factor in participants’ persistence in an online cohort graduate certificate program; persistence in an online cohort graduate certificate program is influenced more by goal proximity, relevance and applicability of program content, and adaptation to online learning; (2) adults are motivated to enroll an online cohort graduate certificate program by its relevance to their employment needs and the convenience and flexibility of its format; and (3) in an online cohort graduate certificate program, adults may decide to withdraw as a result of unique personal circumstances or early achievement of the goals that motivated them to enroll.

INDEX WORDS: Cohort, Persistence, Completers, Non-completers, Online distance education, Web-based distance education, Adult education
APART BUT A PART IN ADULT DISTANCE STUDY:
PERSISTENCE IN AN ONLINE COHORT GRADUATE CERTIFICATE PROGRAM

by

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Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

ATHENS, GEORGIA

2004
APART BUT A PART IN ADULT DISTANCE STUDY:
PERSISTENCE IN AN ONLINE COHORT GRADUATE CERTIFICATE PROGRAM

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DEDICATION

This dissertation is dedicated to the twenty-four men and women who willingly gave of their time during the summer of 2003 so that I might interview them and learn about their experiences in an online cohort graduate certificate program. They absolutely made my research on this topic enjoyable and enlightening. They surmounted many obstacles in order to complete the certification requirements. They should be very proud of this accomplishment. Needless to say, without them this study would not have been possible. Their participation contributes significantly to research on persistence in online learning, and the results of this study will benefit not only the people who plan and teach online programs but also the many adults who participate in and earn degrees through online programs. These teachers, and others like them around the state who work with special-needs children, will always be an asset to the school systems in which they teach: Ken, Eileen, Lori, Ruth, Shirley, Shade, Teresa, Louise, Tracy, Ginger, Heather, Niki, Marilyn, Derek, Tiya, Douglas, Clarinda, Chris, Elaine, Cecil, Julia, Mary, Traci, and Becky. Thank you for all you do for the children.
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CHAPTER I
INTRODUCTION

Context of the Problem

Readers should remember that as the rapid growth of distance education and enrollments in Web-based courses outstrips publication schedules any data reported in this study will likely be out of date soon. With this in mind, it is estimated that by the year 2006, three out of four jobs will require some postsecondary education (University Continuing Education Association, 2000). Furthermore, according to Bureau of Labor Statistics data, jobs requiring a bachelor’s degree or higher are expected to account for 33 percent of total job growth in the overall economy over the period 1998 to 2008 (Mallory, 2001). As this trend continues well into the 21st century, adults already in the workforce, as well as new entrants, will need higher levels of education and training in order to compete effectively (Aslanian, 2001; Kasworm, Sandmann, and Sissel, 2000; Mallory, 2001; Spear and Mocker, 1989; UCEA, 2000; Zalenski, 2001). “Education has become the key to the future of the economy, to the development of a labor force that can match world-class standards, and to the development of a populace that can create new solutions to new problems” (Aslanian, 2001, p. 5).

Of the new jobs being created by the year 2006, managerial, professional and technical occupations will be among the fastest growing job categories, accounting for 29 percent of new job openings (Aslaninan, 2001; UCEA, 2000). Additionally, these three occupational groups also have the highest proportion of workers with a college degree,
and on average, these groups earn much higher salaries than do virtually all other occupational categories, thus demonstrating that in any economy the benefits of education pay off in the job market. More significantly, according to Mike Wald, regional economist in the Atlanta office of the U. S. Bureau of Labor Statistics, the college graduate has about two-thirds greater chance of being employed than someone with a high-school diploma (Mallory, 2001). Consequently, as the value of baccalaureate level study increases, and as the rewards of advanced degrees prove to be worth the time, effort, and financial expenditure, more and more adults are seeking further education (Lindner, Dooley, and Murphy, 2001).

The dramatic rise in American’s levels of educational attainment during the past quarter century is apparent in the number of college graduates in the U.S. population (Aslanian, 2001; Belanger and Valdivielso, 1997; Courtney, 1992; Cross, 1981; Merriam and Caffarella, 1999; UCEA, 2000). Only 12 million Americans aged 25 years and older had a college degree in 1970. By 1997, this number had escalated to 41 million with college degrees, and the number is expected to continue to rise. Moreover, while the number of college graduates continues to grow, the number of older students has been growing more rapidly than the number of younger students. According to Aslanian (2001), between 1990 and 1997, the enrollments of students under age 25 increased by two percent. During the same period, however, enrollments of persons 25 and older rose by six percent. Given these statistics, it can be anticipated that the demand for further education will continue to increase. “We at the College Board believe that there is little question that education will dominate the lives of Americans even more and will become the major public agenda challenge of the twenty-first century” (Aslanian, 2001, p. 5).
At the same time that undergraduate enrollments continue to increase, recent studies show that a greater number of adults are also going back to school to earn graduate degrees that will benefit them professionally. Of the more than two million post-baccalaureate degree enrollments during 1995, an estimated 80 percent were at the master’s level. Reports indicate that over the past thirty years, educational participation by adults has become increasingly tied to the workplace (Aslanian, 2001; Cervero, 1989; Kasworm, Sandmann, and Sissel, 2000; Stroer, 2001; Valentine, 1997; UCEA, 2000). For executives, earning an MBA remains a crucial step toward advancement. “The steady stream of executives heading back to school is increased by their nagging concerns about staying up to date in a world constantly renewed by technology” (Stroer, 2001). Furthermore, Stroer reports that a study conducted by Business Week revealed that corporate America’s top firms spend about $10 million a year on executive education, trying to attract and retain managers in a tight labor market.

While more Americans are earning college degrees, the traditional method of obtaining these degrees is rapidly changing (Aslanian, 2001; Courtney, 1992; Lindner, Dooley, and Murphy, 2001; Liu, 1999; Paul, 2001; Schrum, 2000; Stroer, 2001; UCEA, 2000). In 1970, full-time baccalaureate enrollments outnumbered part-time enrollments by nearly three to one. However, between 1970 and 1997, higher education institutions witnessed part-time enrollments increase by 125 percent, compared with 44 percent for full-time enrollments. It is estimated that 42 percent of pre-baccalaureate students attend part-time, while an estimated 60 percent of graduate degree candidates attend part-time (Aslaninan, 2001; UCEA, 2000). This fact is further confirmed by the International Association for Management Education which reports that enrollment in part-time
programs is growing faster than in the full-time equivalents, where over 60 percent of all students enrolled in MBA programs attend on a part-time basis (Paul, 2001). Furthermore, Aslanian’s 2001 study shows that the rise in part-time enrollment in higher education is to a large extent attributed to the entrance of older students.

Recent studies show several reasons for the shift from traditional full-time student status to part-time student status. First, with the average college tuition rising faster than the annual inflation rate over the past 14 years and shifts in financial aid from grants to loans, many students now have to hold jobs while in school (Aslanian, 2001; Kasworm, Sandmann, & Sissel, 2000; UCEA, 2000). Second, most part-time students are over 30 years of age and often face obstacles to pursuing continuing education that younger students do not (Aslanian, 2001; Merriam & Caffarella, 1999; Paul, 2001; Schrum, 2000; Stroer, 2001; UCEA, 2000). Job and family responsibilities prevent many adults from participating as full-time students in further education. As a result, full-time working professionals have made part-time programs a fast-growing area in college curricula (Paul, 2001; Schrum, 2000). Third, many states have a significant interest in the quality of services offered by the nation’s professionals, and as a result, are mandating continuing education for a number of professions (Queeney, 2000). These professions, as well as other organizations, are turning to colleges and universities to provide custom, on-site training programs through self-contained, distance education courses, or face-to-face instruction (Gibson, 1995; Queeney, 2000; UCEA, 2000).

Not only is the traditional full-time method of earning a degree changing, but the demographics of the traditional student are changing as well. Studies by Aslanian (2001), Kasworm, Sandmann and Sissel (2000), Lindner, Dooley, and Murphy (2001)
and UCEA (2000) report that between 1970 and 1995, much of the growth in part-time enrollments came from an increasing number of women pursuing postsecondary studies. During this period, the number of women enrolled part-time tripled from 1.2 million to 3.6 million. For men, the growth was far less pronounced, from 1.5 million to 2.5 million. Additionally, enrollments for women ages 35 years and older more than quadrupled between 1970 and 1993 (Aslanian, 2001; UCEA, 2000). These studies show that more women must be both breadwinners and caregivers, thus making full-time attendance on campus virtually impossible. Furthermore, in a study on support systems, psychological functioning, and academic performance of nontraditional female students, Carney-Crompton and Tan (2002) report that while nontraditional female students performed at a higher academic level than did traditional female students, family variables were frequently the reason these women cited for not completing their education.

As previously noted, economic and demographic shifts are rapidly changing college student populations as well as the methods of delivery of higher education. As the value of baccalaureate and post-baccalaureate level study increases, electronic distance education becomes a beacon of hope for many busy adults. No longer is the adult learner bound by “access through the frames of time, place, format, sequencing of learning, and delivery options” (Kasworm, Sandmann & Sissel, 2000, p. 456). “The ability to enroll in full-fledged undergraduate and graduate programs has opened the possibility of college instruction for time-pressed professionals as well as those shackled to home by family responsibilities or physical disabilities” (Meyers, 2000).
In examining experimental research literature about the use of telecourses in adult and higher education, Machtmes and Asher (2000) report that with the costs of technology declining and more higher education institutions offering courses electronically, learning at home has become a reality for increasing numbers of Americans, making distance education an appealing alternative for working adults with career and family responsibilities. “Although it is not surprising that adults would indicate a classroom setting with a professor present as their preferred method of instruction, their life schedules and strong need for convenience may make them turn to distance options if a classroom setting is not available” (Aslanian, 2001, p. 81). Further, recent reports show that approximately 20 percent of adults are in favor of taking courses via technology-based instruction such as online, television, or videotapes (Aslanian, 2001; UCEA, 2000). Of those adults who have successfully taken courses via distance delivery techniques, 90 percent said they would use these methods again, with online being the preferred method. For colleges and universities, these adults represent potential customers.

It is reported that at the university level in the United States distance education enrollments are in the high six figures nationally (Chyung, 2000; Hanson, Maushak, Schlosser, Anderson, Sorensen, & Simonson, 1997; UCEA, 2000). This includes enrollment in courses offered by both traditional universities and those offered by distance learning universities, where the most preferred distance method is online. These student groups constitute a majority of postsecondary enrollments and include students who are in the workforce, have family responsibilities, reside in remote locations or have mobility impairments (Kasworm, Sandmann, & Sissel, 2000; UCEA, 2000). If a
classroom is not available, close to 40 percent of undergraduate adult students said they were highly willing to take a course in some other nontraditional way (Aslanian, 2001). Hence, the implications and opportunities for colleges and universities are many. Therefore, it is recommended that institutions re-evaluate how they deliver content to students, find sources of funding for instructional technology expenses, and compete with private sector education providers with virtual campuses.

To realize the potential of distance education, institutions offering technology-based distance education credit courses have to ensure that adult learners receive not only the education they seek, but also the support they need to complete courses in the distance-learning environment. While the delivery mechanism behind electronic teaching represents a departure from traditional instructor-led teaching, its goals are identical and the wide support given to classroom instruction needs to be extended to electronic instruction (Dillon & Gunawardena, 1990; Landtroop, 1998; Singh, 2001; Zielinski, 2000). “Because highly motivated learners may be willing to endure almost any educational environment or process to achieve a passing grade, more than grades need to be examined to evaluate educational experiences of individual adult students” (Wilkes & Burnham, 1991, p. 43). Palloff and Pratt (2000) offer that the role of the group is critical to the success of the online class because members of the group come to see their contributions as important to the learning process of the whole group.

Recent research on cohort learning (Lawrence, 2002; Palloff & Pratt; 2000, 1990; Stein & Imel, 2002; Turkle, 1995) reveals that cohort groups in adult and higher education Web-based programs provide the skills needed to build and maintain learning communities in an environment that by its nature requires a certain degree of autonomy.
and self-direction. Even though the learners attend class alone with their computers, it is the sense of being a part of a community that sustains the learning group. Further, a collaborative environment with equal participation by all students is essential to the survival of the online learning group.

Based on their many years of teaching experience in the online environment, Palloff and Pratt (2000, 1999) offer their understanding of the importance of the development of an online environment that helps promote successful learning outcomes while building and fostering a sense of community among learners. They too, as others mentioned above, acknowledge that nontraditional students (that is, working adults returning to school or students who are unable to attend classes on campus for other reasons) make up a rapidly growing population in education today, and it is these students to whom online distance education is geared. They warn, however, that the assumption should not be made by academic institutions that if online courses and programs are offered that teachers will know how to teach in that environment, and more importantly, that students will know how to learn or engage with the material. Online learning by nature requires a certain degree of autonomy and self-direction and, according to Palloff and Pratt, it is incorrect to assume that students will intuitively know how to learn online. It is their position that building and fostering a sense of community among learners leads to the development of an online environment that helps promote successful learning outcomes while reducing the chances of drop out.

Lawrence (1996) found from her research on face-to-face cohort groups that support and nurturing from the cohort can help individuals to feel successful and even act as an incentive for persevering even when things are difficult or when life events threaten
success. Among the themes that emerged as structures of the experience of learning in a cohort group were building a learning community, experiencing a collaborative process, and facilitating individual development. She found that if it had not been for the cohort group, there was a good chance that many students would not have persisted.

Further, Lawrence (1999b) contends that cohort groups do not need to meet face-to-face to form a community. With the proliferation of undergraduate and graduate degree programs being offered entirely online over the past decade, programs that are asynchronous and cohort-based create their own learning communities in much the same way as the traditional face-to-face groups. While it may be possible to maintain a successful online learning community in the absence of any face-to-face interaction, Lawrence (2002) suggests bringing the students together for a residential workshop at the beginning of their program. Participants get to know one another and have a face and voice to relate to the name later seen on the screen.

Among other factors that need attention are motivators and deterrents for adult learners who choose to participate in online learning. Examining these factors may strengthen online programs’ responsiveness to the needs of the individual learner, promote students’ motivation to learn, and encourage learner persistence to complete online learning activities. In her literature review of motivational factors to participation in adult education, Liu (1999) concludes that both the psychological-focused interpretation of motivation (e.g., Houle’s 1961 orientations of goal-oriented, activity-oriented, and learning-oriented), as well as sociological factors such as personal needs and conflicting social forces, help explain adult learners’ decision to participate in adult education. Similarly, Courtney (1992) posits from his historical analysis of participation
research that “sociological considerations appear to play as important a role as psychological factors in finally determining the likelihood that people will try to learn” (p. 80).

In his research on adult student persistence, Pearson (2000) reports that many adult students approach college after some change in their work, family, or personal situation. In light of this, he contends that adult students follow many paths to college, that they experience college in addition to the rest of their lives, and that their college connection comes within a web of other connections:

These connections and experiences make them both very committed to learning and more likely to leave college. They have higher grade point averages and they are more likely to drop out. They actively participate in classroom dialogues and have trouble trying to balance the demands of work and family and school. They experience life changes that fuel a return to college and that paradoxically also stall or block their persistence. (p. 1, italics in original)

In addition to situational barriers or external barriers beyond the individual’s control (that is, cost or location of program, family responsibilities, work demands), and dispositional or psychosocial obstacles (that is, beliefs, values, attitudes, and perceptions about education or about oneself as a learner), Cross (1981) proposes institutional barriers as a third deterrent to participation. She posits that institutional barriers include “all of those practices and procedures that exclude or discourage working adults from participating in educational activities” (p. 98). Palloff and Pratt (2000) encourage institutions already offering distance learning classes and those considering offering such
classes to embrace the new pedagogy required for the delivery of distance education that builds inter-activity and community into what is otherwise a flat, text-based medium. They argue that it is critical for institutions to choose technology that enhances students’ ability to connect with one another thereby enabling them to form a learning community.

Why adults do or do not participate in adult learning activities has been the subject of numerous studies spanning some forty years (Anderson & Darkenwald, 1979; Aslanian, 2001; Aslanian & Brickell, 1980; Boshier, 1971; Courtney, 1992; Cross, 1981; Darkenwald & Merriam, 1982; Houle, 1961; Johnstone & Rivera, 1965; Morstain & Smart, 1974). However, for the most part, these studies were based on traditional, face-to-face learning environments and profiled the typical adult learner as white, middle class, employed, younger, and better educated than the non-participant. Furthermore, then as now, employment-related reasons accounted for the majority of participant interest in continuing education (Merriam & Caffarella, 1999).

More recent distance education quantitative research (Clow, 1998; Hanson, et. al., 1997; Iverson, 1995; Landtroop, 1998; Moore & Thompson, 1997; Osborne, 2001; Pearson, 2000; Sammons & Kozoll, 1994; Schilke, 2001; Spendlove, 2000; Wittington, 1997; Zalenski, 2001) has revealed motivators and some deterrents that affect participation and persistence in the distance-learning environment. Generally what these studies found was that barriers to persistence among adult distance learners are complex and difficult to define with any one instrument. Further, the findings regarding the impact of the various factors on persistence are mixed due to inconclusive research results and the lack of generalizability (Moore, 1997). Beyond that, the studies reflect older and less traditional groups in which the majority of the students are working
women, and non-traditional age students who may lack computer self-efficacy or self-discipline to complete assignments in isolation.

Although the results of the quantitative studies mentioned above for the most part make an important contribution to the prediction of course completion, Osborne (2001) contends they are not sufficient predictors in isolation. In other words, while student goals, student commitments, and pre-entry attributes, including skills, abilities, prior schooling, and family background, play a significant role in course completion, there is still a need to focus on social and academic integration as significant aspects of the relationships and experiences of the distance learner. Further, Eastmond states:

The strength of quantitative approaches is that they can indicate the extent of some phenomena or attitude, but their drawback is that they seek to reduce personalities, relationships, and outlooks into a numerical analysis and predefined categories, without capturing the richness of what is going on in the setting (1995, p. 20).

Even with the advantages of electronic distance education and increasing participation of adults in online learning, research shows that when students and teachers are separated by either time or place, dropout rates for distance courses are usually higher than those for comparable face-to-face courses (Chyung, 2001; Jorgensen, 2002; Kember, 1995; Kennedy & Powell, 1976; MacGregor, 2002; Schilke, 2001; Zielinski, 2000). In order to help explain attrition from online classes, MacGregor used the I6PF inventory to compare personality differences between online and face-to-face students. Her findings show that personality does appear to matter when predicting who is likely to complete an online course. The online students who successfully completed their courses were more
introverted, accommodating, self-controlling, and responsible than those who met in traditional classrooms. In a case study of attrition in Web-based instruction for adults, Schilke reports that analysis of the interviews revealed a continuous lack of learner preparation for the online-learning environment. Similarly, Zielinski reports in recent training literature that 90 percent of employees who took an instructor-led classroom program completed the training, while only 50 percent of the self-paced Web learners completed the same course. Zielinski attributes this dropout rate to such factors as poor incentives to learn, problems with technology, and the inability of poorly designed courseware to hold a person’s attention. Chyung cites similar reasons for attrition.

In their meta-analysis of the effectiveness of telecourses in distance education, Machtmes and Asher (2000) found that most of the studies reviewed failed to provide information about dropout rates, thereby casting doubt on the results. They contend that it is rare for the author of a study to discuss the attrition issue, and yet, research indicates that there can be a high dropout rate associated with learners taking distance courses. “Without knowing the dropout rate, the reviewer is left to assume that attrition was not a problem, even though it may have been” (27).

A few studies have reported improvement in retention rates for online courses when interventions have been put in place to instill a sense of community (Cook, 2002; Hill, 2002; Jorgensen, 2002; Osborn, 2001). In identifying at-risk students in university videoconferencing and web-based distance education, Osborn (2001) reports that of the 501 students enrolled in the nineteen distance education courses offered during the summer and fall of 1999, 86.69 percent completed the courses. Hill reports that Concord University’s School of Law retention rate has remained stable at 70% after introducing
interventions aimed at addressing motivational factors. Similarly, Jorgensen’s examination of Wisconsin Technical College revealed an average online retention rate of 72 percent after methods were introduced to create and promote a learning community. Cook reports comparable retention rates in University of Wisconsin-Madison’s engineering masters degree program in which 24 of the cohort of 30 students, through new levels of student support, completed the online program in 2002.

Eastmond (1995) posits that one of the difficulties institutions that offer distance education courses has is obtaining a thorough, in-depth understanding of their individual students needs. Further, Granger (1990a) states:

Personal factors such as background and learning styles, prior learning and experience, students’ expectations, skills levels and motivation can vary widely in significance. For the most part, however, these are known by distance faculty almost intuitively at the level of “what might work” or “what to look out for” (p. 165).

Further, Eastmond contends that by the very nature of distance education, faculty and institutions are physically separated from those they serve, and interactions with them are mediated—either by letter, telephone, or computer network. As such, the time and space separation involved in studying distance education students—citing the difficulty of traveling to students’ homes or work sites or having telephone discussions with them in probing, unstructured interviews—inclines researchers to favor quantitative measures, that is, contacting hundreds of learners with a questionnaire or similar instrument using the mail system.
Finally, most of the research on distance education provides “snap-shot” profiles of student content learning and/or student attitudes. In their review of research in distance education, 1990 to 1999, Berge and Mrozowski (2001) found that the research tended to emphasize student outcomes for individual courses rather than for total academic programs. Additionally, and just as significant, they found that the research does not adequately explain why the dropout rates of distance learners are higher than those of traditional face-to-face learners. There continues to be a paucity of research on persistence in online total academic programs, as well as a paucity of research on the influence of the cohort on persistence in these programs.

Statement of the Problem

Though there is a strong demand for higher education opportunities that has resulted in dramatic increases in participation by adults in distance learning, and though there is considerable evidence of the effectiveness of distance education in bringing about learning, there is no research yet to help institutions understand why online students drop out more frequently. Further, there is a gap in what has been studied on the influence of the cohort on persistence in or withdrawal from complete online graduate programs. Given the paucity of research on both completers and non-completers at the end of online cohort graduate certificate programs, a significant problem emerges. Why do some adult learners stay and others leave an online cohort graduate certificate program? Students who are academically challenged and come from backgrounds without significant web-based experience may not fare well in the independent and isolated atmosphere that is typical of online instruction (Swail, 2002). Does being in a cohort influence persistence?
Purpose of the Study

The purpose of this study was to determine the influence of the cohort on persistence in and withdrawal from an online cohort graduate certificate program. The following research questions guided this study:

1. Why do adult learners say they enroll in an online cohort graduate certificate program?
2. How does being in a cohort influence persistence to complete or to withdraw from an online cohort graduate certificate program?
3. What factors differentiate non-completers from completers in an online cohort graduate certificate program?

Significance of the Study

Literature searches discovered a gap in what is being researched in web-based distance education, particularly in the areas of the influence of the cohort on student persistence for a total academic certificate program. Further, there continues to be an inadequate explanation of why the dropout rates for distance learners are higher than those for on-campus learners. Tinto (1993) argues that research must also enable institutions to address the policy question of how they can act to enhance graduate persistence and completion by looking at the successful as well as the unsuccessful student experience. A better understanding of the influence of the cohort on persistence in and withdrawal from an online cohort graduate certificate program could provide a theoretical basis for the planning, design, and delivery of improved online cohort graduate certificate programs that promote building learning communities in cyberspace.
Given the increased importance of distance education in meeting adult learners’ needs, the present study attempts to identify general categories that may help inform the critical issue of high drop out rates in online distance education and add to the body of knowledge concerned with student persistence. While drop out may be attributed to variables outside the online program, theoretical considerations give distance educators a benchmark against which decisions can be made with confidence that directly affect the practice of distance education. By focusing on the influence of the cohort on both adults who complete and those who withdraw from an online cohort graduate certificate program, this study may point towards a systematic approach that higher education institutions can take to begin to correct the attrition problem in online distance education. A systematic approach affords higher education institutions the opportunity to carefully design and carry out interventions step by step, from the beginning to the end, thus allowing educators and instructional designers to view instructional materials and programs as being subject to continuous evaluation and revision.

If online degree programs are to live up to their true potential, program planners need to know why adult learners are dropping out of online programs at such a high rate. “The programs that adult educators construct through their program planning practices are always intended to improve some situation in the world. The central question that program planners must confront is what kinds of programs can best bring about the needed improvement” (Mills, Cervero, Langone, & Wilson, 1995). With clarification about the influence of the cohort on persistence in online programs, program planners may have more information as they focus on planning programs where plans, courses,
and programs are learner-focused, continually meeting the academic needs of the distant learner.

Knowing more about the influence of the cohort on persistence in online learning will benefit not only those who plan and teach online courses, but also those who enroll in cohort web-based distance education classes as well. A greater understanding of why adults choose to study via a cohort in distance education and what deters them from completing the program is necessary to ensure quality of the education experience. Does the cohort contribute to a sense of community for the online learners and if so, is it strong and vital enough to affect persistence? Results from this study may provide information regarding student needs early enough in the course for educators to address these needs and modify existing instruction that allows for more collaboration and connection, thereby giving students learning experiences that are tailored to the environment and situation in which they find themselves.

Finally, the potential significance of this study may extend beyond the single online cohort graduate certificate program studied here. Results from this investigation may prove helpful for other online cohort programs as well. To date, there is very little published research on causes of drop out in web-based instruction and only one study was found that offered an analysis of learner identified barriers to completion of Web-based courses. Interviews by Schilke (2001) revealed a continued lack of learner preparation for the demand of the online learning environment. Therefore, results of this study may build a foundation for future research and investigation which can advance the field of distance education, providing a vital link between research in older technology-based
distance education and today’s research in distance learning delivered by web-based technology.

At the close of the twentieth century, one could easily observe that many graduate-level institutions had launched web-based distance-learning programs. As the twenty-first century commences, the number of such institutions offering degrees through distance learning will likely multiply; and one author projects online learning to become fifty percent of lifelong learning (Marsello, 2001). Because it is more economical to retain students than to recruit new students into a program, knowledge of what motivates adult learners to complete an online program as well as what deters them from completing a program may be the most economically important area of adult and continuing education during the next decade (McGivney, 1996). By focusing on adult learners participating in an online cohort graduate certificate program, this study may reveal the voices of the adult learners who complete such a program as well as the voices of the adult learners who withdraw from the program. Such a revelation may help delineate the interaction of variables that have been shown to influence an adult’s decision to participate in a web-based learning activity and subsequent perseverance to complete that learning activity.

**Definition of Terms**

**Distance education** – any formal approach to learning in which a majority of the instruction occurs while educator and learner are at a distance from one another

**Online program** – a distance education program delivered using the Internet

**Synchronous communication** – direct communication where all parties involved in the communication are present at the same time
Asynchronous communication – communication that does not require all parties involved in the communication be present and available at the same time

Cohort – a group of learners who move through a set program of study as a single unit
CHAPTER II
REVIEW OF THE LITERATURE

Introduction

The purpose of this literature review is to describe and evaluate previous research in distance education in order to clarify what is already known about attrition and persistence in distance education as well as to report on the literature on the influence of the cohort on persistence as well as to provide a theoretical basis for the research proposed in this study. With a few exceptions, all the studies cited here are based on distance education, have been published within the last decade. Both quantitative and qualitative studies are included, and comprise research on nontraditional adult learners in distance education.

In order to focus this study, Chapter II is divided into six main sections. The first section presents recent research on demographics that affect adults’ participation in distance education. Section two presents a brief historical perspective on distance education. The third section focuses on research in distance education: general research in distance education and research on web-based distance education. Section four presents research on attrition and persistence in distance education. Research on motivators and barriers to participation by adults in distance education comprises the fifth section of the chapter. Section six focuses on research on cohort groups in adult and higher education.
The literature reviewed represents a variety of disciplines and fields. The main literature comes from the fields of distance education and adult and continuing education. Regardless of the fields, particular emphasis is placed on those studies that relate to attrition and persistence to show basic conceptual and theoretical implications for this study.

Most of the sources for this study come from a comprehensive examination and collection of previous studies identified mainly through the GALILEO (Georgia Libraries and Learning On-line) and GALIN (Georgia Libraries Network) systems at the University of Georgia Libraries. Three databases in the GALILEO System were searched: ERIC (Education Resources and Information Center), PsychINFO, and Dissertation Abstracts. Various academic journals were also reviewed, such as Adult Education Quarterly (formerly Adult Education), The Chronicle of Higher Education, New Directions for Adult and Continuing Education, Distance Education, and The American Journal of Distance Education. The literature review also includes unpublished doctoral dissertations, published proceedings, published contributions to a symposium, an unpublished paper presented at a meeting, and information from the newsletter Distance Education Report, as well as articles or chapters in edited books. Minimal reviews from more recent training literature and popular media were also included.

Appendix A presents a summary of the literature review. The table is constructed following the Sample Chart Method (Caffarella and Olson, 1993) in Merrian and Simpson, 1995.
The number of adult learners in higher education has grown steadily over the last thirty years (Aslanian, 2001), with total full- and part-time higher education enrollments of students age thirty and older growing sixty-three percent to 4.3 million in the past twenty years (UCEA, 2000). Almost seventy-five percent of today’s undergraduate students are considered “nontraditional” because of their age (typically they are a few years older than most high school graduates), the degree to which they are financially independent, the fact that many attend part time (forty-eight percent), the amount of time they work, and whether they have dependents (Evelyn, 2002).

Job requirements continue to fuel the increase in the nontraditional student population, and recent studies reveal that a greater number of adults are going back to school to earn graduate degrees that will benefit them professionally (Aslanian, 2001; Courtney, 1997; Merriam & Caffarella, 1999; Valentine, 1997; UCEA, 2000). The most recent UCEA (2000) study predicts that through 2006, three out of four jobs will require some postsecondary education.

As current demographic and economic trends acknowledge the need for workers to fill jobs requiring further education, the need for more and better education increases steadily. According to Verdiun and Clark (1991), distance education should play a significant role in this expansion of educational opportunity for adults.

Distance education may become of far greater importance in America in the years ahead because it is so cost efficient in most applications and because it allows for in-place learning by working adults. If society is to cope with this growing need for continuing education, the
role of the adult educator must take on new meaning and importance.

(p. 199)

While informal learning and traditional adult education will continue to offer greater opportunities for educational experiences, Whittington (1997) contends that adult learners will seek out distance education programs because they have found that these courses meet their learning needs while allowing them to remain in the work force. Consequently, distance education will move ahead, serve many other adults and their learning needs, fit into adults’ busy schedules, and provide knowledge, skill, and attitudes so vital to adults and their well-being (Verdiun & Clark, 1991).

**Historical Perspective on Distance Education**

Verduin and Clark (1991) define distance education as “formal instruction in which a majority of the teaching occurs while educator and learner are at a distance from one another” (p. 19). Zalenski (2001) extends the definition by adding that the same quality of instruction should occur between student and teacher even though they are separated by distance. A brief review of the history of distance education follows.

The origins of contemporary distance education in the United States can be found in correspondence education, an educational delivery method originating in the late 19th century (Moore & Thompson, 1997). Formal American distance study can be traced back to the Society to Encourage Study at Home, an organization founded in 1873 by Anna Eliot Ticknor, who originated the exchange of comments as well as grades with students (Verduin & Clark, 1991). The Society to Encourage Studies at Home attracted more than 10,000 students in twenty-four years. Students of the classical curriculum
(mostly women) corresponded monthly with teachers, who offered guided readings and frequent tests.

In 1878, John Vincent created a home reading circle for adults that eventually evolved into the Chautauqua movement, a popular education society based on the idea of expanding access to education to all Americans (Moore & Kearsley, 1996; Verdiun & Clark, 1991). Five years later the Chautauqua College of Liberal Arts awarded academic degrees to students who completed the required summer institutes and correspondence courses. Thus, Chautauqua became known as the first significant distance education effort in America.

The first university-level correspondence study division in America was founded in 1892 at the University of Chicago and incorporated principles and ideas from Chautauqua. However, while the University of Chicago was successful, at least in terms of numbers, lack of enthusiasm within the university for the program was partly responsible for its demise. The University of Wisconsin experienced the same temporary fate when its correspondence study program was discontinued in 1899 (Hanson, et al., 1997; Moore & Kearsley, 1996; Verdiun & Clark, 1991). However, the University of Wisconsin eventually became the nation’s leader in correspondence programs when correspondence study was reinstated seven years later within the school’s University Extension Division (Harroff, 2002).

Another pioneer in the field of correspondence during the late 1800s was Illinois Wesleyan, offering bachelor’s, master’s and doctoral degrees. Between 1881 and 1890, Illinois Wesleyan enrolled 750 students, yet by 1900, enrollment had dropped to
approximately 500 students. Concerns about the quality of the program eventually prompted a recommendation that it be terminated in 1906 (Hanson, et al., 1997).

Education by correspondence experienced a resurgence at the beginning of the twentieth century, and by 1910 there were more than two hundred correspondence schools in the United States. Garrison (1989) attributes much of this growth in correspondence education to the rapid transition to an urban society; basically, correspondence was the only opportunity for many adults to improve their socioeconomic condition. “This growth of correspondence education during times of change and transition was a pattern that was to repeat itself” (Garrison, p. 52).

According to Garrison (1989), the term distance education grew out of a need for a concept broader than correspondence study that could encompass new communications technology for the delivery of education at a distance. The growth of distance education during stages of development in the United States was made possible through the availability of new communications technology (Garrison, 1989; Hanson, et al., 1997; Moore & Kearsley, 1996; Verduin & Clark, 1991). Advances in electronic communications technology helped determine the dominant medium of distance education (Garrison, 1989; Hanson, et al., 1997). For example, in the 1920s, at least 176 radio stations were constructed at educational institutions. Although most were gone by the end of the decade, land grant colleges retained many of these stations.

The term “telecourses” covers those courses in which the primary communication technology is recorded video that can be distributed by mail or through local television channels (Moore & Kearlsey, 1996). Television teaching programs were first produced at the University of Iowa, Purdue University, and Kansas State College in the early 1930s.
(Hanson, et al, 1997), but were highly experimental prior to 1950. However, it was not until 1951 that college credit courses were offered via broadcast television through Case Western Reserve University. Eventually, Chicago community colleges followed in 1956, offering an Associate of Arts degree by television.

Satellite technology, developed in the 1960s and made cost effective in the 1980s, made possible the rapid spread of instructional television. Unlike earlier forms of distance education, satellite-based courses, sometimes referred to as “narrowcasting”, allowed for courses to be delivered to students in groups according to a schedule determined by the instructor (Hanson, et al., 1997; Moore & Kearsley, 1996). While the early experiments were criticized for being poorly planned, recent attempts at satellite-delivered distance education have been more successful. In the latter half of the 1980s and early 1990s, distance education consortia based on satellite television were used by corporations to conduct training, by the Department of Defense to deliver educational programs to numerous sites, and by the Adult Learning Satellite Services (ALSS) to deliver satellite television courses to colleges and universities, businesses, and hospitals (Moore & Kearsley, 1996).

The development in the late 1980s and early 1990s of fiber optic communication systems allowing for the expansion of live, two-way, high quality, audio and video systems expanded the concept of distance education. Many now consider fiber optic delivery systems as the least expensive option for the high-quality, two-way audio and video required for live two-way interactive distance education (Hanson, et al., 1997).

Today, distance education opportunities are quickly growing through the use of computer networks and computer-mediated communications (CMC). CMC increases the
potential for interaction and collaborative work among the students, a type of collaboration which was difficult with previous forms of distance education (Berge & Collins, 1995; Eastmond, 1998; Hanson, et al., 1997). Each mode of CMC is classified according to its predominant communication paradigm: one-alone, one-to-one, one-to-many, and many-to-many (Berge & Collins, 1995). As a result, conferencing, electronic mail, and bulletin board systems are playing an increasingly important role in regional, national, and international distance education endeavors (Moore & Kearsley, 1996). For this reason, many faculty members now use the convenient user interface of the World Wide Web to make course materials available to their students.

Research in Distance Education

General Research in Distance Education

According to Moore and Thompson (1997), the original target groups of distance education efforts in the United States were adults with occupational, social, and family commitments. This remains the primary target group today, with distance education providing instruction to learners unable to attend traditional classes as well as to those who prefer distance education to traditional classes. Further, distance education provides the opportunity to widen intellectual horizons as well as the chance to improve and update professional knowledge. Lastly, distance education stresses individuality of learning and flexibility in both the time and place of study (Hanson, et al, 1997). Hence, almost every university or college, large corporation, or school district in the United States today is involved in some type of distance education (Moore & Kearsley, 1996).
In an attempt to answer questions about the effectiveness of distance education, Moore and Thompson (1997) reviewed a selection of literature primarily on research from 1986 to 1996. The main focus of the review was on research on the effectiveness of interactive telecommunications media per se and the effects that their use have on learners’ achievement and attitudes, on teachers’ achievement and attitudes, on course design and curriculum issues, on cost, administration and organization, and on policy making in education. The authors conclude that teaching and studying at a distance via electronic telecommunications media is effective when effectiveness is measured in three areas: achievement of learning, attitudes of students and teachers, and return on investment. The findings of this literature review follow.

Most of the early studies of learner achievement in distance education were conducted with adult populations (noncredit students, graduate students, medical personnel, teachers, and military personnel) in a variety of content areas (finance, library science, psychology, and mathematics). Studies on factors that influence achievement in higher and continuing education reveal mixed results. Pugliese (1994) reports that social integration factors do not appear to influence achievement in distance learning. In contrast, Dille and Mezack (1991) report that personality and demographic factors appear to correlate with achievement. Several continuing education achievement studies compared achievement of students in traditional face-to-face classes with students in distance education classes (Ritchie & Newby, 1989; Souder, 1993). Generally, the findings of the comparison studies show that instruction via distance delivery was as effective as instruction delivered traditionally.
Studies on learner perceptions and attitudes in higher education again report mixed findings. While a majority of the studies report more positive attitudes toward learning in a face-to-face environment than in a distance learning environment (Pirrong & Lathen, 1990; Ritchie & Newby, 1989), others show that adults are satisfied with the distance learning mode as a way of offering them academic and professional advantages (Jones, 1992; Stahmer, Smaldino, Hardman, & Muffaletto, 1992).

Cost-effectiveness studies of technologically mediated instruction focus on cost avoidance, increased productivity, and increased access. Findings show that cost-effectiveness of distance education must focus not only on costs alone but also on costs in relation to educational value. While distance education technologies may be less expensive than comparable face-to-face instruction, access that is extended to greater numbers of students decreases possibilities for each student to interact with the instructor or with other students. “Achieving an appropriate balance between the distribution levels necessary to realize cost-effectiveness and the level of interaction necessary for a particular learning experience may necessitate new organizational structures” (Moore & Thompson, 1997, p. 51).

Moore and Thompson (1997) add several reservations to their conclusions on effectiveness of distance education over the ten-year period reviewed. First, most of the research is anecdotal and offered by persons with limited resources and institutions with vested interest in the technology or programs under review. Second, evaluation research often has little external validity, is not often linked to existing research, and provides limited information for anyone not connected with the program being evaluated. Finally, research in distance education over the past sixty years has included studies designed to
answer immediate, practical questions, to evaluate the effectiveness of distance education programs, to compare media technology, and to assess student achievement and satisfaction. While previous research in distance education has contributed to the knowledge base in distance education, Moore and Thompson call for future research on the development and integration of knowledge about the distant learner, the teacher, and communications. In particular, persistence and attrition in distance education was not addressed in the literature on effectiveness of distance education.


In their review of some thirty plus studies in the early 1990s on learning outcomes and learner perceptions, Hanson, et al. (1997) found that the focus of the distance education research agenda had shifted to a more learner-centered approach, not only looking at achievement, but also examining learner attributes and perceptions as well as interaction patterns and how these contribute to the overall learning environment. For example, the focus was not so much on which medium is best, but on what attributes of the medium contribute to a positive learning experience. In order to highlight the shift, Hanson, et al. (1997), organized their research around the areas of course design, instruction, policy and administration, and learners and learning. Research on persistence and attrition in distance education continues to be absent from the literature.

Several findings by Hanson, et al. (1997), are consistent with Moore and Thompson (1997). The largely anecdotal nature of distance education literature makes it difficult to generalize. Comparing the achievements of distance learners to traditional learners or between distance learners using different technologies continues to show “no
significant difference.” Finally, subjects tend to be highly motivated adult learners providing little help in generalizing to other populations. The authors argue that in spite of these limitations, the literature supports the conclusion that distance education is an effective method for teaching and learning. However, Hanson, et al. (1997), call for future research that focuses on psychological and social attributes of the learner, their milieu, conditions and study motivations. Such research may reveal insight into the high dropout rate associated with distance education.

Major Review of the Literature 1990 – 1999: Berge and Mrozowski

In order to provide a summary of dissertations and published research in distance education from 1990 to 1999 and address gaps in past distance education research, Berge and Mrozowski (2001) conducted an extensive literature review of 890 articles and abstracts on distance education. Their review included dissertation abstracts and articles from four peer-reviewed English-language journals (The American Journal of Distance Education (United States), Distance Education (Australia), the Journal of Distance Education (Canada), and Open Learning (United Kingdom), published continually from 1990 to 1999, accessible world wide. Only those articles and abstracts reporting a research methodology were included in the review.

The authors acknowledge that research in distance education conducted prior to 2000 has received harsh and consistent criticism for several reasons. In particular, studies that include non-control for extraneous variables, lack of use of randomly selected subjects, lack of validity and reliability of the instruments used to measure student outcomes, and inadequate control for the feelings and attitudes of students and faculty (that is, “reactive effects”) call into question the rigor and strength of the research.
Organizing their research around four main underlying research issues in the field of distance education—focus on learner characteristics and needs, media influence on the instructional process, access issues, and the changing roles of teacher, site facilitator, and student—Berge and Mrozowski (2001) discovered that pedagogical themes (design issues, learner characteristics, and strategies for active learning and increased interactivity) dominated the research and appear to be increasing in recent years (192 articles, 151 articles, and 139 articles respectively). Categories such as equity, accessibility, and cost/benefit trade-offs were seldom discussed during this decade. Furthermore, research on learner support, which increases student completion rates, appeared in only forty-nine of the 890 articles.

Berge and Mrozowski’s 2001 report shows gaps in what is being researched and calls for a research agenda in the field of distance education that could point the way to removing these and other gaps that have historically been found in the early decades of research in distance education. The authors report the following gaps in what is being researched:

The research has tended to emphasize student outcomes for individual courses rather than for a total academic program. The research does not adequately explain why the dropout rates of distance learners are higher than those of traditional face-to-face learners [text in italics added]. The research focuses mostly on the impact of individual technologies rather than on the interaction of multiple technologies. The research does not adequately address the effectiveness of digital libraries. (p. 17)
Two of the four gaps in what is being researched are rather significant to the learner and the program: the research has tended to emphasize student outcomes for individual courses rather than for a total academic program, and the research does not adequately explain why the dropout rates of distance learners are higher than those of on-campus learners.

In summary, teaching and studying at a distance, especially that which uses interactive electronic telecommunications media, is an effective method for teaching and learning. However, there are several reservations expressed by researchers in their conclusions on effectiveness of distance education. First, widely criticized comparison studies continue to be popular. Second, the largely anecdotal nature of distance education literature makes it difficult to generalize the findings. Third, the methodology of many of the studies is weak, specifically in regard to control of the populations being compared or otherwise studied, the treatments being given, and the statistical techniques being applied. Finally, Berge and Mrozowski (2001) report four major gaps in what is being researched: research on a total academic program; research on dropout rates of distance learners; impact of the interaction of multiple technologies; and the effectiveness of digital libraries.

Recommendations for future research include a widespread agreement on a research agenda for distance education with a focus on psychological and social attributes of the learner that could help point the way to removing these and other gaps that have historically been found in the early decades of research in distance education. Additionally, the structure of distance education research should include distance
students, their milieu, conditions and study motivations that may point to reasons for high attrition rates.

Educators around the world are experimenting with new opportunities for learners almost anywhere to access education through connections and technologies that did not exist ten years ago. Further, teaching and studying at a distance, especially that which uses interactive electronic telecommunications media, can provide the connectedness missing in many distance education classes.

Research on Web-Based Distance Education

According to the National Center for Education Statistics (NCES, 1999), fifty-eight percent of two-year and four-year postsecondary education institutions offering distance education in the 1997-98 academic year used asynchronous Internet instruction (e-mail, listservs, and Web-based courses). Of these, eighty-two percent planned to start using or to increase their use of asynchronous Internet instruction as a primary mode of delivery in the next three years. “Distance education has expanded to the Internet to the extent that in some settings the terms distance learning and Web-based courses are becoming synonymous” (Eastmond, 1998, p. 40). [italics in original]

The increasing trend of Internet courses delivered via the World Wide Web offers widespread accessibility and a shift from oral to written communication (Howland, 2000). Students experience the flexibility afforded by an asynchronous environment as well as the opportunity to interact synchronously with the instructor and other students in the online class. Beyond its logistical advantages, Eastmond (1998) views the Internet as holding important educational promise for engendering active and experiential learning.
as well as fostering collaboration and individualized construction of meaning in learning communities that extend beyond the boundaries of the traditional classroom or campus.

In order to develop a better understanding of the nature of electronically facilitated study groups, Holt, Kleiber, Swenson, Rees, and Milton (1998) summarize research conducted from 1994 to 1996 using electronic mailing lists and Web-based conferencing. Students from “Issues and the News” journalism classes at Ithaca College and adult education classes in “Methods” and “Public Policy” at the University of Georgia took part in a series of on-line National Issues Forums. Until recently, the National Issues Forums were almost entirely face-to-face exchanges.

Holt, et al. report that students participating in the mailing list tended to interact individually with the moderators, but very little with one another independent of the moderators. Several students reported frustration when they e-mailed a comment or question and received no replies. In contrast, following a topic on the Web was clearly easier for the students because of the more coherent visual sequencing of ideas. Students were able to participate more efficiently when using the Web interface. Holt, et al. report that among previously identified benefits of using Web conferencing such as flexibility in individual schedules, the ability to participate without restraints of time and place, and having time and space to focus independently on the process and content, students who may not be comfortable participating in face-to-face groups have a voice in Web-based learning.

Based on previous research, interviews with instructors, potential instructors, and students in online courses, and drawing on her own experiences in teaching online courses, Schrum (1998) provides an overview on issues surrounding the emerging
pedagogy of online education. Traditional distance learning was based on passive media (paper, audio, and video broadcast) and was frequently conducted with each learner corresponding only with the instructor. In contrast, online courses are place and time independent, offer many-to-many communication, as well as collaborative learning and dependence on text-based communications to promote thoughtful and reflective responses. Further, Schrum’s research revealed that courses delivered entirely or principally via computer-mediated communications (CMC) are effective for well-motivated students. Suggestions for increasing student motivation include creating interactivity in the online environment through collaborative student work, using synchronous and asynchronous judiciously, requiring students to post comments on readings, and providing access to the instructor’s personal notes.

Using qualitative methodology, Davis and Denning (1998) report on the use of computer-mediated-communication (CMC) during the teaching of a postgraduate course offered as part of two programs: two modules in the M.Ed. in Training and Development offered by the Centre for Adult Education at the University of Manchester, UK, and a course in the Masters/Doctoral Program in Adult Education and Human Resource Development in the Department of Adult Education at the University of Georgia, USA. I was a doctoral student in the University of Georgia class. The computer-mediated component of the course was conducted over a five-week period, using the groups that had been formed in the initial five-day face-to-face meetings on the University of Georgia campus. The structure of the CMC was both asynchronous and synchronous.

The evidence from Davis and Denning’s analysis indicates that as with groups in face-to-face environments, some students in distance education environments will be
more active than others. Further, what the evidence suggests is that there are different kinds of activity. For example, to lurk in cyberspace does not mean that one is not taking part. Students commented favorably about the opportunity to enter a conference, read and then leave, only to return afterwards with more reflective observations. Davis and Denning propose that this is not something that is available in the face-to-face seminar.

Utilizing the case study method, Wilkerson and Elkins (2000) investigated the effectiveness of instruction in a Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) course designed for workforce development and delivered exclusively on the Internet for the first time in the United States and Canada. The study included evaluation of the course content and delivery, the clarity of presentation of complex technical concepts, student receptivity to the Internet delivery mode, and student assessment results. Components of the students’ experience studied included motivation, nature of interactions, advantages and disadvantages, issues associated with Internet delivery, and student outcomes.

Findings of the CAD/CAM study indicate that the Internet delivery met the expectations of the students. Further, by offering a course that would not have been practical or possible through traditional delivery, participants were satisfied with all components of the program except for selected technical problems. In particular, the students felt that this distance learning course was as effective as a traditional class. On the whole, Wilkerson and Elkins conclude that it is possible to have flexibility and responsiveness of Web-based instruction and still meet students’ learning expectations in a course as highly technical and graphics intensive as CAD/CAM.
Acknowledging the increasing presence of women in distance education coupled with the need for examining the phenomenon of computer-mediated communication in Internet courses, Howland (2000) investigated ways that women discerned their learning in an Internet classroom through self-direction and connection. The data from her study suggest that the women demonstrated self-directed learning strategies in connecting with learning opportunities through the instructor, instructional materials, and other students. Identified as self-directed connections to learning, the women spoke most of the connections through other students that occurred in the context of the online course’s Discussion Board. Additionally, they used others’ experiences and new perspectives gained from this dialogue to construct knowledge that they could apply to their own professional situations. While online communication appeared to have mediating effects, including mediating students’ perceptions of gender differences in the class, it also presented conditions that interfered with learning for some students. Therefore, Howland calls for future research that is designed to teach us how the appropriate use of technology and pedagogy could make distance education more beneficial for all students.

Seeking to give voice to the online graduate-level educational experiences of women, Smith-Stoner and Jean (2000) collaborated on a study to explore meaningful learning in the online graduate classroom for women. Noting that few studies exist which explore the central concepts such as the reason(s) students drop out of these programs, the process by which students adapt to a text-based learning environment, or how students interact online, Smith-Stoner and Jean believe that it is necessary to provide insight into what it is like to be a distance student and identify teaching methods that promote the best of what education has to offer. The authors conclude that virtual
environments using computer-mediated communications show the most amount of promise for freeing women from being silenced. Since communication is text based using some form of electronic posting, one can deliver a complete thought in a virtual classroom without being interrupted.

Interest in the increasing number of educational institutions actively using the Internet to reach their learners and the relatively little information available on adult learners specific to Web-based distance education prompted Lim (2001) to investigate personal and experiential factors of distance learners related to satisfaction with their Web-based distance education courses. Lim’s primary purpose was to develop a predictive model for satisfaction of adult learners enrolled in a Web-based course and their intent to participate in future Web-based courses.

Most of the participants in Lim’s study were female, 30-49 years old, and more than half were graduate students, a demographic distribution consistent with the characteristics of adult learners identified in Howland’s (2000) study. The predictor variables used in this study were computer self-efficacy, academic self-concept, age, gender, academic status, years of computer use, frequency of computer use, computer training, Internet experience in a class, and participation in a workshop for a Web-based course. Lim found that overall, adult learners with higher computer self-efficacy were more likely to be satisfied with their Web-based distance education courses and they were more likely to take future Web-based courses.

In their research on online learning, Russell and Ginsburg (1999) describe the general features of online learning communities, looking specifically at community organizations that have constructed learning delivery systems that effectively combine
elements of the distance learning and traditional models of instruction. In reviewing the
online learning community framework of three Southeastern programs—SeniorNet,
Neighborhood Networks (provides training for employment), and Bridging the Gap of
Isolation/Powering Up (provides online learning in rural communities), Russell and
Ginsburg report four features indicative of these communities: learning environment,
vision of adult learning and development, instructional mode, and social construct. Each
case study focused on two major tenets of adult education: effectiveness of each
community in mediating between its members and technology to provide access to tools
for learning, and capability of each community to provide learning experiences that are
transformative, rewarding, accommodating of learning differences, and inclusive of life
experiences. Russell and Ginsburg conclude that the goals and outcomes of each
program are complementary to those of adult education in general and adult literacy in
particular.

In an overview of the instructional design model for Web delivered professional
nursing courses within and beyond the borders of Wisconsin, Winfield, Mealy, and
Scheibel (1998) report on the results of The University of Wisconsin Learning
Innovations Center’s design guidelines that structure weekly learning activities to
enhance student motivation and participation. The overview focused on six design
guidelines: (1) build up user confidence with technology; (2) build in the instructor’s
presence and personality; (3) provide a clear set of learning activities; (4) build on
personal and professional experiences of participants; (5) relate content to real situations
using case studies and simulation; and (6) build in collaboration and facilitated team
projects. Using a multilevel course evaluation process that involved students, instructor,
and the client (Learning Innovations Center), Winfield, et al. report the design guidelines to be a success in building up user confidence with technology which in turn enhanced confidence and participation in the Web courses.

In summary, the above mentioned research using qualitative case studies and interviews shows that Web-based education is as effective as traditional-based education, has the advantage of not being time and place dependent, and is flexible enough to offer the opportunity for reflection before responding. Virtual environments using computer-mediated communications show the most amount of promise for freeing women from being silenced. Further, adult learners with higher computer self-efficacy were more likely to be satisfied with their Web-based courses and are more likely to take future Web-based courses.

Recommendations for future research include research that is designed to elucidate how the appropriate use of technology and pedagogy could make distance education beneficial for students. Additionally, factors that require further research for Web-based delivery format include frequency of interaction and incorporation of cooperative and active learning strategies. What is missing from the recommendations is research on attrition and persistence in Web-based environments.

According to the National Center for Educational Statistics (NCES, 1999), the number of distance education course offerings and the enrollments in higher education has increased dramatically during the past several years. However, high dropout rates have been a continuous problem in distance education (Kember, 1995; Verduin & Clark, 1991). Moreover, distance education institutions are usually reluctant to publicly announce their dropout rates and yet, attrition of distance education learners is known to
be higher than that of on-campus learners. Further, attrition is much higher at the beginning of a course than towards the end of the course (Rubenson, 1986).

Research on Attrition and Persistence in Distance Education

Eastmond (1995) reports that tutorial support, in telephone, peer, and face-to-face means positively affect course completion and satisfaction. Beyond that, some institutions have employed several successful practices to enhance student completion: pacing constraints, mailing reminders to apparent laggards, adding counseling, tutorials, or computer conferencing, and speeding up assignment turnaround rates. The following research on attrition and persistence in distance education is organized according to studies without an identifiable delivery method, studies reporting multiple distance delivery methods, studies reporting telecourse delivery method, and studies reporting Web-based delivery method.

Studies without an identifiable delivery method. Brindley’s (2000) study of social support intervention on distance learner behavior in a dual mode university, traditional and distance, sought to evaluate the effects of an early intervention in the form of social support on distance learning outcomes, specifically learner behavior associated with persistence and academic achievement, learner satisfaction and intention to re-enroll. Findings from the study show no significant effect of the intervention on learner behavior or satisfaction. However, findings did reveal a strong positive relationship between social support and intention to re-enroll.

In his research on persistence, Landtroop (1998) investigated Master-level, theological, distance education to determine if the academic and social integration factors espoused by Tinto’s 1975 “Model of the Student Attrition Process” had significant
associations with student attrition in a distance education environment. Additionally, Landtroop investigated initial commitment to completion of a degree as a factor in persistence. Landtroop’s findings are consistent with Tinto’s (1993) theory of graduate communities and doctoral persistence, specifically that, in addition to goal commitment, persistence is molded by interactions between faculty and students and between students and students. The vast majority of the participants in the study believe strongly that faculty and students should interact around the academic material, an intervention that can be accomplished more readily today in distance education with the recent advances in technology that are becoming more feasible and increasingly more affordable.

Using both quantitative and qualitative methods, Suciati (1990) studied the effect of motivation on academic achievement in a distance education setting to reveal reasons for unsatisfactory student achievement and a high level of non-reregisters (potential dropouts) in an Indonesian Open University. Suciati proposes persistence as a function of motivation which in turn influences achievement. Inter-correlations for all indicators of motivation, persistence, and achievement showed that some factors of motivation correlated with persistence as well as achievement, and that some factors of persistence correlated with achievement. Further, the collinearity between motivation and persistence indicates that empirically the two concepts were indistinguishable, even though theoretically they are regarded as distinct concepts.

Whittington (1997) investigated the effect of selected variables on achievement and persistence among students involved in distance education to determine if selected variables could be used to discriminate between traditional and nontraditional status. Independent variables were age, gender, marital status, number of dependents, family
support, family trauma, personal income, work status, work status of spouse, educational level, field of study, hi-tech media, audio visual media, non-technical media, program rating, and locus of control. Whittington administered the Participation in Distance Education Questionnaire (PIDEQ) and the Rotter’s Internal-External Locus of Control Scales to a sample of 80 traditional and 88 nontraditional students enrolled in distance education courses at the University of the West Indies, Cave Hill Campus. The results of Whittington’s study reveal no significant difference in the means of either persistence or achievement between traditional versus nontraditional status.

Wittington (1997) makes three specific recommendations from his findings for improving persistence: (1) increase student support through seminars, teleconferencing, tutorials, and e-mail communication for the individual as well as subject groups; (2) provide user-friendly guides and manuals on the technologies used in distance education; and (3) periodically conduct curriculum needs assessment to dictate review of current program content and direct future program content.

Similarities in the above studies include recommendations for increasing student support as well as academic and social integration factors as means for increasing student persistence. Additionally, the above four studies were quantitative studies and thus the theories and hypotheses are tested in a cause-and-effect order. Differences in the studies reviewed include a study to determine if variables could be used to discriminate between traditional and nontraditional status, one study applied the Tinto’s Model of the Student Attrition Process in a graduate degree program, one study focused on a dual mode university (traditional and distance), and one study focused on an Open University
setting. What is missing from these studies is the reality that is constructed by the individuals involved in the research situation.

Studies reporting multiple distance delivery methods. In order to increase understanding of those variables associated with distance education persistence and withdrawal, Garland (1993) used ethnography to elucidate the declarative and tacit understandings of seventeen withdrawal and thirty persisting students registered for credit in five introductory academic courses in the natural resource sciences offered by the University of British Columbia. The courses incorporated print based, television broadcast, video, audio or slides, and face-to-face methods of content delivery. Initial quantitative analyses of student characteristics such as gender, age, academic background, marital status, socioeconomic background, and learning style as measured by the Myers-Briggs Type Indicator, revealed no differences between the withdrawal and persisting cohorts.

The ethnographic interviews, which allowed the students to talk about the things that mattered most to them, revealed that the two cohorts reported similar hindering or facilitating incidents in four areas: situational, institutional, dispositional, and epistemological. Potential situational barriers identified were poor learning environment and lack of time. Potential institutional barriers identified include cost, problems with institutional procedures, problems with course scheduling/pacing, problems concerning tutorial assistance, and instructional design problems. Potential dispositional barriers identified consist of lack of a clear goal, stress of multiple roles, time management, learning style problems, adult pride, and psychological, social and economic factors. Finally, potential epistemological barriers to persistence include epistemology of course
differing from student’s epistemological stance, internal epistemological gap between presented content and expectations, content lacking personal relevance/interest, and lack of prerequisite knowledge. According to Garland (1993), most significant about the epistemological findings is that course content itself cannot be ignored in any theoretical or practical consideration of distance education attrition.

Garland (1993) argues that each student is subject to a complicated interplay of positive factors encouraging persistence and negative factors promoting withdrawals. “These variables, many of which are complex, have ill-defined permutations, and are context-dependent, act additively and synergistically in such a multitude of ways that decisions to withdraw appear idiosyncratic in nature” (p. 195). This finding parallels Kember’s (1995) position that there is no one solution to the dropout problem.

Finally, Garland (1993) reports that while the largest number of barriers to persistence identified in the study related to the psychological and sociological nature of the student (that is, dispositional barriers) and were experienced by completers and non-completers, the completing students were able to overcome these barriers while the non-completers were not. Garland’s 1993 recommendations for reducing attrition rates are consistent with other research findings that encourage increasing interactive opportunities (Cook, 1995; Landtroop, 1998; Owens, 2001), creating uniquely optimal conditions for each and every learner to persevere (Chyung, 2001), and greatly increasing the amount of dialogue through proactive tutorial assistance and audio teleconferencing (Kember, 1995).

Recognizing that educators involved in distance learning programs need reliable methods for assessing the needs of their students, Osborn (2001) centered her study on
identifying at-risk students in distance education. The purpose of the research was to select a set of key variables related to a student’s ability to complete a distance learning course, and to test the reliability and validity of an assessment instrument based on these variables. Students participating in both Web-based and video conferencing courses were included in the study, and at the time of the study, the majority of the distance learning courses were graduate-level courses at the University of North Texas.

Osborn’s assessment instrument was developed from research on four models of student attrition—Billings’ 1989 Model of Correspondence Course Completion, Tinto’s 1975 Model of Student Persistence, Kennedy and Powell’s 1976 Descriptive Model, and Kember’s 1995 Open Learning Model. These four models suggest three general areas or constructs that are central to understanding student decisions and behavior in completing a course: entry characteristics, social integration, and academic integration. Nine subscales or indicators of completion were based on these three broad constructs: computer confidence, enrollment encouragement, financial stability, locus of control, motivation, need for support, preparations for course, study environment, and tenacity. In addition to the nine subscales, the instrument included seven predictor variables of one item each: age, grade-point average, educational level, hours worked per week, credit hours taken in the current semester, number of previous distance learning courses taken, and years out of college.

Results of Osborn’s 2001 study indicate that the at-risk students were taking more credit hours and working fewer hours per week; had not taken distance learning courses prior to participation in the study; were continuing students or students who had been away from college less than two years; and had less-stable study environment, lower
motivation, and less computer confidence compared to the completing students. Of the nine subscales in the survey, study environment, motivation, and computer confidence were the strongest in differentiating completing students from non-completing students. Further, while entry characteristics, such as GPA and educational level, make an important contribution to the prediction equation of course completion, Osborn contends these are not sufficient predictors in isolation.

Focusing on the identification of variables that predict graduation and thereby contribute to the effort to understand, describe, and serve an increasingly visible community of distance learners, Zalenski (2001) examined matriculates and graduates of the Bachelor of Liberal Studies offered via distance education at the University of Iowa where the typical student takes upper division classes by correspondence, the Iowa Communications Network (a two-way synchronous audio-video television communications system), the World Wide Web, or at distance education sites. Zalenski collected demographic descriptions of the students, and assessed their satisfaction with various institutional services by asking them to rate their perceptions of institutional considerations, academic experiences, and personal experiences as well as their previous educational and financial experiences.

Zalenski’s 2001 findings reveal that personal characteristics, life experiences, and financial factors play a larger role in persistence and graduation than do either academic or institutional factors, that students entering the program with more earned hours and a specific reason for completing their degrees are more likely to graduate, and that students who receive support from their employers are also more likely to graduate than students
who do not. Students are less likely to graduate if they lose their motivation, work long hours while enrolled, and/or lose financial support of either a parent or employer.

Two of the above studies reviewed incorporated quantitative methodology alone while the third used ethnography in a qualitative approach as well as a quantitative analysis. One study included withdrawing and persisting students, one study focused on at-risk students, and one study focused on the identification of variables that predict graduation. Similar findings in the three studies suggest that situational, institutional, and dispositional circumstances play a significant role in persistence. What is missing from these studies is research on a total academic web-based program.

*Studies reporting telecourse delivery method.* In order to predict the potential for completion of telecourses, Iverson (1995) developed the Telecourse Success Prediction Inventory. The inventory was sent to 1,000 randomly sampled students who had registered for a telecourse at Triton College during August, 1993 to June, 1994. Two hundred and thirty-one subjects participated in the study and were placed into completer and non-completer groups based on their telecourse grades. Attribution style (attribution to ability/success), achievement motivation, and use of institutional support were found to be predictive of telecourse completion. The separate effects of motivation, attribution, study habits, telecourse history, and demographic factors on telecourse success were also examined. Significant results were found between telecourse grades and motivation, attribution to ability/success, ability/failure, and effort/success, telecourse history, and study habits.

In her study of two-year college students in interactive distance education telecourse classes using the Georgia Statewide Academic and Medical System (GSAMS)
network, Clow (1998) investigated the relationship between learning strategies and student academic achievement as evidenced by persistence (course completion) and performance (grades). In addition to a questionnaire she developed, Clow used the Learning and Study Strategies Inventory (LASSI), an instrument that measures ten adult learning characteristics believed significant in academic achievement: attitude, motivation, time management, anxiety, concentration, information processing, selecting main ideas, study aids, self testing, and test strategies. No significant difference was found between telecourse completers and non-completers with regard to demographic factors. This study indicates that by combining attribution style, motivation, and institutional support it is possible to predict telecourse completion.

Results of Clow’s 1998 study indicated a strong correlation between grade point average and seven of the LASSI variables: motivation, time management, anxiety, concentration, test-taking, selecting main ideas and attitude. Motivation was the most useful variable in predicting academic success, supporting earlier research by McGivney (1996) and confirmed by Chyung (2001) and Osborn (2001). However, no variable was significant in predicting course completion (persistence) for this group of students. These results align with Kember’s 1995 findings that there is no one cure for attrition, and Clow suggests that further research on variables that do affect persistence should be pursued.

In their research on the effectiveness of telecourses in distance education, Machtmes and Asher (2000) used meta-analytic procedures to examine experimental research literature about the use of telecourses in adult and higher education. Abstracts of over 700 possible studies were examined. Research reviewed included (1) studies that compared traditional instruction to either live or pre-produced adult telecourses; (2) those
that were true or quasi experiments; (3) all studies from 1943 up to 1997; and (4) studies with codeable outcomes and context data. Additionally, the studies reviewed compared a remote site with a traditional site. The literature search identified thirty studies that met the parameters for inclusion in the meta-analysis. Only nineteen of these studies were used in the analysis because effect sizes could not be extracted from the other eleven.

Machtmes and Asher (2000) found that methods that enable distance learners to become more personally involved in the course contribute to the likelihood that students will succeed. While research indicates that there can be a high dropout rate associated with learners taking distance courses, this issue was not discussed in the articles reviewed. Machtmes and Asher contend that without knowing the dropout rate, the reviewer is left to assume that attrition was not a problem, even though it well may have been—a similar concern expressed by Berge and Mrozowski (2001) and Osborn (2001).

Similarities in the research design of the above three studies include either a quantitative approach to studying persistence in telecourses or a meta-analysis of experimental research on persistence in telecourses. Further, similar findings show that methods that enable distance learners to become more personally involved in the course contribute to the likelihood that students will persist. What is missing from the three studies is the voice of the students who withdrew from the course or program.

Studies Reporting Web-based Delivery Method

In order to determine whether a cause-and-effect relationship existed between persistence and the method of instruction (small group, moderated communication versus large-group, non-moderated communication), Spendlove (2000) conducted a quasi-experimental study to explore ways in which Internet-delivered courses could be taught...
in a cost-effective manner while continuing to provide a quality academic experience to distance learners. Findings from her study indicate that forming small, moderated discussion groups may have had a positive effect on persistence. Further, effective interaction is also credited with increasing persistence levels of online learners. Meaningful and sustained communication is a key factor in building and maintaining an effective community for online learners that in turn affects persistence. Her recommendation is that educators and researchers look for ways to emphasize and enhance social and academic communication and interactions among all participants in distance education.

Chyung (2001) conducted a long-term evaluation case study on systematic and systemic approaches to reducing attrition rates in an online degree program at Boise State University. According to Chyung, the study was not an experimental study; therefore, the purpose of the study was not to generalize the results to its population but rather to explain how a higher education institution applied theory-based systemic and systematic approaches to solving the attrition problem in its online degree program. Further details of the study were revealed from my direct communication with Chyung in 2002: (1) this was not a cohort study; (2) there was not a set time for completion; (3) statistics are not completed on how many completed the program in 3 years; and (4) the definition of a dropout that was used in the evaluation was whether students dropped out of the program by their third course (email from Yonnie Chyung, August 6, 2002).

Through her literature review, Chyung found three main reasons why adult learners tend to drop out of distance education courses or degree programs: they perceive that their interests and the course structure do not match; they are not confident in
learning in distance environments; and they have learned what they wanted to learn.

Further, she found that students are more likely to drop out after the first couple of online courses than after they have taken a larger number of online courses.

Chyung’s 2001 study revealed factors similar to those found in her literature review that contribute to the dropout problem. Exit interviews revealed that almost half of the students who dropped out of the program did so because of dissatisfaction with the online learning environment. Further analysis revealed several motivational factors in the online instruction system that caused the dropouts: the online learning environment was not attractive to them; what they learned from the online instruction was not relevant to their interests or goals; they had low confidence levels while learning in the online classroom; and they had low satisfaction levels toward the instructional process of the online learning environment.

Chyung used Keller’s 1987 ARCS Model (attention/interests, relevance, confidence, and satisfaction), Kaufman’s 1988 Organizational Elements Model (OEM), and Kirkpatrick’s 1998 evaluation model throughout the processes of improving the motivational appeal of the online course for the first-time adult online learners and solving the dropout problem. Following the interventions, course-evaluation data revealed that, during each semester, the learners perceived that the online instruction was motivationally appealing to them, the instruction was interesting and relevant to their interests and goals, and the learners were confident in learning in the online environment.

In updating Garland’s 1993 Model of Barriers to Persistence in Distance Education in a non-Web-based environment, Schilke (2001) examined attrition of adults from Web-based courses at a Midwestern community college. Whereas Garland studied
both completers and non-completers in a non-Web-based environment, Schilke used a case study analysis to examine classroom experiences of Web-based learners who dropped out of these classes. To reflect the unique features of learning delivered through the World Wide Web, Schilke’s model included technological barriers in addition to Garland’s four barriers—situational, dispositional, epistemological, and institutional. Schilke’s analysis of the interviews revealed a continuous lack of learner preparation for the demand of the online-learning environment, that is, awareness of the demands of the courses and expectations contrary to course syllabi and other documentation. Schilke contends that online web-based courses are a dramatic improvement over other distance delivery methods in that they provide a better opportunity for interaction among the learners and the instructors and among the learners themselves, a significant factor reported in previous attrition and persistence in distance education research (Cook, 1995; Hanson, et al., 1997; Hill, 2002; Jorgensen, 2002; Landtroop, 1998; Machtmes and Asher, 2000; Moore, 1999; and Owens, 2001).

In order to elucidate Concord University’s School of Law success in retention of its online students, Hill (2002) explored reasons why Concord’s high retention rate and its innovative learning tools are positioning the school as a model distance learning program. Among other successes, Concord has developed highly effective responses to the challenge of attrition in its online program. Consequently, its retention rate has remained stable at 70 percent—a high figure for an online program.

Hill reports that the ability to keep students in the program revolves around three concepts. First, Concord makes sure that the content fits the medium. In other words, the content incorporates the basic premises of computer technology which allows for the
immediate feedback on papers and quizzes, a significant issue for online learners. Second, creating a genuinely interactive atmosphere develops out of the principle of immediate feedback. Third, Concord strives to set the individual student into a genuine community, one of small classes, a nurturing environment, and considerable interaction. These findings parallel research on supporting feedback to adult learners in order to provide for the dialogue/support concept so vital to learning (Cook, 1995; Garrison, 1989; Hanson, et al., 1997; Moore, 1999; Verdiun & Clark, 1991). It is not clear from the report if dropouts were included in the study.

The most noted similarity among the research on Web-based delivery method is the attention given to the environment. Consistently, the findings reveal that interaction and community are important to persistence in Web-based learning. In contrast, either the online learning environment was not attractive to them, or they had low confidence levels while learning in the online classroom, or they had low satisfaction levels toward the instructional process of the online learning environment that contributed to attrition. What is missing from the studies is attention to persistence in and attrition from a complete academic program as well as stories of the experiences of the adult learners themselves.

Across the various delivery modes, findings from the research show that there is a strong positive relationship between social support and the intention to re-enroll. The ability to keep students in the program revolves around giving immediate feedback on papers and quizzes, creating an interactive atmosphere, and setting the individual student into a genuine community. Further, persistence is molded by interaction between faculty and students and between students and students. Meaningful and sustained
communication is a key factor in building and maintaining an effective community for online learners. Finally, research shows that personal characteristics, life experiences, and financial factors play a larger role in persistence and graduation than do either academic or institutional factors.

Beyond findings that show what encourages persistence, research also shows that at-risk students were taking more credit hours and working fewer hours per week, had not taken distance learning courses prior to participation in the study; were continuing students or students who had been away from college less than two years, and had less-stable study environment, lower motivation, and less computer confidence compared to the completing students. Moreover, environment, motivation, and computer confidence were the strongest variables in differentiating completing students from non-completing students.

Recommendations for future research include continued research on variables that affect persistence and attrition of students in Web-based graduate programs. Suggestions include using an inductive approach that allows students to talk about their experiences as distance education students, that is, allows them to talk about the things that matter most to them. Additionally, educators and researchers should look for ways to emphasize and enhance social and academic communication and interactions among all participants in distance education. Further, multivariate studies in various disciplinary areas would be extremely useful in adding to the body of knowledge on student persistence.

Why adults do or do not participate in learning is as important to the field of distance education as it is to traditional face-to-face learning. Many of the motivators and barriers facing distance learners are the same as those experienced by adult learners
in a traditional education setting. The following section presents research on motivators and barriers to participation in distance education.

*Research on Motivators and Barriers to Participation in Distance Education*

*Motivators to Participation in Distance Education*

Noting that motivational orientation research attempts to determine order or structure in the enormous variety of reasons that adults give for participating in education, Wilkes and Burnham (1982) sought to determine if the electronic distant education (EDE) learning environment is more attractive to learners with a particular motivational orientation. Boshier’s (1982) Education Participation Scale (E.P.S.) was used to measure the motivational orientations of one hundred and fifty-six students enrolled in Utah State University’s electronic distance education system, COM-NET. A comparison group consisted of eighty-five participants from rural Utah enrolled in Utah State University extension programs in which classes were taught by the traditional method, with an instructor present at an off-campus site. Both groups consisted of graduate and undergraduate students. No significant differences were found in comparing the motivational orientations of the EDE group with the traditional group, leading Wilkes and Burnham to conclude that there appears to be little practical relationship between motivation orientations and participants’ satisfaction with the EDE environment. Further, they conclude that external variables, such as those factors that influence good instruction, may be more influential in student participation than internal variables.

Research on students in distance education has shown that the convenience of home-based study, the time factor, and the possibility to continue to earn an income are
among the most important reasons for choosing distance education (Rubenson, 1986). Further, Rubenson contends that students who choose the distance education route are typically well educated, highly goal-oriented and study to attain competence for better jobs or advancement in current jobs. With advanced technology, communication can take place without time and place constraints through asynchronous time, students are able to ask questions of fellow students and professors at any time, and reflect on the responses they receive at their convenience (Harroff, 2002).

Sammons and Kozoll (1994) also report several reasons why adults find distance education courses a convenient way to advance and to continue their education. First, for individuals who have been away from education for any period of time, learning through distance education provides an effective reintroduction to the discipline needed to complete course work, and lacking confidence, they may prefer working alone. Second, adults with job, school, and family responsibilities choose the convenience of completing an entire graduate degree, or at least a major portion of it, off campus. Third, professionals in certain fields are required to complete initial or ongoing certification requirements and find that distance education courses best fit their busy schedule. Fourth, adults of all ages, from the early twenties to the late seventies, enroll in a wide variety of self-improvement programs for stimulation through exposure to new ideas plus the perspective of recognized experts. Further, some adults particularly value the privacy this type of learning provides.

Research by Cook (1995) highlights how people use the Internet to develop associations with each other, and at times even a sense of community, and how the same can occur in organized learning activities provided through computer-mediated
environments. Cook asserts that because the Internet offers something for everyone and because it is an effective and efficient way for people to connect with others, the growth of resources available on the Internet will help develop self-directed learners.

Additionally, because the Internet does not discriminate by gender, race, color, or ability level, older, nontraditional learners are connecting and learning with people around the world. The older adult population’s increasing use of cyberspace illustrates the point of active participation.

Cook (1995) concludes that although learning at a distance cannot duplicate face-to-face classroom instruction, it should not exclude the development of community. She recommends small-group activity, learning partners, and patience and flexibility on the part of the facilitators as ways for promoting community in computer-generated environments. Cook cautions, however, that the existence of distance education learning opportunities in computer-mediated environments on the Internet or through other online networks will not guarantee the occurrence of learning or social construction of knowledge any more than the existence of classrooms—both require people who actively participate in life, seeking experiences to grow and learn. Adult educators have argued for years that learners need to be more active participants in their learning (Brookfield, 1986, 1999; Knowles, 1975).

In a study conducted by The College Board, Aslanian (2001) reports that the most preferred nontraditional way of taking courses among adult students is online, followed by two-way interactive video (Aslanian, 2001). While graduate students indicated a classroom setting with a professor present as their preferred method of instruction, Aslanian argues that they will turn to distance options if the classroom setting
is not available at a convenient time and place. Hence, the level of flexibility offered by online education makes it easier for students who are in the workforce, have family responsibilities, reside in remote locations or have mobility impairments, to take classes.

Santovec’s (2002) report on a study by the American Association of University Women reveals reasons for women choosing online learning. Women are increasingly looking at online education as a way, often the only way, of adding course work to their busy lives. They choose this route for career enhancement or to keep a job, as well as for personal enrichment. Similar to Howland’s (2000) findings, Santovec reports that most of the women interviewed report themselves to be highly motivated and self-directed, even when they have great difficulty finding time and/or the money for their courses. However, most of the women believe that taking online courses is more difficult than those taken on campus, noting the importance of having high motivation, time-management skills, and maturity for success in online courses. Rubenson (1986) also refers to the difficulty in taking distance education courses and the importance of motivation in persisting in this learning environment.

In summary, while the most preferred method of instruction is a classroom setting with a professor present, online instruction is the most preferred nontraditional way for adults taking courses, followed by two-way interactive video. The convenience of home-based study is a major reason for choosing distance education. The time factor and the possibility to continue to earn an income are also among the most important reasons for choosing this form of study. For these reasons, the level of flexibility offered by online education makes it easier for adults who are in the workforce, have family responsibilities, live in remote locations or have mobility impairments. Above that,
distance education provides an effective reintroduction to the discipline needed to engage in and complete course work.

Barriers to Participation in Distance Education

Eastmond (1995) found that distance students pursuing higher education were barred from that quest in much the same way that the adult education literature has described regular adult learners as being deterred. While career advancement was the greatest motivating factor for participation, employment responsibility was the greatest inhibiting factor. Rubenson (1986), however, questions whether the new information technology will remove barriers to participation in distance learning or add to the existing ones. “The great danger with the new information technology is that it seems to assume there are people capable and motivated to use it, an assumption that needs close examination from the point of adult socialization” (p. 53). He argues that before a person is able to perform satisfactorily in a role the person must know what is expected, must be able to meet the role requirements, and must pursue the appropriate ends to meet those requirements.

Rubenson (1986) contends that distance education mainly has aimed at helping those adults who want to pursue some form of higher education to overcome situational barriers such as work and family obligations, and institutional barriers such as scheduling and problems with location or transportation. Further, as technology provides access to a wider spectrum of the higher education system than what was previously available through distance education, Rubenson believes that it could further reduce situational and institutional barriers.
In an interpretative qualitative case study of higher education students learning through asynchronous, computer mediated communication (CMC)-based distance education, Blum (1999) studied gender differences in preferred learning styles, participation barriers, and communication patterns. Results of her study revealed higher dispositional, situational, and institutional barriers for female distance education students than for male distance education students. Institutional barriers include lack of support from student services and distance learning professors as well as the educational timeline. Dispositional barriers include confidence attitudes and social/cultural attitudes toward education. Situational barriers include lack of prior educational experience, general lack of time, lack of home computer, lack of technical expertise, and costs.

Acknowledging that there is little empirical research concerning the use of Web-based education by professional groups and virtually none concerning deterrents to that use, Perdue and Valentine (2000) conducted a study for the Georgia Society of Certified Public Accountants to examine the perceptions of certified public accountants concerning deterrents to participation in Web-based continuing professional education CPE. The authors identified a “deterrent” as a force working in combination with other forces to reduce the chance that an individual will elect to participate in a particular Web-based educational opportunity [italics in original] (p. 8). Using a fifty-seven-item Likert-type scale indicating the extent to which participants agreed or disagreed with each item and a ten-item survey to collect personal and professional information on study participants, Perdue and Valentine identified the top ten deterrents to respondents’ participation in Web-based CPE. The top ten deterrents identified are:
1. Prefer hearing CPE lectures in person rather than reading them on a computer screen.

2. Never occurred to participant to participate in Web-based CPE courses to complete CPE requirements.

3. Prefer face-to-face interaction with the instructor rather than electronic communication used in Web-based CPE courses.

4. Prefer traditional classroom instruction over Web-based CPE courses.

5. Prefer hearing CPE lectures in person rather than hearing them through a computer speaker.

6. Prefer face-to-face interaction with peers rather than electronic communication used in Web-based CPE courses.

7. Prefer using printed materials over the kind of electronic materials (e.g., computer screens, e-mails) used for Web-based CPE courses.

8. Concern about how to evaluate the quality of a Web-based CPE course before enrolling.

9. Concern that there might be too many interruptions in office or home to participate in Web-based CPE courses.

10. Concern about submitting personal information over the Internet in order to participate in a Web-based CPE course.

In further analysis of their data, Perdue and Valentine found that the highest-ranking items relate to concerns about the specifics of electronic education and interaction, thus supporting findings from their literature review that the lack of face-to-face interaction is a primary stumbling block for electronic education. Further, the
second most influential factor in terms of its power to deter CPAs from participating in Web-based course is the concern for the quality of the Web-based course offerings, that is, the accuracy of course content and the richness of the offerings.

Similar to the study by Perdue and Valentine in 2002, but conducted on a smaller scale, Zielinski (2000) sought to elucidate why learners, when offered technology-based training, still prefer classroom-based training. In a study for a global technology company on its employees’ learning-delivery preferences, Zilienski reports that, when given a choice of five delivery options for learning about a new product, more than ninety percent of respondents chose instructor-led over online. With an emphasis on so-called “wraparound” elements that influence participation rates, Zielinski found that how online learning is marketed, what incentives are offered for completing the learning, how conducive the physical environment is to learning, and whether or not manager oversight plays a role in the learning affect whether adults participate in employee training in Web-based learning.

Across the research, the primary barrier to participation in distance education for both genders is the lack of face-to-face interaction. The second most influential factor is concern for quality of the Web-based course offerings, that is, the accuracy of the course content and the richness of the offerings. Lack of technical expertise, lack of support from student service and administration, lack of confidence, prior educational experience, and general lack of time are additional reasons given as barriers to participation in distance education. Finally, training research shows that how conducive the physical environment is to learning and what incentives are offered for completing the learning affect participation in the business world.
Recommendations for future research include research that identifies and describes deterrents to Web-based education in different professional contexts, research that identifies and describes distinctive types of learners as defined by their perceived deterrents to participating in Web-based courses, and qualitative research that investigates deterrents to Web-based courses. The use of interviews and focus groups would reveal a more comprehensive, in-depth understanding of the deterrent factors.

**Research on Cohort Learning in Adult and Higher Education**

For the purposes of this section, research on cohort learning in adult and higher represents limited research in cohort learning in the traditional face-to-face environment as well as cyberspace communities. Lawrence (2002, 1996) defines a cohort as a small group of learners who complete an entire program of study as a single unit. As such, cohort groups in adult and higher education programs provide the skills needed to build and maintain learning communities. However, the learning community created by the cohort group is not confined to the hours a class in session. Lawrence (2002) and Paloff and Pratt (2000) contend interaction often goes well beyond the content of the course. Further, learning in a cohort differs from traditional education in that students become interdependent upon one another, their participation and opportunities for learning increase, and they share more with each other as parts of a whole.

In her research on adult learning in higher education, Lawrence (1996) investigated experiential and collaborative learning and the role of the group on the learning process for the individual. Through this qualitative study, she sought to understand and give meaning to the experience of learning as part of a cohort group from the perspective of the learner. It was her observation after nearly twelve years as a
facilitator of such groups in face-to-face university programs of study that the students come into the learning group with no prior knowledge of each other and perhaps little in common except the mutual desire to complete their degrees. Further, she observed that many were attracted by the accelerated nature of the program and the fact that it was designed to accommodate the schedules of working adults.

The participants in Lawrence’s 1996 study were students from three different non-traditional graduate and undergraduate degree programs within the Chicago University system that used the cohort model. Some of the participants were active students while others had graduated less than three months previous to his initial contact. Typical of adult learning, Lawrence’s participants were primarily White and female, with the majority in their mid-forties. She used interviews and focus groups to collect his data.

Among the themes that emerged as structures of the experience of learning in a cohort group were building a learning community, experiencing a collaborative process, and facilitating individual development. Further, Lawrence (2002) found that experiential learning played a significant role in the cohorts. The participants acknowledged that hearing the experiences of others helped them to learn by introducing new perspectives on issues. Finally, support and nurturing from the group can help individuals to feel successful and an incentive for persevering even when things are difficult or when life events threaten success. According to Lawrence’s findings, if it had not been for the cohort group, there was a good chance that many students would not have persisted.

Lawrence (2002) contends that cohort groups do not need to meet face-to-face to form a community. With the proliferation of undergraduate and graduate degree
programs being offered entirely online over the past decade, programs that are asynchronous and cohort-based create their own learning communities in much the same way as the traditional face-to-face groups. Palloff and Pratt (2000, 1999) offer that online learning by nature requires a certain degree of autonomy and self-direction. Even though the learners attend class alone with their computers, it is the sense of being a part of a community that sustains the learning group. Further, a collaborative environment with equal participation by all students is essential to the survival of the online learning group. While it may be possible to maintain a successful online learning community in the absence of any face-to-face interaction, Lawrence (2002) suggests bringing the students together for a residential workshop at the beginning of their program. Participants get to know one another and have a face and voice to relate to the name later seen on the screen.

While Lawrence (2002) contends that many of the dynamics of building and sustaining a learning community are similar in online and face-to-face cohorts, she proposes that the communication patterns tend to differ online. An advantage of the online asynchronous communication is that no one can be interrupted. This gives the quieter students time to complete their thoughts or more willing to speak up without being intimidated. Second, students find they have more time to be reflective. Third, because it is also easier to misinterpret comments that are solely text-based, cohort members need to work harder to keep the community functional. Finally, because online learning is not yet a standard in most institutions, yet is still growing in numbers of programs and participants, most students in such groups have no previous experience being a part on an online community. They soon realize, however, that they are learning how to become a community experientially.
Saltiel and Russo’s 2001 research on cohort programming and learning offers insights into improving educational experiences for adult learners. They contend that learners are attracted to cohort programs because the selling point is group completion. Beyond that, they want to meet their academic goal and earn a certificate or degree. In a cohort program, the course of study is laid out from the beginning to the end. As such, the students know the order and timeline of their courses from the day they enroll. In this process, they are willing to give up course selection in return for a greater certainty of completing the program. Saltiel and Russo suggest that the administrative structure of the cohort is there to support the students. From recruitment, to admissions, to information packets, to financial information, to books and other supplies, the administrative structure must be responsive to the needs of the potential cohort member.

In a further look at adults learning in community, Stein and Imel (2002) argue that such learning takes a variety of forms that emphasizes the community rather than the individual level of learning. As such, a space is created where a diversity of views and ideas can be shared and honored and sustainable relationships formed. Similar to Lawrence (1996), Stein and Imel found that some of these relationships continue long after the group has disbanded. Finally, Stein and Imel contend that participants in learning communities often create the content, and similar to findings by Lawrence, develop learning approaches, and situate learning in a specific context. Moreover, a learning community can develop around educational, environmental, civic, and social situations.

While Stein and Imel (2002) report that adults are creating learning spaces outside of formal educational boundaries, they see a number of the same themes and threads
emerging. These themes reflect a shared sense of purpose and a sense of belonging to a group that welcomes differences as it works toward a common goal. First, place is important in learning in community. Environment and experience can interact to produce shared insights whereby the space itself becomes an element in producing learning. Second, learning content relates to the community’s daily life. Learning is cooperative, purposeful, and designed to strengthen the group’s ability to apply what is learned to everyday life situations. Third, knowledge is locally produced. Expertise is located in the group’s shared insights and in individual members’ experiences. Through reflection on experiences, the members of the learning community understand how to improve an aspect of their own situations.

In summary, Stein and Imel (2002) suggest that the challenge for the adult educator is to encourage formation of learning communities without interfering in the learning that occurs or using their expert knowledge to direct the group in its struggle to learn. Dialogue in an adult education context often involves the participants sharing personal stories of their lived experiences. In cohort and community learning, these stories take on more meaning over time as the community develops (Lawrence, 1996; Stein & Imel, 2002). Further, one advantage of learning in a group is that there is less chance an individual will give up when going through a difficult period. The group members tend to rally round and do everything in their power to retain the individual in the community. In the end, participants in this type of learning take with them the collaborative skills of paying attention, valuing the contributions of others, and sharing ideas. Cohort members realize that developing community does not happen automatically; it takes considerable effort.
The limited research presented above on cohort learning in adult and higher education represents one qualitative study on face-to-face cohort learning (Lawrence, 1996) and anecdotal evidence of the importance and contribution of learning communities to the successful delivery of online instruction (Palloff & Pratt, 1999, 2000). Much of what has been written to date has focused on the issues of concern to faculty, trainers, faculty developers, and administrators of distance learning programs. Little attention has been given to the assumption that students will intuitively know how to learn online. What is needed is more research that will add to the limited knowledge base on the influence of the cohort on persistence in and withdrawal from an online cohort graduate program. The question becomes how can faculty build interactivity and community into a flat, text-based environment in a cohort group of adults? Lawrence (1996) found that while the majority of the participants in her study benefited from the family atmosphere created by the cohort, others found the over-familiarity of the cohort to be a bit intimidating. They felt it was frightening and threatening to have others know them so well. Research on the influence of the cohort on persistence in online cohort total academic programs is lacking and is needed as a starting point to substantiate the importance of the cohort and community on persistence in a flat, text-base learning environment or refute the claims of its importance in adult and higher education online distance education.

In summary, as current demographic and economic trends acknowledge the need for workers to fill jobs requiring further education, the need for more and better education increases steadily, and according to Verdiun and Clark (1991), distance education should play a significant role in this expansion of educational opportunity for adults. Educators
around the world are experimenting with new opportunities for learners almost anywhere to access education through connections and technologies that did not exist ten years ago. Further, teaching and studying at a distance, especially that which uses interactive electronic telecommunications media, can provide the connectedness missing in many distance education classes.

Adult learners will seek out distance education programs because they have found that these courses meet their learning needs while allowing them to remain in the work force (Whittington, 1997). The increasing trend of Internet courses delivered via the World Wide Web offers widespread accessibility and a shift from oral to written communication (Howland, 2000). Web-based education is as effective as traditional-based education, has the advantage of not being time and place dependent, and is flexible enough to offer the opportunity for reflection before responding. Further, students experience the flexibility afforded by an asynchronous environment as well as the opportunity to interact synchronously with the instructor and other students in the online class.

Beyond its logistical advantages, Eastmond (1998) views the Internet as holding important educational promise for engendering active and experiential learning as well as fostering collaboration and individualized construction of meaning in learning communities that extend beyond the boundaries of the traditional classroom or campus. Further, web-based education is as effective as traditional-based education, has the advantage of not being time and place dependent, and is flexible enough to offer the opportunity for reflection before responding. Adults with job, school, and family responsibilities choose the convenience of completing an entire graduate degree, or at
least a major portion of it, off campus. Professionals in certain fields are required to complete initial or ongoing certification requirements and find that distance education courses best fit their busy schedule. However, research has tended to emphasize student outcomes for individual courses rather than for a total academic program, and the research does not adequately explain why the dropout rates of distance learners are higher than those of on-campus learners (Berge & Mrozowski, 2001).

Finally, there is research to suggest that learning in a cohort promotes persistence in adult and higher education programs (Lawrence, 1996; Palloff & Pratt, 1999, 2000; Saltiel & Russo, 2001). Structures of the experience of learning in a cohort group were building a learning community, experiencing a collaborative process, and facilitating individual development. Further, experiential learning played a significant role in the cohorts Lawrence, 2002). Hearing the experiences of others helped cohort members to learn by introducing new perspectives on issues. Finally, support and nurturing from the group can help individuals to feel successful and an incentive for persevering even when things are difficult or when life events threaten success.
CHAPTER III

METHODOLOGY

Introduction

Economic and demographic shifts are rapidly changing college student populations as well as the methods of delivery of higher education. As the value of baccalaureate and post-baccalaureate level study increases and the time available for adults to participate in further education decreases, electronic distance education becomes a beacon of hope for many busy adults. The ability to enroll in full-fledged undergraduate and graduate programs through Web-based distance education is an appealing alternative for working adults with career and family responsibilities or physical disabilities. Though there is a strong demand for higher education opportunities that has resulted in dramatic increases in participation by adults in distance learning, and though there is considerable evidence of the effectiveness of distance education in bringing about learning, dropout rates for distance learners tend to be quite high nationally. The purpose of this study was to determine the influence of the cohort on persistence in and withdrawal from an online cohort graduate certificate program.

In this chapter, I describe the design of the study, sample selection, data collection, data analysis, validity and reliability, and the researcher’s biases and assumptions used to address the following research questions:

- Why do adult learners say they enroll in an online cohort graduate certificate program?
How does being in a cohort influence persistence to complete or to withdraw from an online cohort graduate certificate program?

What factors differentiate non-completers from completers in an online cohort graduate certificate program?

Design of the Study

A generic qualitative research design was used in this study. Qualitative research is an ideal design for understanding and interpreting observations of educational phenomena in which the variables are largely unknown (Creswell, 1994; Merriam, 1998). For that reason, the researcher wants to focus on the context that may shape the understanding of the phenomenon being studied. Beyond that, qualitative studies evolve from a research problem that needs to be explored because little information exists on a particular topic (Creswell, 1994). As such, qualitative research is largely an investigative process for understanding a particular social situation, event, role, group, or interaction (Creswell, 1994). To this end, the researcher enters the informants’ world and seeks the informants’ perspectives and meanings through ongoing interaction (Creswell, 1994).

Many researchers explain the unique assumptions or characteristics of the qualitative research paradigm and the importance of its contributions to research for educators and trainers of adults (Bogdan & Biklen, 1998; Creswell, 1994; Marshall & Rossman, 1995; Merriam & Associates, 2002). With this in mind, Merriam and Associates (2002) argue that this methodology will continue to be important in advancing knowledge because of immediate need to define and describe the fields of practice of adult education. Further, qualitative research is “an umbrella term that encompasses several philosophical or theoretical orientations, the most common being interpretive,
critical, and postmodern” (p. 13). As a result, the improvement of practice comes from understanding the experiences of those involved. The first and key characteristic of qualitative research, then, is the view that reality is constructed by individuals in interaction with their social worlds (Merriam & Associates, 2002). In other words, research that is exploratory or descriptive and that assumes the value of context and setting in a search for a deeper understanding of the participants’ lived experiences of the phenomenon is a unique strength of this paradigm (Marshall & Rossman, 1995).

This first characteristic is consistent with the purpose of my study and provided valuable information. The purpose of this study was to determine the influence of the cohort on persistence in and withdrawal from an online cohort graduate certificate program. To this end, qualitative research methods were used determine from the participants’ view the influence of the cohort. First, I wanted to know, from the participants’ perspectives, why they enrolled in an online cohort graduate certificate program. Second, I wanted to examine the influence of the cohort on their persistence. Third, I wanted to find out what differentiates completers from non-completers. Most of the research on adult learner motivations and deterrents to distance education has been conducted on single courses using a quantitative paradigm. While this methodology makes a contribution, the research results are in the form of lists of reasons without rich, thick description to help the reader understand the list. My qualitative research study addressed this gap by looking at a complete online cohort graduate certificate program.

The inclusion of the first characteristic of reality constructed by individuals in interaction with their social worlds leads the qualitative researcher to be concerned primarily with process rather than outcomes or products (Merriam, 1998). Research on
little-known phenomena, such as human behavior in the online learning environment, allowed me to explore and describe the contribution of the cohort to persistence in the online learning environment. Proponents of qualitative research designs argue that one cannot understand human behavior without understanding the framework within which participants interpret their thoughts, feelings, and actions (Marshall & Rossman, 1995). This second characteristic of qualitative research fits the purpose of my study. As stated above, I was interested in understanding why some adult learners persist in the online learning environment while others withdraw as they go through the process of learning in the online environment. That is, I was interested in what happens in the online learning process that causes adult learners to stay or leave, rather than the learning as an outcome itself, and to describe how people interpret what they experience.

A third important characteristic of qualitative research is that the qualitative researcher is the primary instrument for data collection and analysis. Rather than static, pre-determined instruments such as inventories, questionnaires, or machines used in quantitative research, the human instrument mediates data from qualitative research (Creswell, 1994; Merriam & Associates, 2002). As such, the qualitative researcher is able to be immediately responsive and adaptive, considering the total context of the phenomenon, rather than a particular segment. As a result, categories are inductively derived from informants, rather than being identified \textit{a priori} by the researcher (Creswell, 1994). Additionally, the qualitative researcher is able to immediately process data as it is being collected, clarify and summarize material, check with respondents for accuracy of interpretation, and explore atypical or idiosyncratic responses (Merriam & Associates, 2002). In other words, the qualitative researcher interacts with those she studies, trying
to minimize the distance between her and those being researched. This approach allowed
the adult learners in my study to talk about the things that matter most to them and thus
gave voice to their experiences as online learners.

A fourth characteristic of qualitative research is that the research is primarily an
inductive research strategy. As such, qualitative research is a particularly appropriate
strategy to use where there is little knowledge about the problem (Merriam & Associates,
2002). If there is a lack of theory, or if existing theory does not adequately explain the
phenomenon, hypotheses cannot be used to structure an investigation as is done in a
quantitative study. In contrast, the qualitative researcher goes into the field with the
intent of discovering the meaning a phenomenon has for those involved (Bogdan &
In the end, what is uncovered is mediated through the researcher’s own perspective,
resulting in an interpretation, explanation, or description of the phenomenon (Merriam &
Associates, 2002). Characteristically, the researcher presents the findings in the form of
categories, typologies, concepts, working hypotheses, or even theory, which have been
inductively derived from the data (Creswell, 1994; Merriam & Associates, 2002).

Qualitative research, necessitating an inductive process, was best suited for my
study for several reasons. First, it gave me the opportunity to substantiate and refute
existing theories on persistence in online learning in general and online cohort learning in
particular. Second, it contributes to the literature on persistence in online cohort learning.
Third, it provides implications for theory and practice in online learning. Fourth, it adds
to the literature on what differentiates completers and non-completers in an online cohort
graduate certificate program. By going into the field with the intent of discovering the
influence of the cohort on enrollment and persistence in online distance learning, I was able to fill some of the gaps that exist in the literature on persistence in online distance education, specifically in the area of cohort learning in a total academic program.

Finally, qualitative research produces rich and thick description of the phenomenon under study. Rich data or rich fieldnotes are full of good description and dialogue relevant to what occurs in the setting and its meaning for the participants (Bogdan & Biklen, 1998; Eastmond, 1995). It is this rich data that are filled with pieces of evidence, that is, with the clues that the qualitative researcher begins to put together to make analytical sense out of what is studied. In other words, of particular interest to the qualitative researcher is a desire to give voice to the experiences of the informants.

The interviews provided rich data and insight into what it was like to be an online distance learning student and identified factors that influenced enrollment in an online cohort graduate certificate program as well as factors that influenced persistence. This study went beyond numbers and provides rich description of the experiences and lives of adult learners in a total academic program. Finally, the interviews provided insight into the idiosyncratic nature that differentiates completers and non-completers. I believe the descriptions speak for themselves and help fill the gap in the literature on persistence in a total academic online graduate certificate program.

As stated above, there are many commonalities between characteristics of qualitative research strategy and my interest in examining persistence of adult learners in an online cohort graduate certificate program. The research methods, research process, and the final reporting of my research findings are consistent with the characteristics of qualitative research methods and provide a sound basis for my study.
Sample Selection

A purposeful sampling strategy was used in this study so that I could learn the most about the experiences of the adult learners in a specific online cohort graduate certificate program, and beyond that, how these experiences contributed to their persistence or withdrawal from the program. Purposeful sampling is a method of sampling in qualitative research (Bogdan & Biklen, 1998). Merriam (1998) argues that purposeful sampling is based on the assumption that the researcher wants to discover, understand, and gain insight; therefore the researcher needs to select a sample from which she can learn the most about the intended study.

In selecting the purposeful sample, I used three criteria to guide the sample selection based on the purpose of my research. First, I identified a web-based cohort graduate certificate program. I had read with interest about an online cohort graduate certificate program at a large Southeastern research university. The web-based cohort program was launched in Summer 2000 as an innovative program designed for teachers with a clear renewable teaching certificate who were teaching on a provisional basis. The certification allows teachers to be more flexible in working with special needs students and makes the teachers more marketable to school systems.

As stated above, the education training on the web is intended for individuals who already have a teaching certificate and who are teaching in the field on a provisional basis. Completion of this program leads to an add-on certificate in the field. The program of study includes five web-based academic credit courses offered by the university. The program also includes two required teleconferences, one three-day academy, one on-site practicum course, and one optional four-day summer institute. The purpose of the
telecourses is to give students the opportunity to have a live interaction with experts in the field. Additionally, the consultants have effective strategies and products that can be used in the classroom and are beneficial for all teachers. The purpose of the summer institute is for students to have the opportunity to personally meet and learn from experts in the field and expand their repertoire of strategies to take back to the classroom and use immediately on the job. However, participation in the institute is optional. There are some co-requisite courses that might have to be taken outside of this university, but overall the program is online. There appears to be missed opportunities at the conferences and academies for the program planners, faculty, and staff to arrange for face-to-face contact of the cohort members that would have promoted more of a sense of community, sharing, and collaboration among the cohort. According to participants, that did not happen.

A participant must enroll at the university as a Non-Degree graduate student. A student who takes courses non-degree may subsequently transfer up to nine hours of credit (i.e. three courses) into a master’s program at the university subject to the approval of the advisor. The program of study will typically require five semesters to complete, including two summers. Students must also pass the required PRAXIS examinations that attest to their knowledge of the program of study. The program will begin in the summer semester of the academic year.

Second, because of my interest in web-based distance education and particularly because of my interest in factors that influence persistence in online learning, I contacted the department head of the college at the university for information on their web-based cohort graduate certificate program. I selected the most recent cohort at the time of my
study. Lawrence (1996) recommends using the most recent cohort “since once the students complete the program and the cohort is terminated, they tend to become involved in other endeavors and are unable to recall their experiences with as much clarity as those immersed in the process” (p. 3). There were thirty-eight participants in the 2001 cohort—twenty-eight completers and ten non-completers. I asked permission to contact all of these students.

Third, in the process of selecting my sample, I asked the department for names of the cohort members who completed the certification requirements as well as those who withdrew from the program after the program began. I used the university student phone directory to get addresses and phone numbers of the thirty-eight 2001 cohort members. I contacted all thirty-eight first by regular mail, followed by a phone call to arrange an interview place and time. I was unable to make contact with five cohort members reducing the potential sample from thirty-eight to thirty-three. Due to participants’ vacation schedules, jury duty, or summer teaching assignments, I was unable to set up interviews with nine of the participants which left me with a sample of twenty-four. My sample was based on the members’ willingness to participate in my study. I informed them of the purpose and audience for my study, what the study entailed, and gained their agreement through the informed consent form. They were free to withdraw at any time without any penalty if they chose to do so. I took precautions to insure that the participants were treated in an ethical manner. Finally, I also protected the participant’s privacy by using pseudonyms and kept secret their identities, specific demographic data, as well as the identity of the program and program staff. All twenty-four individuals agreed to participate in the study.
The findings of this study are based on interviews with twenty-four participants enrolled in an online cohort graduate certificate program at a large Southeastern university. Twenty-three of the participants were teaching in field on a three-year provisional certificate at the time they were enrolled in the program. One of the participants has a teaching certificate but was working as a computer systems analyst at the time of her enrollment.

Demographic information was obtained from a biographical data sheet that each participant filled out at the interview session prior to the interview. The age range was from 21 years to 57+ years, with the majority of the participants in the 33 to 56 year range. Four of the participants were males and twenty were females. Twenty-three of the participants were Caucasian while only one was African-American. There was one husband-wife team in the cohort, however, due to jury duty, the husband was not available for an interview and is not included in the twenty-four participants. All but two of the respondents were married and had children at the time of their participation in the program. It was an almost even split between the participants with a bachelor’s degree plus graduate hours and a master’s degree plus graduate hours.

The majority of the respondents in this study had minimal computer experience, such as e-mail and limited word processing skills when they enrolled in the program, but acknowledged their skills and computer self-efficacy had improved by the end of the program. Reference made in the participant section of Chapter 4 to their computer skills and computer self-efficacy where applicable. Most significantly, this was the first online learning experience for the completers as well as the non-completers.
Data Collection

I used the interview as the principal strategy for data collection. The most common technique used for gathering data in qualitative research is the interview and the personal, face-to-face interview is recommended to develop rapport and gain the widest range of data (Merriam & Simpson, 1995). Typically participants are asked to respond to a written or orally administered schedule of questions. An advantage of the interview technique is its effectiveness in interviewing special populations and gaining in-depth information. To this end, interviewing is particularly useful in gathering data from hard-to-reach populations, or when we cannot observe behavior, feelings, or how people interpret the world around them (Merriam, 1998). Additionally, interviewing is a prudent method of data collection when the researcher is interested in past events that are impossible to replicate (Creswell, 1994; Marshall & Rossman (1995). The participants I interviewed during the summer 2003 completed the 2001 cohort online graduate certificate program in the fall of 2002.

Merriam (1988, 1998) contends that an interview is a conversation with a purpose, that is, to obtain a special kind of information. It is through the face-to-face encounter in the interview that one person elicits information from another and finds out what is on someone else’s mind. Further, according to Patton (1980),

We interview people to find out from them those things we cannot directly observe . . . We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world and the
meanings they attach to what goes on in the world—we have to ask people
questions about those things. The purpose of interviewing, then, is to
allow us to enter into the other person’s perspective. (p. 196)

In particular, interviews allow the researcher control over the line of questioning.
Beyond that, participants can provide historical information in their own words so that
the researcher can develop insights on how subjects interpret their world (Creswell, 1994;
Marshall & Rossman, 1995). With this in mind, interviews may be used in two ways.
They may be the principal strategy for data collection, or they may be used in conjunction
with participant observation, document analysis, or techniques such as projective
techniques and psychological testing (Bogdan & Biklen, 1998; Marshall & Rossman,
1995).

In order to collect my data, I used the interview technique as the only means of
collecting data, incorporating face-to-face interviews where possible, as well a telephone
interview, an e-mail interview and online follow-up clarification (Appendix B). I used
only interviews as they revealed the answers to my research questions without having to
incorporate document analysis. Additionally, since the program had ended, I did not
have the option of observation.

The decision to use interviewing allowed me access to the kind of information I
needed from informants who were at a distance and whose program of study had ended.
My goal was to better understand the influence of the cohort on persistence of the adult
learners who completed or withdrew from the online cohort graduate certificate program.
While interviews have several advantages as stated above, Creswell (1994) and Marshll
& Rossman (1995) suggest limitations and weaknesses of using the interview to collect
data in qualitative research. Because interviews involve personal interaction, cooperation is essential. A further limitation of the interview is the fact that informants provide information in a designated “place,” rather than the natural setting. Additionally, the researcher’s presence may bias responses in a face-to-face setting. Finally, interviewees may be unwilling or uncomfortable sharing all that the interviewer hopes to explore. The respondents in this study were quite forthcoming in their responses. There was significant interaction between us, and I never detected any bias or hesitancy on their part to share their stories.

Qualitative researchers categorize interviews into three general types: the highly structured or general interview guide approach; the semistructured or standardized open-ended interview; and the informal conversational interview or unstructured interview (Marshall & Rossman, 1995; Merriam, 1998). The decision as to which type to use is determined by the amount of structure desired (Merriam, 1998).

In this study, I sought access to the perspective of the person being interviewed rather than interjecting my perceived categories for organizing data around the phenomenon. Because I was interested in obtaining certain information from all informants, I used the semistructured interview (Appendix B). The semistructured interview is guided by a list of questions or issues to be explored. “This format allows the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic” (Merriam, 1988, p. 74). The two areas for which I asked specific questions were: (1) reasons adults give for enrolling in an online cohort graduate certificate program and, (2) the influence of the cohort on persistence in or withdrawal from an online cohort graduate certificate program. The face-to-face
interviews took place during the summer of 2003 and were tape recorded and then transcribed. Interviews took place in fourteen different cities/counties and were held in local public libraries (17), participants’ school (3), and participants’ homes (2). Any necessary follow-up phone interviews were transcribed from handwritten notes.

**Data Analysis**

I used the constant comparative method of data analysis in this study. In the constant comparative method

The researcher begins with a particular incident from an interview, field notes, or document and compares it with another incident in the same set of data or in another set. These comparisons lead to tentative categories that are then compared to each other and to other instances. (Merriam, 1998, p. 159)

In other words, decisions are made on what will be included and what will be left out from all the data collected. Further, data are coded and recorded until themes begin to appear. In the end, “category construction is data analysis” (Merriam, 1998, p. 180, italics in original).

Data analysis is the process of bringing order, structure, and meaning to the mass of collected data (Marshall & Rossman, 1995). Further, “Data are compressed and linked together in a narrative that conveys the meaning the researcher has derived from studying the phenomenon” (Merriam, 1998, p. 178). In other words, researchers go beyond mere descriptions that leave readers to draw their own conclusions. Marshall and Rossman (1995) add that “each phase of data analysis entails data reduction as the reams of collected data are brought into manageable chunks, and interpretation as the researcher
brings meaning and insight to the words and acts of the participants in the study” (p. 113, italics in original).

Merriam (1998) argues that “the right way to analyze data in a qualitative study is to do it *simultaneously* with data collection” (p. 162, italics in original). Simultaneous data collection and analysis are both parsimonious and illuminating (Merriam, 1998). Further, Merriam (1998) argues that “a rich and meaningful analysis of the data will not be possible if analysis is begun after all data are collected” (p. 177).

My first two interviews were conducted on the same day. I then transcribed each interview. The transcription took approximately eight hours and resulted in approximately eighteen pages of single-spaced text. After reading each transcript three times, I began to note several codes that were occurring and I noted these in the side margins. I then transcribed each of the succeeding interviews after they occurred, again reading each two or three times and noting codes in the margins. I then began to make a list of the codes as they appeared in each transcript. From this list, I began to note themes that were emerging. Some of the themes appeared as single words, some as phrases. As transcripts were read, coded and codes listed under themes, the themes were merged into categories. Through constantly comparing the themes and codes, main categories emerged. Once this was accomplished, I highlighted each category with a different color marker and then used the same color in the transcripts. From these color markings I used a flip chart to list the names of respondents as their responses fell into certain categories. It was from these five lists that I chose the *in vivo* quotes to be used in Chapter 4.

Therefore, as suggested by Bogdan and Biklen (1992) and Merriam (1998), I worked
with the data, organized them, broke them into manageable units, synthesized them, searched for patterns, discovered what was important, and decided what I would report.

**Validity and Reliability**

The trustworthiness of the findings of a study with a small, nonrandom sample is dependent upon internal validity, reliability, external validity, and ethics in qualitative research (Merriam & Associates, 2002). In other words, both producers and consumers of research want to be assured that the findings of an investigation are to be believed and trusted. To this end, Merriam and Associates (2002) recommend strategies that investigators can employ to ensure the rigor of valid and reliable knowledge in an ethical manner.

Merriam and Associates (2002) assert that internal validity, sometimes referred to as credibility, is considered a strength of qualitative research because qualitative researchers are ‘closer’ to reality than if an instrument with predefined items had been interjected between the researcher and the phenomenon being studied. Internal validity insures the congruency of one’s findings with reality. Additionally, Merriam and Associates (2002) argue that qualitative research is not interested in how many or the distribution of predefined variables but rather in the perspectives of those involved in the phenomenon, uncovering the complexity of human behavior in context, and presenting a holistic interpretation of what is happening. Beyond that, reality is constructed by individuals. Therefore, the goal of internal validity is to demonstrate that the inquiry was conducted in such a manner as to ensure that the subject was accurately identified and described (Marshall & Rossman, 1995).
In order to ensure for internal validity, I used the following strategies. The first strategy was member checks in which I sent a letter to six randomly selected participants asking them to confirm or refute that my interpretation and conclusions captured their experiences (Appendix C). Four letters were returned signifying that they agreed with my analysis that employment options and the convenience and flexibility of online learning explains their enrollment in the program and that goal proximity, support, relevance and applicability of program content, and adaptation to online learning influenced their persistence in the program. The second strategy I used was peer and colleague examination. I asked my major professor and another committee member on different occasions to comment about the plausibility of the emerging findings. Finally, I stated my experience, assumptions, and biases as a researcher so that readers understand better my position as a researcher in this particular study. Merriam and Associates (2002) advocate incorporating these strategies as a means of ensuring that the qualitative researcher is getting as close to reality as possible through the participants.

The second construct, reliability, asks the question of the extent to which one’s findings will be found again if the study is replicated (Merriam & Associates, 2002). Researchers want to know if the findings of a study will hold up beyond the specific research subjects and the setting involved (Bogdan & Biklen, 1998). “Reliability is problematic in the social sciences simply because human behavior is never static, nor is what many experience necessarily more reliable than what one person experiences” (Merriam & Associates, 2002, p. 27). Indeed, “the assumption of an unchanging social world is in direct contrast to the qualitative/interpretive assumption that the social world
is always being constructed, and the concept of replication is itself problematic” (Marshall & Rossman, 1995, p. 144).

Merriam and Associates (2002) offer several techniques an investigator can use to ensure that her results are reliable and dependable. They suggest that the researcher keep a research journal or record memos throughout the study. Memos are kept in such a detailed manner that other researchers can use the original data to replicate the study. In order to enhance the reliability of my study, I recorded memos throughout the study on the biographical information sheet that was filled out by each participant at the time of the interview. These memos were recorded immediately after the interview ended and the participant had left. These memo notes served as a journal for me while analyzing the transcripts. Examples of memos include my observations of the participant’s body language, openness, willingness to participate in the study, and their candid remarks about the program, program staff, family, and work situation. I also made notes of the conduciveness of the interview setting, time of day, and any interruptions that occurred during the interview. These memos allowed me see and hear the participants a second time as I read from their text-based script. Finally, I used investigator’s position, which informs readers about my orientation to the research, my assumptions and biases.

The third construct, external validity, is sometimes referred to as reader or user generalizability or transferability. Merriam and Associates (2002) encourage readers of qualitative research to think of what can be learned from an in-depth analysis of a particular situation or incident and how that knowledge can be transferred to another situation. In so doing, generalizability in qualitative research becomes possible. Indeed, while findings cannot be generalized in the statistical sense, that is, from a sample to a
population, generalizability can be viewed as something different. In other words, the qualitative researcher might end up with working hypotheses—hypotheses that reflect situation-specific conditions in a particular context (Merriam & Associates, 2002). “Working hypotheses that take account of local conditions can offer practitioners some guidance in making choices—the results of which can be monitored and evaluated in order to make better decisions in the future” (p. 28). In other words, the reader or user of the findings from an investigation speculates how findings can be applied to other settings. To this end, Merriam and Associates (2002) contend that “in order to facilitate the reader (not the researcher) transferring findings from one study to his or her present situation, the researcher must provide enough detail of the study’s context so that comparisons can be made” (p. 29).

As with internal validity and reliability, there are strategies the qualitative researcher can use to strengthen the external validity aspect of rigor (Creswell, 1994; Marshall & Rossman, 1995; Merriam, 1998; Merriam & Associates, 2002). Rich, thick description is most often cited. The provision of rich, thick, detailed descriptions allows the reader who is interested in transferability a solid framework for comparison (Merriam, 1998). In other words, in order to allow readers or users to determine if findings can be applied to their situation, the researcher should provide a detailed account of the focus of the study, the researcher’s role, the participants’ position and basis for selection, and the context from which data will be gathered. In order to boost the external validity in this study, I have provided a detailed description in the data analysis section of the program and the participants in the introduction in chapter four. Consequently, “If one thinks of what can be learned from an in-depth analysis of a particular situation or
incident and how that knowledge can be transferred to another situation, generalizability in qualitative research becomes possible” (Merriam & Associates, 2002, p. 28).

Researcher Bias and Assumptions

The importance of the researcher as the primary instrument for data collection and analysis in qualitative research cannot be overemphasized (Merriam, 1998). While the researcher can respond to the situation by maximizing opportunities for collecting and producing meaningful information, he or she is limited by being human—“that is mistakes are made, opportunities are missed, personal biases interfere” (p. 20). Further, when the data must go through the researcher’s mind before they are put on paper, worry about subjectivity arises (Bogdan & Biklen, 1992). Therefore, the role of the researcher as the primary data collection instrument necessitates the identification of personal values, assumptions and biases at the outset of the study (Creswell, 1994).

Merriam (1998) recommends that the qualitative researcher assess her personality characteristics and skills necessary for this type of research. First, the qualitative researcher must have an enormous tolerance for ambiguity. The researcher must accept the fact that from the initial design of the study, through data collection, and finally data analysis there are no set procedures that can be followed step by step. Second, the qualitative researcher must be sensitive to the information being collected and guard against any personal biases and how they may influence the investigation. Third, the qualitative researcher must be a good communicator, exhibiting empathy, creating trust, being a good listener, and recognizing that qualitative research and analysis involves much more writing than would be the case for a quantitative researcher. As this was my
first attempt at qualitative research, I constantly returned to these three important attributes that are required of this study.

I recognized as I commenced the study that there could be obstacles to overcome in collecting the data. First, there might be some cohort members who would not want to participate in this study. Second, I recognized the fact that there would be extensive travel involved as these teachers were located across the state. Third, because the teachers were on summer break, I might have difficulty setting up interviews due to their vacation schedules. In the end, only one teacher did not want to be interviewed, I actually enjoyed visiting different parts of the state and hearing their local stories, and all of the participants arranged the interview around their vacations.

Once the interviews began, I felt quite comfortable with the respondents and I sensed that they were quite comfortable with me and my line of questioning. I let them know during the initial phone call to arrange the interview that I had been a former teacher for twenty years and perhaps that fact quelled any fears and created a rapport that permeated the interview. While there may have been missed opportunities to pursue further questions, these did not diminish the richness of the data as offered from the respondents’ experiences while in the program.

Finally, as an adult woman who has completed the majority of her graduate degree in the traditional face-to-face environment rather than the online environment, I assumed that the online adult learner would experience loneliness and a lack of connectivity and sense of community, a lack of computer self-efficacy, or frustration with the online learning environment, and might drop out of the program for these reasons. While the respondents in this study did talk about the loneliness, frustration, lack of
computer self-efficacy, and the lack of face-to-face camaraderie they experienced, they also talked about the importance of being able to attend class anywhere, any time without the restraints of going to campus at designated times. Further, these experiences had no influence on those who did withdraw from the program. These observations are all borne out in the transcripts and taken *in vivo* from the transcripts for this study. These revelations were refreshing to me as all of my education came through the traditional face-to-face environment. I recorded these revelations as memos on each participant biographical information sheet.
CHAPTER IV

FINDINGS

Introduction

In order to better understand persistence in an online graduate program, the purpose of this study was to determine the influence of the cohort on persistence in and withdrawal from an online graduate certificate program. Specifically, I examined the following research questions: (1) why do adult learners say they enroll in an online cohort graduate certificate program, (2) how does being in a cohort influence persistence to complete or to withdraw from an online cohort graduate certificate program, and (3) what factors differentiate the completers and the non-completers in an online cohort graduate certificate program. This chapter presents a brief description of the web-based cohort program, the participants, the results of the study, and a summary.

The Program

The online cohort graduate certificate program selected for this study was launched in Summer 2000 as an innovative program designed for teachers with a clear renewable teaching certificate who had a provisional teaching certificate. The certification allows teachers to work with students across all areas of the field of study and makes the teachers more marketable to school systems.

As stated above, the program is intended for individuals who already have a teaching certificate in some area and are teaching on a provisional basis in the field served by this program. Completion of this program leads to an add-on certificate in the
field of study. While the program allows for some chance face-to-face meetings, the program is considered a web-based program by the university conducting the program. The program of study includes five web-based academic credit courses offered by the university. The program also includes two required teleconferences, one three-day academy, one on-site practicum course, and one optional four-day summer institute. The purpose of the telecourses is to give students the opportunity to have a live interaction with experts in the field. Additionally, the consultants have effective strategies and products that can be used in the classroom and are beneficial for all teachers. The purpose of the summer institute is for students to have the opportunity to personally meet and learn from experts in the field and expand their repertoire of strategies to take back to the classroom and use immediately on the job. There are some co-requisite online courses that might have to be taken outside of this university. Opportunities for face-to-face meetings were limited and not a requirement of this cohort. Consequently, there appears to be missed opportunities at the conferences and academies for the program planners, faculty, and staff to arrange for face-to-face contact of the cohort members that would have promoted more of a sense of community, sharing, and collaboration among the cohort as stressed in the cohort literature for successful educational experiences.

A participant must enroll at the university as a Non-Degree graduate student. A student who takes courses non-degree may subsequently transfer up to nine hours of credit (i.e. three courses) into a master’s program at the university subject to the approval of the advisor. The program of study will typically require five semesters to complete, including two summers. Students must also pass the required Praxis examination. The Praxis Series and related assessments are designed to be used principally in connection
with other criteria by state authorities for the purpose of licensing education professionals. Test scores used to inform such credentialing decisions must be supported by appropriate validity evidence. The program begins in the summer semester of the academic year.

The Participants

The findings of this study are based on interviews with twenty-four participants enrolled in a special education online graduate certificate program at a large Southeastern university. All but one of the participants was teaching special education classes on a three-year provisional certificate at the time they were enrolled in the program. One of the participants has a teaching certificate but was working as a computer systems analyst at the time of her enrollment.

Table 1 portrays the participants according to their gender, ethnicity, age range, martial status, level of education, and status of completion of the program. Pseudonyms are used to protect participant identity. The information in the table reflects the order of the interviews as they took place during the summer of 2003. This information was obtained from a biographical data sheet that each participant filled out at the interview session prior to the interview. As can be seen in the table, the age range is from 21 years to 57+ years, with the majority of the participants in the 33 to 56 year range. Four of the participants were males and twenty were females. Twenty-three of the participants were Caucasian while only one was African-American. There was one husband-wife team in the cohort; however, due to jury duty, the husband was not available for an interview. All but two of the respondents were married and had children at the time of their
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participation in the program. It was an almost even split between the participants with a bachelor’s degree plus graduate hours and a master’s degree plus graduate hours.

The majority of the respondents in this study had minimal computer experience, such as e-mail and limited word processing skills, when they enrolled in the program, but acknowledged their skills and computer self-efficacy had improved by the end of the program. Reference is made to their computer skills and computer self-efficacy where applicable. Most significantly, this was the first online learning experience for the completers as well as the non-completers. The participants are listed as completers or non-completers of the university online cohort graduate certificate program.

**Completers**

Ken taught for approximately 13 years at two different high schools with special needs children before going into administration and eventually added special education certification, but the certification had expired. In the meantime, he was hired as an interrelated special education teacher at a high school on a three-year provisional certificate with the stipulation that he get the interrelated special education certification to continue in the position. Additionally, during the time of his enrollment in the certificate program he had two hip replacements and was also working on his doctorate in education
administration. His wife is also a high school teacher and they have one son. He lives within five minutes of the university.

*Beth,* who has her bachelor’s degree in special education in mental retardation—a degree that has been phased out and replaced with the special education interrelated degree—had transferred to a neighboring county school system where she was traveling between two schools at the time she was enrolled in the program. She was teaching on a three-year provisional certificate. Since receiving her interrelated certification, she now teaches at only one school. She is married and has two sons, one of whom is a diabetic and requires constant attention. Beth lives within five minutes of the university.

*Shade,* who has his bachelor’s degree, coaches football and track as well as teaching a full load at a high school. He was changing from health and physical education to special education and was teaching on a three-year special education provisional certificate. Before that, he was in charge of the alternative school. He had just resigned from his current position to accept another teaching and coaching position. His wife is also a teacher and they are expecting their first child. Shade lives within a thirty-mile drive of the university.

*Teresa,* who has her master’s in education, was a nurse before going into teaching. She now teaches fifth and sixth grade special education and had been teaching one year on a three-year provisional certificate when she enrolled in the program. She also teaches adult education classes two nights a week. Teresa and her two children live with her parents in the county where she teaches during the week and are home on the weekends with her husband who travels during the week. She attended one of her online
classes while participating in a program at a university out of state. Travel time to the university from her work site would have been a four-hour round trip.

*Tracy*, who has her master’s in early childhood education, had been teaching in an elementary school for twelve years when she quit in the middle of the year due to the illness of one of her three children. Two of her children are autistic. When she returned to work nine months later, she did not want to return full time because of her children’s health problems and accepted a part time special education position on a provisional certificate. Her mother was diagnosed with breast cancer while Tracy was in the program and Tracy was able to be with her out of state and still attend her online classes. Due to the special education demands of her two autistic children, Tracy is not teaching at the present time. She lives approximately one hour from the university.

*Heather* has eleven years of teaching experience in Health and Physical Education and has a master’s degree but wanted to change teaching fields to Special Education. She was pregnant and had her baby during the 2001 cohort. She is a single mother. Heather lives approximately one hour from the university.

*Niki* has a degree in general education but wanted to teach full time in Special Education. While she admits that she is not technology literate and not comfortable with the computer, she still preferred the online environment to the face-to-face environment. She did not like school as a child because she had difficulty reading. Further, she has difficulty focusing on the computer screen and requested and received printed material from the program staff. Niki was able to attend one of her online classes while on a cruise ship in Alaska. She lives in a remote area approximately an hour and a half from the university.
Marilyn has a master’s degree and taught the deaf and hard of hearing for nine years before switching to a provisional certificate in Special Education. She participated in a bicycle ride across the state during one of the program summer semesters and accessed class work from local libraries in towns through which she passed. Additionally, Marilyn got married in the middle of the program. She lives approximately an hour and a half from the university.

Derek is married and has a three-year old child. He has a degree in Social Studies and History but there were no openings in his field when he began teaching three years ago and he accepted a position in Special Education teaching with a three-year provisional certificate. He considers himself computer literate and feels quite comfortable with the Internet and technology. Derek coaches two sports. He lives approximately an hour from the university.

Tiya is an African American woman who has a bachelor’s degree in Mental Retardation. She returned to school after teaching for nineteen years. She had considered graduate school several times but it was not convenient because of her work schedule and family responsibilities. Tiya attended one of her online classes while she was out of the country one summer. She admits that she set the same high educational expectations for herself as she did for her two children and therefore was determined to do well and complete the program. Tiya describes herself as a “loner” with very little computer experience. She lives approximately an hour from the university.

Douglas had just graduated from the university with a degree in Health and Physical Education when he enrolled in the program. When there were no job openings in his field, he accepted a position in Special Education on a three-year provisional
certificate and now prefers to remain in that field. He coaches football and baseball and was single and living at home during the program. He describes himself as computer literate and feels quite comfortable on the Internet. Douglas lives approximately two hours from the university.

_Clarinda_ has a bachelor’s degree in elementary education K–8 and has taught sporadically for the past twenty years but kept her certification current during those years. She attended class while she was on vacation in three different states. Her computer experience comes mainly from working in the front office at an elementary school. She has a daughter in college and two sons in middle school. One of her sons has a learning disability and is a stutterer. Clarinda planned her daughter’s wedding during the program. She lives approximately two hours from the university and has never been on the campus.

_Chris_ has her bachelor’s degree in elementary education K-8 and taught reading and English for approximately twenty-five years. She ran her own business for ten years before returning to teaching three years ago. She had two surgeries during the program, escorted students on a tour to Europe and spent one summer with her husband out of the country, where she attended classes online. She had minimal computer experience when she enrolled in the program. Chris lives approximately two hours from the university.

_Elaine_ has a bachelor’s degree in Special Education and has taught self-contained behavioral disorders classes for nineteen years. She and her husband were in the program at the same time. They have two children in middle school. Their computer “died” during her first summer in the program, and had to attend class from their public library, her school, and from a friend’s house. One summer they were camping in a national
forest where there was no electricity at the campsite and had to go into town to a public library to log into class. She was also able to attend online classes while vacationing at the beach. She lives approximately two hours from the university.

*Cecil* has a master’s degree in Health Education. He retired after thirty years in medical management and decided to return to teaching. He completed face-to-face classes in Health and Physical Education in order to be certified to teach in the state but accepted a provisional certificate in Special Education in order to be employed. His wife has a PhD in education and teaches in the same school system as he does. They have grown children. Chris considers himself computer savvy but is a slow typist. He lives approximately two hours from the university.

*Mary* taught when she first graduated from college and then taught sporadically while her children were young. She has a master’s degree in elementary education and taught for nine years before she had to quit because of medical problems. She accepted a special education position on a provisional certificate when she could not return to a large classroom situation because of a disease that affects her hearing. She admits that she has limited computer experience that includes mainly e-mail. She attended a summer semester online course while on a cruise by going to Internet cafes at every port. Mary lives approximately three hours from the university.

*Traci* has a bachelor’s degree in Special Education and taught for four years before accepting an interrelated position on a provisional certificate. She admits to having limited experience with computers when she enrolled in the program but readily admits she is more comfortable after her online experience. She has a twelve-year old
son and she and her husband live with his mother. Traci lives approximately three hours from the university.

:**Becky** has a master’s plus additional graduate hours and has been teaching Special Education for fifteen years. She felt very comfortable learning in the online environment and did not mind working independently. She has three children still living at home. Becky lives approximately three hours from the university.

**Non-completers**

**Julia** earned her master’s in Special Education in 1985 and has twenty years of teaching experience in another state. She received credit for previous graduate work in another state and only had to take three courses through the program plus the seminar, a summer institute, and the practicum for state certification. Julia and her family moved to a city about two hours from the university four years ago and accepted a part-time teaching position at a middle school on a three-year provisional. She is currently working part time at the county office coordinating programs for children with autism. She admits that her computer skills are minimal and limited to e-mail, word processing, and limited Internet research. Julia attended one of her summer classes from Europe where she had to travel two hours to get to an Internet café.

**Shirley** has a master’s degree and has taught Special Education in several states and in Europe. She also served as an educational diagnostician in another state, which is equivalent to a school psychologist in the state where she resides now. Her certification had expired by the time she returned six years ago, and the state only required two courses for re-certification. She taught for five years on a provisional certificate and then took the two required courses through the program. She did take a third class because
she felt it would be beneficial in her teaching position. Except for financial reasons, she would have taken more courses through the program. She had minimal e-mail and word processing experience when she enrolled in the program. Her husband is retired from the military, and they have two children. Shirley lives approximately thirty minutes from the university.

*Ginger* completed all of the program course work, took the Praxis (the certification exam), but was not required by the state to complete the practicum because of her past teaching experience. She was a nurse before going back to school to get a teaching degree in mental health. Ginger has taught for the past six years, the last two years on a provisional basis in learning disabilities and emotional behavior disorders and prefers to remain in this field. Her computer experience was limited to e-mail and basic word processing. She would like to continue in higher education and get her master’s in Special Education. She is single, lives with her father, and has a grown daughter. Ginger lives approximately an hour from the university.

*Eileen* has been a computer systems analyst for a large university for approximately twenty years. She started a master’s in Special Education ten years ago but switched to a master’s in foreign language education with an emphasis in Russian. She withdrew from the special education online certificate program during the third course when she had difficulty completing assignments because she was not teaching and did not have teaching experience from which to draw. Even though she would take a cut in pay, she does plan to seek a Special Education teaching position on a provisional basis. Eventually, she hopes to complete the course work through the program for her add-on
certification. Eileen is married with no children. She lives approximately fifteen minutes from the university.

_Ruth_ is certified in early childhood and middle grades. She accepted a Special Education position on a three-year provisional basis and after one year enrolled in the program for her add-on certification rather than entering a master’s program. She admitted that she was very afraid of computers but that she could not have completed her master’s degree in the two-year time period. Midway through the second semester she found out that she was pregnant with twins and while she had planned to continue in the program, her doctor advised her against it until after their birth. However, the twins were born with health problems that required surgery and Ruth was unable to return to the program. Her husband, who is a pastor, was unemployed at the time of the interview. Ruth lives approximately thirty minutes from the university.

_Louise_ had been retired for two years when she decided to return to teaching. She has a master’s in Social Studies and has taught advanced college prep Economics as well as Macro/Micro Economics on the junior college level. She accepted a Special Education teaching position at a high school and enrolled in the certificate program. She had planned to teach fall semester and return to the online program in the spring. However, her new job was quite demanding and she postponed re-entry until the summer. She enrolled that summer even though she knew she would be busy with her son’s wedding. When she decided to retire and home-school her two grandchildren, she withdrew from the program. Louise lives approximately forty-five minutes from the university.
Results

Results of this study on the influence of the cohort on persistence in and withdrawal from an online cohort graduate certificate program indicate that the cohort as a part of the learner support network had minimal influence on persistence and no influence on withdrawal. Four factors—goal proximity, support, relevance of program content, and adaptation to online learning—help explain why the majority of these adults completed the program. Unique personal circumstances and early goal accomplishment differentiate non-completers from completers.

Using the constant comparative analysis of the interview transcripts of both completers and non-completers, the results of this study indicate two factors for enrollment in the online cohort graduate certificate program as depicted in Table 2. The two factors identified as contributing to enrollment in an online distance learning program are employment options and the convenience and flexibility of online learning. The cohort had no major influence on enrollment.

Factors Leading to Enrollment in an Online Cohort Graduate Certificate Program

The purpose of this study was to determine the influence of the cohort on persistence in and withdrawal from an online cohort graduate certificate program. Two factors, neither of which were related to the cohort, were identified as contributing to enrollment in the online program—employment options and the convenience and flexibility of online learning. The participants were attracted by the structural nature of a cohort in that it was an accelerated program, that it was designed to accommodate their work schedules, and they had a mutual desire to complete the certification within their provisional basis. The community, collaborative, cohesive aspects of a traditional cohort
program were not present and not influential to enrollment. The program is designed for teachers who hold a clear renewable teaching certificate and who are teaching in the field of study on a provisional basis. Completion of this program leads to an add-on certification. Employment options include job security and getting a job.

Table 2. Factors Influencing Enrollment in an Online Cohort Graduate Certificate Program

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<th>Employment Options</th>
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<tr>
<td>Job security</td>
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<td>Getting a job</td>
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Convenience and Flexibility of Online Learning

*Employment Options*

Employment options in teaching for the twenty-four respondents in this study include job change that assured job security and getting a job. Some of the teachers were changing from a former special education degree to an interrelated special education position as mandated by the state, while others were changing teaching fields entirely after teaching for several years.

*Job security.* Job security for these teachers meant being able to remain in their current teaching position. Only one of the respondents and a non-completer, Eileen, was not teaching at the time of participation in the program but enrolled in the program with the intention of accepting a special education teaching position after getting the add-on certification. She was offered a teaching position in special education but decided not to
do it at that time because of her financial situation—“I would be taking a cut in pay to do it.”

Another non-completer, Louise, was returning to teaching after retirement from teaching social studies and economics in high school and junior college. For her, getting the add-on certification meant both a job change and job security. “For retirement . . . I needed to go back into teaching in a system that was covered by social security. I’m certified in social studies but I wasn’t fully certified in special education. I had to have it for the job.”

Ken had started his teaching career working with special needs children before moving into administration. However, he wanted to move out of administration and back into the classroom in a field that guaranteed him job security. “I was looking to get back into the classroom . . . the interrelated special education certification was really basically the same kids that I had worked with all my life.” Therefore, the add-on certification allowed him to change jobs and gave him job security.

Marilyn, a teacher of the deaf/hard of hearing for nine years, moved to a new school that could only offer her a part-time position in her field. She accepted a special education position as a job change as well as job security in one location with no travel involved. “It was . . . job security because deaf/hard of hearing is a low incidence population . . . I thought that interrelated, any special education, was a really good way to go, so yes, definitely job security.

Heather and Shade were changing fields from health and physical education and needed the add-on certification in order to remain in an interrelated special education position. While Shade admits his reluctance to use a computer, he knew he needed the
certification for employment reasons and viewed the online program as an exciting way to get the certificate.

I guess it was sort of exciting to try to use the computer to learn how to do different things for job security reasons . . . one of the main reasons I was trying to get special education certification wasn’t for a pay raise but was for job security.

Teresa and Clarinda both have degrees in regular education but found after a year in special education they preferred this field and accepted positions on provisional basis. According to Teresa, “I was in a position to teach special education but I didn’t have the special education certification so I tried it for a year to see if I was going to like teaching special education and I did.” Clarinda was advised by her assistant principal that she needed the interrelated add-on certificate to keep her job. “An assistant principal at that time who had worked in special education and was now an assistant principal said this is what you have to do . . . I had three years to get the add-on certification.”

Mary and Tracy had both been out of teaching for a couple of years when they decided to return to the classroom in special education positions rather than regular elementary positions. However, they both needed the interrelated add-on certification in order to remain in their jobs. Mary had left teaching when she had ear surgery and realized that she could not function in a regular size classroom because of the noise level. For her, a position as an interrelated special education teacher guaranteed her a change in jobs as well as job security in a field of her choice at a school of her choice. “I had to have this to continue in special education. I’m sure I can do something else in education but I like working with children and this is my job here so I had to do this.”
Tracy had to leave her regular elementary position in the middle of the school year due to the illness of one of her children and when she decided to return, she accepted a part-time position in special education. Getting the interrelated degree allowed her to move from her initial teaching degree into a secure, preferred position.

Special education is a nice little certificate to have added onto your credentials because you can always get a job, they always need special ed teachers and you’re much more likely to get a job in special education on a part-time basis or consultative basis or something . . .

Eleven of the respondents already had a special education degree but not in the new state mandated interrelated field. These degrees included majors in Learning Disorders, Behavior Disorders, Emotional Disorders, Emotional Behavior Disorders, and Mental Retardation. There was no pay raise associated with the add-on interrelated certification, and only nine hours could be transferred into a master’s degree program.

For these respondents, the add-on certification assured them of job security in a field they enjoyed and in a school of their choice.

Beth had changed jobs from a county where she was traveling between two schools fulfilling special education job requirements when she accepted an interrelated special education position on a three-year provisional basis. The interrelated special education position guaranteed her job security within her changing degree field. She acknowledged that she did not get a pay raise nor full credit towards a master’s degree from the program, but her job was secure.

Our special education supervisor suggested strongly that if we wanted to keep our jobs, we would get our interrelated degree. They are phasing out
self-contained, mentally retarded classes, or mentally challenged . . . so in
order for me to teach I had to have that certificate . . . she plainly said if
you want a job, you have to do this.

Tiya had previously taught in a mental retardation position. She was returning to
higher education after nineteen years. She had considered going to graduate school many
times but didn’t feel like she had the time with her work schedule and raising a family.
She admits that even though she thought online learning might be a problem but
“everything just worked out . . . nothing ever was a problem, everything just fell in line
so I knew that this was meant for me.” Further, Tiya expressed her desire to do the best
job she could in the new position by getting the interrelated certification as well as
securing a teaching position in a school of her choice.

I was in a brand new school and I’m the first interrelated teacher there so I
wanted to do a good job and I know now they’re really not hiring teachers
who are not certified in interrelated, the push now is to hire people who
are certified so that was another thing that really pushed me to go ahead
and get that certification.

Julia, Becky, Elaine, and Traci already had their degrees in different areas of
special education but needed the add-on interrelated certification to remain in their
current interrelated positions. Julia already had a master’s in special education when she
moved to the state four years ago. She was teaching with provisional certification until
she added the interrelated certification. For her, adding the interrelated certification
meant getting a job as well as job security under the state mandated requirement.
I wanted to upgrade my certificate from just mental retardation to interrelated because of the way the job market was here. I wasn’t looking for a degree, I was just looking for an add-on certification . . . . it was just something that I needed to do if I wanted to work.

Similarly, Becky pointed out that for someone already with a master’s degree and only needing to complete the interrelated add-on certification as a job requirement, the program is a good option. She understood from the beginning that she would not get a pay raise upon completion of the program, but it did give her job security. “No pay raise for us. Just job security . . . but I think for somebody like me who has my master’s already and just needed the add-on certificate, it’s perfect, an ideal situation.”

**Getting a job.** Three of the respondents had not been able to find jobs in their teaching field and decided to accept positions in special education, a field that is in demand. These respondents acknowledged that they preferred teaching special education to their former field. Derek has a social studies/history degree but found it difficult to find a teaching position in his field. “I got a social studies/history degree and came out of school and there weren’t any spots open so I was able to get a probationary certificate in special education and I like it. I wanted to keep doing it.” Similarly, Douglas, a recent graduate, was having difficulty getting a teaching position in health and physical education in the county of his choice and enrolled in the program to get certified in special education so that he would have a job. He admits that he now prefers teaching special education.

I was already certified in health and physical education but to get a job, I guess to get a job in the county I wanted to, special education was the best
route. I know there have been several teachers who didn’t start working on their certification that have been let go . . . they (administration) made it very clear that if I wanted a guaranteed job for next year that I needed to go ahead and start on it.

Cecil retired after thirty years working in medical management, and with a master’s degree in health education, decided to go back into teaching. Teaching special education with an add-on certification allowed him to find a job.

Looking around particularly locally it appeared that the opportunity for quick job employment would be in special education because there seemed to be a tremendous need in that specific field. So having a degree in health education that would require some kind of add-on in special education. Basically what I was looking for was just getting the certification that said I could teach special education in the state.

Chris was going back into teaching after working in non-teaching jobs. She ran her own business for ten years before she and her husband moved to the state and she decided to look for a teaching position. The special education position she accepted required the add-on interrelated certificate.

My husband was assigned out of the country for three and a half years and I decided that in order to move back and forth with him, I needed to go back into education where I had a little more flex time than if I were running a business . . . I applied and almost immediately was put into a special education position that required the add-on certificate.
Factors contributing to enrollment in the online cohort graduate certificate program for the twenty-four respondents included not only employment options of job change that guaranteed job security as well as getting a job, but also included the convenience and flexibility of online learning. While this was the first online learning experience for all of them, the respondents found that online learning best fit their work, family, and vacation schedules.

**Convenience and Flexibility of Online Learning**

After employment options, the convenience and flexibility of online learning was given as the second reason for choosing the online program rather than an on-campus program. Twenty-one of the respondents either live at least an hour from the university or as much as three hours from campus, and therefore chose online learning. While three of the respondents live within a ten-mile radius of campus, they still preferred online learning rather than driving to campus, finding a parking space, attending class at set times, and working out meals and child care at home. Additionally, these adults say that online learning worked best for their work and family schedules, and family vacations.

Ken, who lives within five miles of the campus, still chose the online program instead of a face-to-face program because of the convenience and flexibility of online learning. It was important for him to be able to help with child care as well as other family responsibilities. At the time of the interview, Ken was in a traditional face-to-face doctoral program and acknowledged that online learning is more convenient.

I think one of the best things about the program is that you can actually do it and it not be a big detriment to your family, it’s not like what I’m doing now where I’m gone two nights a week until 10:00 at night. Just the fact
that the online classes were available twenty-four hours a day if you wanted to work on it at night after your family goes to bed. That makes it really convenient for the non-traditional student.

Mai lives even closer to campus than Ken but she admits that because of the demands of her job and her children, it would have been almost impossible for her to attend classes in the traditional face-to-face environment.

I just felt like the way my life was so chaotic at that time . . . there was absolutely no way I could have gotten this traditionally. I said OK. I can do this all through the computer. I don’t have to be on campus with my kids being at home . . . it just wouldn’t have worked for me any other way I don’t think. It not only kept me off campus . . . I didn’t have to hassle with parking, I didn’t have to hassle with baby sitters . . . racing to class after school . . . I mean it’s not that far for me but it’s just having to go.

Eileen works for the university and has a ten-minute drive to campus, but because of her job, found it impossible to attend on-campus classes. While she admits that she prefers face-to-face classes, the flexibility of online learning allowed her to learn while still working full time. “This program was exactly what I was looking for—totally. The online courses were attractive because then I didn’t have to go down to the university and I could do it on my own time and I’m working full time.”

Teresa, a former nurse, and her children live with her parents during the week in the county where she teaches special education during the day and adult education classes two nights a week. It would have been a two-hour drive one way to the university and on-campus classes would have conflicted with her evening job as well. She found that
the convenience and flexibility of the program a perfect fit for her busy life. The convenience and flexibility of online learning even allowed her to participate while she was out of state one summer for a one-week seminar.

There’s no way I could have driven to the university two or three times a week. I just knew I wasn’t going to get that option if I didn’t do it online. I taught adult ed classes two nights a week so those two days I didn’t go home, I stayed and worked just on my certification, my online classes. And last summer I was at a week of intense study at a university out of state, but that week was test and exams and last minute paper work for my online class so I was actually in the hotel lobby with my laptop, checking my e-mail from the program.

Heather was in the process of changing teaching fields from health and physical education to special education. She was attracted to the program because it accommodated her working schedule as well as her family situation. “I was in the process of having a baby and felt an online course would allow me to care for my newborn while also being able to complete the program. It accommodated my schedule much better.”

Marilyn was not only changing fields from deaf/hard of hearing to interrelated special education, but she was also changing schools when she heard about the program through a colleague. The online program met her certification needs and best fit her schedule while learning a new job at a new school.

There weren’t many options because I live in an area where there is nothing available as far as add-on type . . . and the great thing is that I
didn’t have a set time. I actually planned a bicycle ride across the state. It’s a whole week so I had literally figured out when I get to this town and that the library will still be open. I could go at midnight and get the assignments. I think this is easier to fit in and I know it’s only an hour commute but when you look at it... from here to the university at night and I might be spending still two hours in the car.

Tiya had taught mental retardation classes for nineteen years when she was hired as the first interrelated teacher in a new school. She was determined to do a good job in the new position. She had thought about going back to graduate school several times but never did for two main reasons—her family responsibilities and the travel involved in attending classes. Additionally, the convenience and flexibility of online learning allowed her to incorporate a family vacation with one of the summer institutes at the beach as well as travel with her husband out of the country and complete her class assignments from there.

I had entertained the idea of going to graduate school but being with family and my work time I just didn’t see where I had time to do that plus I didn’t want to travel, didn’t want to be on the road at night so as I read more and more about the program it seemed more appropriate for me. My last course we were able to use that as a family vacation at the beach. And I had the opportunity to go out of the country with my husband. I was able to go to his office and use the Internet and turn in my information.

Douglas, Shade, and Derek experienced similar circumstances trying to fit course work for their interrelated certificate around their extra-curricular coaching.
responsibilities in addition to teaching five classes. For them, the convenience and flexibility of the online program made it possible to attend class when they got home late from football, baseball, or track practices and games. According to Douglas,

I guess convenience because I coach football and baseball so time was going to be a problem. I couldn’t take just any courses and really it’s not much available in this area that was feasible for me, so online was very, very convenient. I could do it any time. I think you have a lot more time to do it with no travel time.

Clarinda and her family moved to the state several years ago and has never been on the university campus, which is a four-hour round trip. She has a son with a learning disability and didn’t want to be away from home at night. Additionally, like other respondents, the online program did not interfere with family vacations. She explains how online learning worked well for her with her work schedule, her family schedule, and her vacation plans.

I could stay at home and it was just much easier for me to do it that way than to have to work all day, come home, cook dinner, and then think about going to class somewhere. I saved about four or five hours a week driving into the city and fighting the traffic at that hour, it would be a nightmare . . . and you have family responsibilities so you really try to keep everything as balanced as you can and this program allowed me to do that. In the summers it didn’t keep us from traveling. I just put the laptop in and did the work there.

Chris who had taught for nine years before going into business for herself wanted to return to a profession that allowed her more flexible time for traveling with her husband. Additionally, she had two serious surgeries during this time and she readily admits that online
learning was the only way she could have gotten her interrelated certification. In addition to living more than two hours from the university, she also spent one summer during the program out of the country with her husband and another summer escorting students to Europe.

Luckily for me I was able to participate in it this way because I spent one summer out of the country and I was able to get online there and get this done. Last year I had two major surgeries so if I had not participated in this program I would have been unable to fulfill all of the requirements on campus. I have a laptop and I can go anywhere in the world and do this. I can do it at three o’clock in the morning, which I did sometimes.

Traci commented positively several times throughout her interview on the convenience and flexibility of the program. She, too, was looking for a way to avoid traveling at night or on the weekends to attend classes. As with many adults returning to school, she referred to it as a juggling act.

Taking classes downtown at night wasn’t a good option either and weekend classes wasn’t a good option for me. And if I was more comfortable being up at two in the morning working on a class that was fine. There were times that I did . . . it is so flexible and fits for me, I mean it fits around all those things you have to deal with as a mom and a teacher . . . being able to juggle yourself. I loved the flexibility. It’s convenient . . . you can work at your own pace. I’m not doing this in the classroom again, not when I can do it online.

Becky lives approximately three hours from the university and highly recommends the program to other teachers. Her only negative experience was with the satellite video conference
when her media specialist did not know how to set the satellite for pick up and she had to travel to a nearby junior college for the conferences. Even with this frustration, Becky still preferred the online environment to the face-to-face environment. Further, she did not feel that she was marginalized in any way by not being in the traditional classroom.

Being on campus would cause me to stay away from the program . . . I mean from here to the university is a long way and if I had to do that even once a month, that would be too much. I clearly wanted distance learning. It’s just very convenient to a busy life style. I don’t think it’s any easier. I don’t think it’s any more difficult. I just think it’s conducive to a busy life style.

Elaine and her husband had a special situation where they both needed to get the interrelated add-on certification at the same time. She had changed schools and he accepted a position in special education when he could not find a job in health and physical education. She admits that it would have been impossible for both of them to be away from home at the same time. Elaine had already enrolled in a face-to-face program at a university approximately forty-five minutes from her home when she heard about the online program. She immediately realized that she could not handle the drive and the time away from her children and switched to the online program. She, like other respondents, also related how convenient it was for her to attend the online classes while on vacation.

We both had to get our interrelated certification at the same time. I said to him there’s no way both of us can go to school and be away from our kids. The summer we started the online course our computer died but we
discovered public libraries. And we’d go to my school . . . and we had a friend who lived down the road who had a computer. The good thing about online courses is we could go on vacation. We went camping one summer and we’d drive down into town to go to the library. I found it a lot easier online without the stress of the regular classroom and traveling . . . physically it was easier.

Tracy has two autistic children who demand quite a bit of her time and she is limited in the time she can plan for activities other than taking care of her children. It was not an option for her to be away from home at night or on the weekends for classes because she has to make special plans for baby sitters. The convenience of online learning was much more conducive to her lifestyle.

It was just the exact thing that I needed because I could still be at home, I could take the classes and do it on my own time, and I even was able to do a lot of it at school because a lot of it involved doing projects with students and I just incorporated that into what I had to do.

Employment options that included job security and getting a job as well as the convenience and flexibility of online learning influenced the twenty-four respondents in this study to enroll in the online cohort graduate certificate program. The results of this study indicate four factors that contributed to persistence—goal proximity, support, relevance and applicability of program content, and adaptation to online learning.

*Factors Influencing Persistence in an Online Cohort Graduate Certificate Program*

Results of this study show that the influence of the cohort was minimal. Participants noted its importance only in relation to a part of the learner network support.
Of more influence to persistence were goal proximity, support, relevance and applicability of course content, and adaptation to online learning. Once the participant made the decision to enter the cohort program based on employment options and the convenience and flexibility of online learning, four factors were identified that influenced persistence in the program. As stated above, persistence by these adults was influenced by the cohort as a function of the learner support network that includes other external factors of family, program, and employer support, as well as internal factors such as goal proximity, relevance and applicability of program content, and adaptation to online learning. These factors are depicted in Table 3. Goal proximity refers to knowing one can complete the certification within the provisional period. Relevance and applicability refers to the participants’ recognition that the course information was relevant and applicable to their job. Adaptation to online learning refers to the participants’ adaptations of behaviors and approaches necessary for them to be successful.

Goal Proximity

All of the respondents had a specific goal in mind when they enrolled in the online program—to obtain the add-on certification in interrelated special education. It was clear to the participants from the beginning that the online program met all of the state requirements within a time period that coincided or fell within their provisional teaching period. All but one of the respondents had accepted a special education teaching position with the agreement that they would get the certification, and they admitted that completing the program within the three-year provisional period was the main factor that contributed to their persistence.
Table 3. *Factors Influencing Persistence in an Online Cohort Graduate Certificate Program*

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Beth, Teresa, and Heather were attracted to the program because it was a set program of study over a set period of time. In other words, their goal was achievable in a certain period of time. Additionally, the respondents appreciated the fact that the program courses were chosen to meet state standards. According to Beth,

> I had to do it. My certificate was going to be up in a certain number of months and I knew how long it was going to take. It was definitely a selling point because it was an accelerated program and you just knew exactly what you were going to have to take.
Teresa expressed similar sentiments about proximity of goal. “I want to see what’s there and know it’s there and I don’t choose a course and get down to the end and find out I’ve missed something or that I didn’t take something that I should have.”

Marilyn was another participant who was changing teaching fields and moving to a new school at the same time. Her goal was to get the interrelated certification as soon as possible and remain in a full-time teaching position in special education.

I was attracted to it because it was an accelerated program. I knew when I’d be finished. I knew exactly how many classes I’d have to take so I could budget. One of the things that I wanted to talk about was the single factor uniting the cohort group . . . that was the goal of completing that certification.

Tiya admits that had it not been for the online learning she would have probably have used up her three-year provisional period without ever getting the certification. However, once she found out about the online program, she decided that was the only option for her to reach her goal of remaining in her current position and dedicated the next year and a half to completing the program. She liked the idea that she was starting in a certain place with a group and finishing with the same group. “I liked the idea of it being sequential and something that was consistent throughout”

Elaine was changing from teaching self-contained behavioral disorders to interrelated special education and was teaching with a provisional certificate. The fact that it was totally online never deterred her from reaching her goal of getting the add-on certification. “It didn’t bother me that I wasn’t in class . . . because I was so focused on getting it done. It was a goal . . . and to me this was such a great way to get that add-on.”
Mary was returning to teaching after two years due to ear surgery and knowing that she could not function well in a large classroom felt fortunate to have been offered a special education position in the school of her choice. She admits that she was not looking forward to going back to school at age fifty-five, but her goal was to get the add-on certification and this program was perfect for her.

You asked me what contributed to my persistence. I had to have this. I was fine that it was going to be a year and a half. I didn’t really care how long it took me to complete it as long as it was within the provisional period.

Shirley and her family had moved around for eighteen years while her husband was in the military. She taught in several different states as well as in Europe before they finally returned to the state; however, her teaching certificate in special education had expired and she needed two courses to renew it. While she too admits she missed the camaraderie of face-to-face classes, describing online learning as a lonely experience, her goal was to renew her certificate and it was clear that she could accomplish this in the program. “My motivation was I wanted to finish because I wanted to get certified. I was driven to getting through these two or three courses so that I could get my certification and wouldn’t have to worry about it anymore.”

Goal proximity was one of the four factors identified by the respondents as contributing to their persistence in a totally new learning environment. Another factor that contributed to persistence was support.
Support

A second major factor influencing persistence in the online program was support. The online learning environment presented a different way of going to class that caused apprehension, anxiety, and loneliness for the participants. Further, because many of them had minimal computer experience or dedicated space at home or work from which to attend their online classes, support from four fronts—family, program administration and faculty, employer/colleagues, and cohort members—was a significant factor contributing to their persistence.

As stated earlier, this was the first online learning experience for all of respondents and many were apprehensive about learning in a text-based environment. They talked enthusiastically about how support from family, program administration and faculty, employers/colleagues, and cohort members eased their apprehension. The support mainly came in the form of encouragement and technical support and many of the respondents admitted that they could not have done it without that encouragement.

Family support. Many of the respondents talked about the importance of family support to their persistence in the online program. Whether it was technical support, help with household chores, or taking care of the children, support from family members made this new learning experience and environment more endurable.

Tiya and Clarinda had minimal computer experience when they enrolled in the online program and admitted they depended on their husbands’ technical expertise as well as their encouragement to get them through the online program. Because of her minimal computer experience, Tiya depended on support from her husband to calm her computer fears as well as to let their children know when she was working on a deadline.
When the information I sent in was all askew . . . I was panicking . . . my husband would come in and find it and he would say, why don’t you just take a break. And he would say to the children, ‘okay, she’s got something to turn in, nobody bother her’.

Clarinda expressed similar sentiments about the support she received from her family. She especially enjoyed the time when she and her daughter were taking classes at the same time.

My husband was wonderful . . . he was very supportive through the whole thing and that really makes a difference. Many nights he would say you go ahead and I’ll take care of dinner. Sometimes he’d get the boys out of the house if I had a major assignment to do . . . And my daughter was in college too so it kind of gave us something to relate to . . . we could also be happy for each other. And the boys were supportive because they knew it was important to me. If you don’t have the support of family, it would be tough, I understand that.

As the only husband and wife in the 2001 cohort, Elaine acknowledged that they were a good team, very supportive of each other and even had friendly competition as far as their grades. They were able to get all of their assignments completed in spite of the fact that the only had one computer.

A good team . . . yes, yes we worked well together. Even though our assignments were due at the same time, our chat rooms were never at the same . . . which actually worked out quite well because we only had the one computer. We were a good team in that we did get through it . . . and
then of course we’d have major competition about who made an A and who
made a B . . . there’s a couple of times where he made better than I did and
of course we’d tease each other.

Similar to other respondents, Traci, Mary, and Teresa commented about the help
they received from their husbands and their children. Traci recalls once when she was
working late at night and under a lot of pressure to get an assignment in on time her son
“came in quietly and brought a teddy bear to sit with me while I was doing my
homework.” For Mary, the support she received from her husband was invaluable. “I
knew I had my husband who is my trusty advisor and helper . . . I don’t think I could
have done it unless I had my husband because he is very, very computer literate.” Teresa
and her children live with her parents during the week and she appreciated the support
she received from her family under these circumstances.

There were always interruptions at home but when I would come down to
the wire and say “I’ve got to finish this,” they understood. No one
interrupted me. They wanted me at home and they knew how important it
was for me to finish this.

Lori has two autistic children who require a constant routine and attention. She
spoke often about the support she received from her husband while she was in the online
program and noted how difficult online learning might be for someone without spousal
support.

There were times when I just had to get something done and dad may take
the boys out . . . he was very supportive . . . I can imagine that if you had a
spouse that wasn’t very supportive that it could be difficult. There were
times when I was interrupted but I had a partner who was supportive and would take the children to the other end of the house.

Ruth and Eileen, who dropped out of the program, still talked about the support they received from their husbands while participating the first year. Ruth admits that she was afraid of using computers when she began the program and appreciated the special support she received from her husband.

I’m very, very afraid of computers—I didn’t have much computer knowledge . . . yes, I was a little nervous about the technology part but my husband is wonderful with the computer and he bought me my own computer at the house and got me set up with my password. The day that we had to get online he stayed there before he went to his job. He went through it with me step by step and it was easy.

Eileen recalled a particularly difficult quarter where her husband’s support helped her get through emotionally.

I remember one quarter when I was in class, it was a fall quarter and I was so overwhelmed and so stressed out with the amount of work I was having to do with that course that my husband planned a weekend away at the mountains because I was so—I’ll never forget that because it was one of the heavier loads I ever had and I had been working long hours at my office on a project.

Program support. Many of the respondents have never been on the university campus and none of them ever met the staff and yet, all of the respondents talked about the excellent support from the program staff and instructors. Whether is was help with
registration, submitting assignments, or reassurance that they could be successful in this first-time online learning, the respondents felt very comfortable contacting the staff and instructors, enjoyed the camaraderie, and never felt marginalized by not being in face-to-face classes.

Tiya had waited nineteen years to return to higher education and admits that she set high expectations for herself once she did decide to enroll in the program; however, the support she received from the program staff made the transition easy.

I didn’t know anyone who had ever participated in the program so I was kind of on my own. After reading the information I got in touch with the university and talked with Betty who was just wonderful. I don’t think I could have made it through without her. She basically just held my hand and carried me through. And this was my first online experience. Yes, very first. But I had Betty because when it was time to register and if registering didn’t go well I called her and she did it for me like it was never a bother. The people who are in charge of the program planning, you can tell had deep thought . . . there was nothing that seemed unplanned.

Beth and Teresa shared similar stories about the support that they received from the program staff as well as the faculty. Beth admits that she was quite uncomfortable with online learning initially, but the support she received from the program administration and faculty soon put her at ease.

Yes, anything we needed you either called Betty or Tricia or Karen and everybody was willing to help . . . your professor or TA, you had his e-mail address or her e-mail address and you just write them twenty-eight
times if you had to. And like I said I was very scared to begin with because I just didn’t know if I could handle this and they always assured me, ‘you’ll do fine’ and after probably the first week I felt very competent navigating the site. I was just brand new at doing that sort of thing . . . And if you were struggling, if you were really struggling, you would call Betty. . . I’ve never met that lady and she is the most wonderful person . . . if any time something would come up she would say ‘oh Beth hold on and I’ll find that information, I’ll figure out how to help you’. I sent her flowers because she’s been so helpful.

As another first time participant in online learning, Teresa’s fears were also calmed by the support she received from the program staff. “The program office was just so cooperative from day one and any time I had a problem I could call them and I wasn’t intimidated to call them and ask questions—they were very supportive.”

Derek is another respondent who was most enthusiastic about the support he received from the program staff. He talked about the special bond he formed with the staff without ever meeting them.

I just called one day and talked to them and figured out this would be the best option. Getting started it was Betty, she was a huge help. There were a lot of times, actually my first class, something happened and I think I got an F to start with . . . I did it but I think I had a problem with my computer . . . I thought it went in and I went off to football camp and I was gone for a week and they had apparently been trying to call me all week and I came back, re-did it and sent it in and I was able to get everything cleared and
ended up making an A. I actually talked to them about a month ago, that kind of thing and I miss them. I usually talked to them pretty often.

Chris had anticipated a long wait to get in the program, but through the diligence of the staff, she was accepted into the program. Because of the support she received, she is not hesitant to recommend the program to other teachers.

When I got this flyer from the university unfortunately I was too late but I called the university and spoke to Tricia and she said ‘oh Chris we have this huge list of people that have signed up, but I’ll put you on the list’. I had to go to my mother-in-law’s out of state and Tricia chased me down and said we have an opening. Tricia has been very helpful all the way through this program. And Betty and Karen both of those have been very, very helpful and very, very supportive. And I’ve told a couple of people at my school who asked about the program, if you have a question, feel free to contact the people at the university . . . the people at the university were very, very helpful and very, very flexible.

Sally admits that she was not at all happy that she even had to have the add-on certification since she already has a master’s in special education; however, the support she received from the program staff encouraged her along the way and calmed her fears about doing the program totally online.

I wasn’t real happy about having to go back and take classes . . . and I was a bit intimidated about doing everything on the computer because I had just kind of used it minimally for e-mail and word processing and a little bit of research on the Internet . . . but the people at the university were very available to answer any questions. I would call Betty . . . she was just
wonderful—no question was too stupid . . . they really did make me feel comfortable and after the first semester I felt real comfortable with the computer. There were so many support systems set up at the program office, you didn’t have to e-mail them, you could just call them and they would walk you through it. I think once I actually got down to it it wasn’t that difficult, it was just not being sure I could to do this . . . it was just a different type of approach. But I never felt like I was out on my own . . . they were always on top of everything. I would recommend it to a colleague . . .

Even the three respondents who withdrew from the program shared similar positive incidents about their online learning experience because of the support they received from the program staff. Louise, like many of the participants, had some reservations about taking courses online because she was not familiar with the computer and was especially apprehensive about being in the chat rooms. However, the support she received from the program staff and the professors helped calm her fears.

I took the first course in the program . . . I spent a lot of time on it and I think part of that was that I was not real familiar with the computer although I had had classes I hadn’t been practicing a lot of things like cut and paste and that sort of thing, so bless their hearts, I pulled the phone out and talked to the department at the university and they walked me through everything, helped me get registered and helped me get the e-mail address at the university and that sort of thing, it was perfect, they just did
beautifully. I think anything you’re a little apprehensive of to begin with.

. . . like chat rooms especially. . . but they were right there with you.

Employer/Colleague support. Many of the respondents commented on the support they received from their employers and colleagues who encouraged them to participate in a learning program that was totally different from previous learning experiences. From notification of the program, to payment of tuition in some cases, to technical assistance, these respondents appreciated the collegial support.

Clarinda and Tracy were both encouraged by and appreciative of the support they received from their employers and colleagues. Both of them were returning to the classroom after taking some time off to raise their special needs children and were somewhat hesitant about full-time work and returning to school at the same time.

Clarinda had gained some experience teaching special education classes while serving as a long-term substitute and was encouraged by her principal and the director of special education to enroll in the program.

I had done a long term sub for a lot of our special ed teachers and it just happened an assistant principal at that time who had worked in special education . . . she really wanted me to teach special education so she influenced me to a certain extent. She said ‘you have such a love for it and you seem to understand it’. It just happened that a memo showed up in our mailbox and . . . and I called the director of exceptional children for the county and she said this looked like an excellent program and she thought I would do well in it with the experience I had.
Tracy shared a similar experience of encouragement and support from her principal as well as her colleagues.

My principal said ‘I enthusiastically recommend this program’ . . . ‘look this is what you need to do, I’ve already told them you were coming’. Yes, she’s principal of the universe, I mean from the day she walked in she encouraged people to go back and get their master’s. And luckily the computer technology person at my school is a friend of mine so I had technological support there. I was not teaching when it was time for me to do the practicum, but my principal worked it out so that I volunteered three hundred hours in special education at summer school last year and in the fall and we kept a log.

Chris talked not only about the support she received from her principal and lead teacher, but also the support she received from her colleagues. Similar to Clarinda and Tracy, Chris was gradually re-entering the teaching field and had just completed a long-term substitution position in special education when she was informed of the online program.

I got support from my principal and colleagues. I spent eight months as an extended substitute in a special education class. The principal at the middle school called me and said ‘everybody has spoken very highly of you, we need you here’. My librarian taped the telecourses for me. Everybody I work with is excellent. . . . I think it’s important if you’re going to do this that you have someone that’s very experienced that you can actually talk to because there are times that questions are going to
come up at school that you want answered, so I felt very good dealing with my lead teacher.

Similarly, in addition to support from the program staff and their families, Tiya, Marilyn, and Derek were motivated to enroll in the online program when they knew that they had the support of their principals and colleagues. Tiya commented on how important it was for her as the first interrelated teacher to do her very best in a new position in a new school. “I had been given some information about the online program by my director of special education, . . . for the practicum, I had my own class and my principal served as my supervisor, so that worked just great.”

Cohort support. As stated earlier, the cohort had minimal influence on persistence for the participants in this study. Some admitted that they did not even realize they were in a cohort when they started the program, and further admitted that they were not interested in pursuing communication with the cohort members outside of the chat rooms and online class discussions. However, while support from cohort members was not mentioned as often by respondents as support from the program staff, family, employers and colleagues, several of the respondents talked about the significance of support from their classmates. Being new to the state, Sally found the interaction with her classmates very helpful.

I did miss interaction with the other people as far as sitting in a classroom and talking. It wasn’t until the second semester that I realized that I had other people in my school who were also doing the same thing and so we actually would get together to do the televised seminars and then there were times when we would get together about assignment and that made
it a lot easier. I think the real strength of the program is the experience
and interacting with other teachers . . . you probably have more of a
variety of people with different experiences.

Heather shared similar experiences of the invaluable support she received from
cohort members. She, as well as one of her classmates, was having a lot of difficulty in
one of the online courses and even they considered dropping the class but changed their
minds after talking to each other.

The cohort experience helped give me other people’s perspectives in the
field of special education. Their experiences and expertise were helpful to
me both in getting through the program and giving me an idea of what
teaching special education was like. There were a few occasions when the
work load, coupled with taking care of a newborn, seemed a bit
overwhelming to me. This was a time when the cohort experience was
invaluable.

Tiya admitted that it was a lonely experience for her in the beginning of the
program, but she eventually looked forward to the chat rooms and enjoyed and benefited
from being online with her classmates. “I did feel alone . . . I felt apart but a part—I did
feel apart from the group but I was a part of the group whereas there was a connection.”
Further,

I got into chat rooms and that was nice—being able to read and type in
text for someone else to read and keep up with what was going on . . .
enjoyed that and the same mind set was among us all you know, we were
feeling the same thing and then later on when we met at the weekend
I began to feel kind of a niche, at home, in place because I believe all of us that started at that time finished at the same time so that was good.

In addition to the personal information shared among cohort members, Clarinda also appreciated the tips she got on taking the praxis exam at the end of the program. Sometimes we would talk about other things like one girl was pregnant so when she had her baby and came back in the chat rooms and said ‘I missed the last one but I had the baby’ . . . I have to give her a lot of credit . . . so we would share experiences like that. And I remember one night some of us stayed on and we discussed the praxis, when is it being given, who’s taken it, who hasn’t, how hard was it, things like that, and it was always related in those ways so to me that was very valuable information.

Tracy talk about the fun she had online with her classmates as well as the serious nature of the chat rooms and about the sharing of ideas that went on during the online program.

And you asked about the cohort experience—there was a female professor who did a more informal chat . . . it was like a real chat room where people just chimed in and we would make jokes about ‘hang on a second I’ve got to go take the brownies out of the oven’ and someone else would write ‘send me a brownie’ and someone would type in ‘they smell so good’ and so we had a little camaraderie . . . I wanted to go to those chat sessions. I enjoyed the intellectual banter and I enjoyed defending my opinion. People would write ‘I’m having a problem in this area’ and other
people would write ‘oh I’ve had that problem and this is what I did’ . . .

there were discussions boards, so there were ways you could communicate
with other people in the class without being face-to-face.

Support from four fronts identified by the respondents, as well as goal proximity,
played a significant role in persistence in this online program. Beyond that, the
respondents recognized early in the program that they would benefit professionally from
the courses, a fact that encouraged them throughout the semesters. They admitted that
what they were studying and learning was not busy work or something to be endured to
get the required certification, but rather useful information to be taken back to their
classrooms.

Relevancy and Applicability of Program Content

Many of the respondents saw the relevancy and applicability of the program
content as a reason to persist in the program. As noted earlier, the respondents either had
degrees in special education or were changing their teaching field to special education.
Teachers who were changing fields as well as veteran special education teachers were
highly complimentary of the courses chosen by the Special Education Department at the
university and were quick to note that they began to immediately apply the knowledge
gained from the program in their classroom situations.

Julia, Tiya, and Shirley were veteran special education teachers when they found
out that they needed the add-on certification for their new positions. Julia had taught for
twenty years, but admitted that with all the changes in the special education field she
needed to update her skills and she benefited from the program. Being in the online
program introduced her to new methods and different approaches that she would not have
implemented otherwise. “It made me update myself on the new research and the latest studies so that I was much more effective with the students. Definitely I could incorporate what I learned in the classroom.” Similarly, Tiya admitted that after nineteen years of teaching she was very comfortable in the classroom, but recognized that she needed to update her skills to be a good interrelated special education teacher. “Did I have all the knowledge that I needed in order to give information to them in the best manner that would work for them? I didn’t know that, so that’s what made me be persistent in pursuing the add-on certification. I’m more current now and I like that.”

Ken and Marilyn looked at the program as just-in-time training for their new positions. Ken had been out of the classroom for thirty years, and while getting the certification in order to keep his job was the main factor that contributed to his persistence, he admits that he was able to take what he was learning immediately back to the classroom.

I think you take what you learn in the courses back to the classroom and you take what you learn in the classroom back to the program too. You’re really only going to learn it when you’re doing it so that really worked together well. It’s good that systems can go ahead and hire teachers and they do the program while they’re teaching—they really reinforce each other while they’re in the classroom.

Marilyn expressed similar sentiments about her motivation to continue in the program because she could immediately apply what she was learning in her new position. “I had a place to apply it . . . everything I was learning I was immediately coming back to school with . . . . I think definitely that was worth the time for me.”
Teresa enrolled in the online program after her first year as a special education teacher. She was immediately pleased with the courses chosen by the Special Education Department because she could see the applicability in the classroom, which was important as she proceeded in the program. “Everything was something I was going to need. All of the information was useful. It wasn’t just having to read a book or do a project or report and not ever picking it up again.”

Cecil had retired after thirty years in medical management when he returned to the classroom in a different field from his certification in health education. While his main goal was to get the certification, he admits that his persistence paid off because of the relevancy and applicability of the subject matter. “My understanding . . . of special education was limited so anything that I picked up in those courses was new information, so yes, everything that I was learning was new which made it pretty relevant and pretty important.”

Becky commented on how important it was for a participant to be teaching at the time of enrollment in the program, thus having a source for applicability of program content. She valued the sharing and exchange between her colleagues and was glad to share her program experiences as well. “I would think it was extremely important that you are employed and you’re using those things because most of those things no matter what the class . . . most of the things kept taking you back to your own classroom.”

Tracy was not able to go to one of the summer institutes because of financial reasons and because of the difficulty in getting baby sitters for her two autistic children; however, she persisted in the program by taking an extra online course and gained from it. “I took the mental retardation class because I wanted the information . . . I felt like I
needed every bit of information I could get . . there’s a very fine line sometimes in the area of mental retardation.”

Clarinda, Traci, and Louise shared similar experiences about completing the program because of the relevancy and applicability of the content material. Clarinda felt more comfortable in the special education teaching environment as a result of completing the certification. “I enjoyed what I was doing. I was able to build a relationship with the kids and I could see I could make a difference and that just gave me a personal satisfaction.” When Traci saw the layout of the course work and the description of each class, she felt confident that she would benefit from the program. “It covered all the special need areas. It actually gave me some background on what I’m teaching now and I can say I learned that in class, just didn’t make it up on my own.” As a former teacher of advanced placement students and junior college students, Louise immediately recognized the fact that she needed the content material offered in the certificate program in order to be successful in her new position.

I realized after taking the first class that there was a great deal to this and here I was never having taught special education. I always did the other extreme—I did the advanced kids, the college prep kids, so this was going to be a one-eighty so I knew that I had so much to learn. Yes, I got a healthy respect for special education having had just the one class in learning disabilities.

Goal proximity, support from the program staff, from family, from employer, and from cohort members, and relevancy and applicability of the program content contributed to the respondents’ persistence in a program that was the first online learning experience for all of
them. Further, because this was a new method of learning for the respondents, they made adaptations in their lives that contributed to their successful completion of the program.

**Adaptation to Online Learning**

In addition to the three factors identified and discussed above on persistence, the respondents shared how they learned how-to-learn in a text-based environment. Without exception, all of the respondents, completers as well as non-completers, agreed that there are certain behaviors and approaches needed by anyone who is considering learning online. Among behaviors they identified that helped them stay focused were exercising self-discipline, dedicating a place for online learning, organizing for online learning, and avoiding procrastination.

**Exercising self-discipline.** Being disciplined to work in a solitary, lonely environment without the structure of face-to-face classes was recognized as a key component to persistence by all of the respondents. Without the physical presence of classmates and a professor, these adults compensated by imposing strict discipline on themselves and dedicating time to online learning.

Douglas shared his approaches for being disciplined, using his time wisely, and staying with a task to the end. He was able to get some of his class assignments done at school during his planning period; otherwise he did his assignments at home after football practice, which was usually between nine and midnight, and on the weekends. “It was just a matter of making myself sit down and do it. I would say to be successful just stay on top.”

Even though Traci did not have a dedicated place at home to be online, she compensated and adapted to the online learning environment. She, like others in her
cohort, stressed the importance of checking the web site often for course updates and due dates. She admits that her good time management skills and discipline helped her to adjust to adding returning to school in the online environment to her already busy schedule.

I would tell anyone thinking about online learning just make sure you keep up with your assignments. You need to check the web, probably daily and just make sure nothing has changed . . . you just have to add in the extra time and set aside an hour a day, I don’t know, set aside a six-hour block on the weekends and that’s your time.

Teresa shared how she had to fit going to class and completing class assignments into her daily routine of teaching in two jobs as well as living with her parents during the week and going home on the weekends. Additionally, she, like other respondents, talked about the importance of eliminating or reducing interruptions.

. . . there were always interruptions but when I was studying no one interrupted me . . . I kind of laid the law down and said this is what I have to do and they wanted me there and they knew how important it was for me to finish this. I would say to anyone thinking about online learning just to be persistent. You’ve got to be persistent because you’ve got to sit there through a couple of hours at a time working on the computer so I think the main thing would be to tune everything else out, that’s probably the big thing, tune everything else out.

Clarinda and Julia, like other respondents, talked about the importance of self-discipline to online learning. In the beginning of the program, Clarinda questioned
whether she would be disciplined enough to do the work online at home. However, by
designating certain times for the online classes, she was successful in the online
environment.

I surprised myself a little bit because I thought I wouldn’t be disciplined
enough to do this but I did . . . you have to be disciplined, you have to
make going to class and doing the assignments a priority. I just knew the
time had to be set aside. I worked on my assignments every day . . . I
disciplined myself to do that—that’s probably the key.

Julia also talked about the importance of being self-disciplined while learning in an
online environment. “You really have to be pretty self-disciplined to make yourself do it.
It’s so flexible it’s easy to get behind.”

Becky and Cecil pointed out the importance of online learners recognizing that
online learning is basically independent learning, and that it takes self-discipline to
complete such a program. Becky urges online learners to be diligent about timelines and
to turn assignments in on time.

I think it’s very important when they enter into it they know right up front
that this is independent learning and if you can’t do that then you don’t
need to be in the program. I think that it moves fast, it is intense . . . I
mean you know right up front . . . it is very clear but if you’re not the kind
of person that can read and follow directions and if you’re looking for an
excuse, I think that it’s very easy to place blame of why you’re not
successful. Always check the web site almost daily even if you don’t have
assignments due or you think you’ve got it all laid out.
Cecil offers similar sentiments about the nature of online learning as opposed to face-to-face learning and what it requires for completion.

Just do the assignments that are assigned to you each week and you’ll do fine. You’ve got nobody to ramrod you face-to-face. It’s easy with the computer to just let stuff slide and if you are not self-motivated you probably could get into some difficulties if you get behind. It’s like a self-study program where you’ve got to just do it yourself.

Mary and Tracy both shared similar experiences about when they typically did most of their course work and how it affected their lives for that year and a half. They talked about the importance of staying on track while in an online learning environment. Additionally, Mary commented on interacting with a computer instead of interacting face-to-face and urged anyone who was considering online learning to pace oneself and know that online learning takes commitment and discipline.

When did I typically go to class? Probably sometime every evening . . . I’d say about eight or nine at night I would check my computer and then almost my full weekend . . . my whole life was sort of put on stop as far as my weekends. I think that is the most important thing is to pace yourself. I would say to anyone to consider it as a real viable option if you don’t mind interacting with a computer as opposed to people . . . and you have to be committed to doing it, because you do have more time in that you don’t have to get in a car and drive, you do have to be committed to working on the modules daily if you can.
Tracy shared similar experiences as Mary about when she went to class and when she did her assignments. She, like many of the respondents, stressed the importance of planning and setting aside time for online learning, which she referred to as her extra curricular activity during that year and a half. “I would conscientiously plan that this is the time that I have to do it. I built it into my routine . . . that was my extra curricular activity—going to school.”

Shirley and Ginger talked about online learning being a lonely experience and how important self-motivation and discipline are to persistence in the online environment. In spite of the fact that Shirley was initially intimidated by being on the computer, she expressed her excitement and enthusiasm at earning excellent grades while learning online.

The biggest thing that you really have to watch out for is being self-motivated because like I said, most of the time I felt kind of lonely. And since the chat rooms were new to me, I had to write down my questions just like I would if I raised my hand in class, so I got a little notebook and wrote ‘questions’ on it.

Ginger commented on the ease of registration and of being able to print out the assignments and cohort responses for reading at a later time. She cautioned, however, that learning online can be a lonely experience and that self-discipline is required by online learners.

I don’t know about a metaphor to describe online learning, the thing that pops into my mind is lonely . . . you don’t have that camaraderie of face-to-face . . . you’ve got to be disciplined, if you’re not a disciplined person
you will fall far, far behind because you’ve got to keep up, it’s all up to you. There are no physical buddies there asking you, “have you done that yet?”.

_Dedicating a place for online learning._ The respondents shared that it was not only important to be disciplined at setting aside time for online learning, but it was also important to dedicate a place for being online whenever possible. Several of the respondents were fortunate enough to have a dedicated place at home with a computer to use for their online sessions and working on assignments. Others made arrangements with their families to share the family computer area. Many of them were able to work online from their schools.

Clarinda and Julia, similar to other respondents, talked about the importance of having a dedicated place for being online. As stated earlier, Clarinda questioned whether she would be disciplined enough to do the work online at home. However, by dedicating an area for class work, she was successful in the online environment.

As much as I disliked having the computer in the living room . . . I put it in there any way and it worked because it was a quiet place for me . . . it was not a place that the kids used and it was big enough to have some work space, so it worked quite well.

Douglas, Teresa and Lori admitted they were fortunate to have a dedicated place at home for being online as well as a computer at work. Douglas and his wife converted a bedroom at home into an office while he was in the program. Teresa stressed the importance of having a dedicated place for going to class and studying as well as taking advantage of a computer at work. “I worked on my certification at school . . . after the
children left . . . and I did have a room of my own at home with a computer . . . an extra
bedroom. We had moved everything I needed in there.”

Lori took advantage of the computer in her classroom as well as dedicating a room at
home with a computer.

Well that’s kind of a thing for me anyway to have that special place and
time to work. We have a little library or office at home . . . that was my
classroom . . . yes and the door locked. It’s the only room in the house we
lock our children out of, it’s the adult room, it has the computer and I was
able to work there.

Julia, who did not have a dedicated place but was working parttime while
in the program, used the family computer when her husband was at work and the
children were at school. “We have the same computer for everyone so I would do
it before the kids got home.”

Organizing to meet deadlines. Along with dedicating time and space for online
learning, the respondents were quick to stress the importance of being well organized.
Whether it was keeping notebooks, calendars with due dates of chat rooms and
assignments, printing out chat room discussions, or locating libraries with computers
while away from home, the completers as well as the non-completers realized early in the
program that organization was a another key component to completing the program.

Beth shared that her life was quite stressful when she began the program because
she was teaching in two different schools and at times she was unsure if she could get the
course work done. She stressed the importance of organization while learning in an
online environment. “I try to be organized. When I first started a class I printed off’
everything so that I knew when everything was due . . . I kept that list on the wall by the computer.”

Marilyn and Chris also emphasized the importance of being organized and not getting discouraged with the amount of work involved, or dealing with deadlines and due dates, or the lack of face-to-face interaction. For Marilyn, keeping notebooks and a calendar helped her stay organized and on task.

. . . be organized. After the first class, as soon as the lesson started I’d download it, print off a paper copy of every thing, you know the assignments or whatever and put it in a notebook. Actually I sectioned it off, I had little tabs that said lesson one . . . and I’d see when everything was due and I would make sure it was on my calendar. I would say probably not to get discouraged because you don’t have that security of going to class and getting to see everybody.

Chris admitted that her teaching schedule as well as traveling with her husband forced her to set timelines and keep notebooks. “I put everything into a large five inch notebook and divided it and used sticky notes with due dates . . . I always look at timelines thoroughly . . and once it was done, check it off.”

Mary, Elaine, and Becky realized early in the program that being organized and staying on track was essential to successfully completing the program. Mary, like many of the respondents, was returning to school for the first time after several years but still recognized the need for organization, especially in an online learning environment.

I guess it’s just the things that anybody does in education who doesn’t want to be overwhelmed is that you try to stay on some sort of a decent
track of keeping up with your work and that you don’t get behind . . . you really have to pace yourself . . . and be committed to working on the modules daily if you can.

Elaine had similar advice for adults who are considering online learning. “The main thing is to be organized because if you’re not organized, you can miss things very easily. Make sure you know when everything is due and mark it on a calendar.” Becky stressed that organization was essential to meeting deadlines. “To be on time with all assignments . . . I would check the web site every day even if no assignments were due . . . you don’t want to be blind sided by something you missed.”

*Avoiding procrastination.* Along with being disciplined to set aside time for online learning, dedicating a place for learning if possible, and being organized, the respondents stressed the importance of avoiding procrastination in online learning. Without the advantage of face-to-face contact with the professor and classmates, the respondents commented on how easy it was to procrastinate and quickly fall behind in doing assignments.

Ken and Chris commented on how good time management helped them avoid procrastination. Ken was in his doctoral program in Educational Leadership at the same time that he was in the add-on certificate program and acknowledged how he had to juggle the two. Among suggestions he made to anyone considering online learning,

Well they need to be, and this is my opinion, they need to be task oriented. It’s sort of like . . . you can’t be a procrastinator. If you’re task oriented it’s going to go a whole lot easier on you if you do one thing and then another, and another, that’s the way the online certificate is. You do one assignment at a time and you
get it done. You can’t wait until Sunday night and do everything you need to do if the due date is at midnight to turn it in.

Chris’s style of time management worked to her advantage especially in the summers when she traveled with her husband.

You’ve got to set a timeline to do it because if you don’t, it’s going to catch up with you. I approached it like this is my work time and I go to work between eight and four, so between eight and four I’m going to work on this and get it done . . . not put it off.

Eileen admitted procrastination in reading the assignments put her behind in one of her classes, and she partially attributed it to not being face-to-face. She talked about how she missed being in class for discussion of each assignment. “I procrastinated and I just got behind on my reading . . . if you did ever get behind then it’s hard to catch up. It just seemed like a lot more reading than in a regular classroom.”

Becky, Cecil, and Ginger pointed out the importance of online learners recognizing that online learning is basically independent learning. Becky urges online learners to be diligent about timelines and to turn assignments in on time. “Yes, follow a timeline and don’t turn in anything late. I’m a firm believer in that. It moves fast, it is intense, you can’t miss the deadlines.” Cecil offers similar advice to online learners about what worked for him. “Just do your work, I mean just do the assignments that are assigned each week and you’ll do fine . . . you probably could get into some difficulties if you get behind in your reading.” Ginger also talked about how it could be easy to procrastinate in an online program. “There are no physical buddies reminding you to get
it done . . . you’ve got to keep up or you will fall far behind . . it’s not for people who
don’t get things done when they should.”

Teresa found that setting aside certain days of the week and staying in a routine
helped her stay abreast of her assignments. She offered suggestions to future online
learners for avoiding procrastination.

I set aside an amount of time each week and got in a routine . . . I got out
of my work mode and into the online program mode. I don’t think there’s
any way if you wait until Saturday night to complete an assignment due
Sunday night. I know I couldn’t do that . . . I had to strategically plan
where I knew that was my time.

Factors Differentiating Non-Completers from Completers in an Online Cohort Graduate
Certificate Program

In the sample population of twenty-four respondents that I studied, unique
individual reasons for withdrawal that do not show a pattern differentiate the six non-
completers from the completers of the program. Family circumstances, retirement,
difficulty in meeting program requirements, and early goal achievement were identified as
reasons for withdrawal from the program. Three respondents withdrew from the program
for unique individual reasons. Even though she was quite pleased with the program,
Louise decided to retire from teaching before she completed the program. Ruth had full
intentions of completing the program and getting her certification but made the decision to
withdraw on her doctor’s advice when she was pregnant. She did not return to the
program due to health related problems with her young twins. Eileen decided to withdraw
from the program mainly because she was not in a teaching position at the time she was
enrolled. “I dropped out of the program—the majority if not all of the other people in my cohort were already teaching and I was not and a lot of the assignments had to do with students.” Three of the respondents who were listed as non-completers by the university program met state certification requirements without having to complete program requirements.

Three of the respondents, Shirley, Julia, and Ginger, did not need to meet program requirements in order to receive state certification. They met state requirements either through previous experience or previous courses in addition to the courses that they completed while in the program. They are listed as non-completers of the university program because they withdrew from the program before they met all program requirements.

It is important to note that in the sample population I studied two factors, employment options and the convenience and flexibility of online distance learning, were identified that help explain why the non-completers as well as the completers chose to enroll in the online program. Additionally, four factors—goal proximity, support, relevance/applicability, and adaptation to online learning—were identified by the non-completers as well as the completers as factors that contributed to their persistence while in the program. Further, participants indicated that the cohort itself had no influence on enrollment for non-completers as well as completers. Finally, while the cohort did have minimal influence on persistence for the completers, it did not influence withdrawal for the non-completers.
Summary

The purpose of this study was to determine the influence of the cohort on persistence in and withdrawal from an online cohort graduate certificate program. Specifically, I examined the following research questions: (1) why do adult learners say they enroll in an online cohort graduate certificate program (2) how does being in a cohort influence their persistence to complete or to their decision to withdraw from the program, and (3) what factors differentiate completers from non-completers. In this study of twenty-four respondents from the 2001 cohort (eighteen completers and six non-completers) two factors, neither of which were influenced by the cohort, were identified that help explain why these adults chose to enroll in an online distance learning program. The first of these factors is employment options. Employment options for these respondents include job security or finding a job. The second of these factors is the convenience and flexibility of distance learning. The majority of the respondents live at least an hour from the university campus, with some being at least three hours from the campus. Even the respondents who live within ten minutes of the university chose online learning over the traditional face-to-face environment because of parking issues, family responsibilities, job responsibilities, and vacation plans.

The cohort had minimal influence on persistence in this study. Four factors were identified that help explain why the majority of these respondents completed the program. The first factor is goal proximity, which includes completing the certification within the required provisional time period. The second factor is support, which came from spouses and family, employers and colleagues, program staff and faculty, and cohort members. The third factor is relevance and applicability of the program content. The respondents
were able immediately to take what they were learning and apply it in their teaching situations, as well as share it with their colleagues. Finally, the fourth of these factors is adaptation to the online learning environment. The respondents, none of whom had taken an online course prior to this program, learned how to learn in an online environment and how to remain diligent to the process.

Two factors differentiate non-completers from completers. Again, the cohort had no influence on withdrawal from the program. Three of the respondents withdrew as a result of factors that are idiosyncratic in nature and thus do not show a pattern. One of the non-completers withdrew when she had difficulty meeting the program requirements because she was not in a teaching position at the time of enrollment. One of the respondents retired while she was enrolled. A third respondent withdrew on the advice of her doctor and then subsequent health problems with her twins following their birth. Another factor for withdrawal was that of early goal accomplishment. Three of the respondents are listed as non-completers by the university program; however, because of previous course work and experience and completion of part of the program they were given certification by the state. In all instances, neither the online program itself nor the cohort was a contributing factor to non-completion.
CHAPTER V
SUMMARY, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

Summary

Though there is a strong demand for higher education opportunities that has resulted in dramatic increases in participation by adults in online learning, and though there is considerable evidence of the effectiveness of online distance education’s contribution to learning, there is a gap in the research on persistence over the duration of a web-based graduate certificate program, as well as a paucity of research on the influence of the cohort on persistence in web-based programs. The purpose of this study was to determine the influence of the cohort on persistence in and withdrawal from an online cohort graduate certificate program.

In order to elucidate the influence of the cohort on persistence in online learning, three questions were explored in this study: (1) reasons adult learners enroll in an online cohort graduate certificate program, (2) influence of the cohort on persistence, and (3) factors that differentiate completers and non-completers. These topics were chosen after a review of the literature which encompassed five different areas in adult distance education: (1) general research on distance education, (2) research on Web-based distance education; (3) research on attrition and persistence in distance education; (4) motivation and deterrents to participation in distance education; and (5) research on cohort groups in adult and higher education.
Qualitative research methodology was chosen for this study because it captures the essence of the central meaning of adult learning in online study in the participants’ own voices. Online learning is experienced individually by adults, and it touches their lives differently, based on the context of their lives and the background from which they approach distance study. Semistructured interviews using the interview schedule found in Appendix B were conducted to collect data from the twenty-four respondents—eighteen completers and six non-completers—representing teachers in an online cohort graduate certificate program at a large Southeastern research university. All face-to-face interviews took place during the summer of 2003. Because a face-to-face interview was not convenient for two of the respondents, one interview was conducted via phone and one interview was conducted via e-mail.

I used the constant comparative method of data analysis in which a particular incident from an interview was compared with another incident in the same data set until themes and categories emerge. Initially, data were coded and recorded until themes began to appear. These themes eventually revealed categories. The resulting categories reflected and represented the purpose of my research. In other words, the categories became the answers to my three research questions on why adults enroll in an online cohort graduate certificate program, the influence of the cohort on persistence, and factors that differentiate completers from non-completers.

Two factors were identified that help explain why these adults chose to enroll in an online program. The cohort had no influence on enrollment. The first of these factors is employment options. Employment options for these respondents include job security and getting a job. The second factor identified that helps explain why these adults chose to
enroll in an online program is the convenience and flexibility of distance learning. The majority of the respondents live at least an hour from the university campus, with some being at least three hours from the campus. Even the respondents who live within ten minutes of the university chose online learning over the traditional face-to-face environment because of parking issues, family responsibilities, job responsibilities, and vacation plans.

Four factors were identified that help explain why the majority of these respondents completed the program. This study shows that the cohort is not essential to program completion. The first of these factors is goal proximity, which includes a clear and urgent purpose for completing the program insured by the accelerated nature of the program. The second of these factors is support, which came from spouses and family, employers and colleagues, program staff and faculty, and cohort members. The third of these factors is relevance and applicability of the program content. The respondents were able to immediately apply what they were learning in their teaching situations, as well as share it with their colleagues. Finally, the fourth of these factors is adaptation to online learning. The respondents, none of whom had taken an online course prior to this online cohort graduate certificate program, learned how-to-learn in a text-based environment and how to remain diligent to the process and their goal.

Two factors differentiate between completers and non-completers—unique personal circumstances and early goal accomplishment. The role of the cohort had no influence on withdrawal from the program. Three of the respondents withdrew from the program for unique personal reasons. One of the non-completers withdrew when she had difficulty meeting the program requirements because she was not in a teaching position at
the time of enrollment. Another non-completer retired while she was enrolled, and the third non-completer withdrew due to health issues. Three of the respondents were listed as non-completers by the university program; however, because of previous course work and experience they were given certification by the state without having to complete all of the program requirements.

Conclusions and Discussion

This study has three conclusions that are suggested by the data. First, the cohort is not an essential factor in participants’ persistence in an online cohort graduate certificate program; persistence in an online cohort graduate certificate program is influenced more by goal proximity, relevance and applicability of program content, and adaptation to online learning. Second, adults will readily enroll in an online cohort graduate certificate program that provides for employment options and offers convenience and flexibility. Third, in an online cohort graduate certificate program, adults will withdraw due to unique personal circumstances and early goal achievement.

Conclusion one: The cohort is not an essential factor in participants’ persistence in an online cohort graduate certificate program; persistence in an online cohort graduate certificate program is influenced more by goal proximity, relevance and applicability of program content, and adaptation to online learning. The cohort, although not an important factor in persistence, yet as a function of the learner support network, did influence the respondents’ persistence in the form of encouragement as well as in the form of experiences of cohort members that helped the respondents to learn by introducing new perspectives on education issues. The learner support network includes other external factors of family, program, and employer support. One of the respondents referred to the experience of being in a cohort as being apart but yet a part of the
group. Internal factors such as goal proximity, relevance and applicability of program content, and adaptation to online learning were more influential to persistence than was the cohort. These will be discussed following the discussion on learner support network.

In contrast to the importance placed on the cohort and a community of learners in earlier research (Eastmond, 1998; Lawrence, 1996; Palloff & Pratt, 1999; Saltiel & Russo, 2001), I argue that the cohort had minimal influence on persistence for four reasons. First, the respondents admitted that persistence revolved around their goal of completing the certificate program rather than social interaction with the cohort. Second, they did not know each other prior to enrollment and never met in a face-to-face setting. Third, the program literature, staff nor instructors stressed the importance of the cohort on program completion. Further, opportunities were missed for face-to-face meetings of the cohort members at the three-day academy as well as the optional four-day summer institute. Finally, there was no face-to-face orientation before the 2001 cohort program started, a component that has since been added to the program. Many of the respondents did not even realize that they were part of a cohort group other than the fact that they were in an accelerated program that had a set time period for beginning and completion. I argue that the cohort literature places too much emphasis on the cohort as essential to program completion.

An essential part of the learner support network that influenced persistence came in the form of program support. Many of the respondents had never been on the university campus and none of them ever met the staff, yet, all of the respondents talked about the excellent support from the program staff as well as the instructors. Whether it was help with registration, submitting assignments, or reassurance that they could be successful in this first-time online learning, the respondents felt very comfortable
contacting the staff and instructors, enjoyed the camaraderie, and never felt marginalized by not being in face-to-face classes. They were made to feel a part of the university program from the very beginning. Additionally, the instructors were readily available by phone or e-mail to answer questions or clear up misunderstandings, or to give extensions on assignments under extenuating circumstances.

Attention given to the environment where interaction and community are important has been shown to increase student completion rates and is necessary for improving persistence in online learning (Brindley, 2000; Clow, 1998; Cook, 1995; Eastmond, 1995; Hill, 2002; Iverson, 1995; Landtroop, 1998; Machtmes and Asher, 2000; Winfield, Mealy, and Scheibel, 1998; Wittington, 1997). Moore (2003) reiterates the importance of learner support in a distance education program. He views the learner support system as the back-up safety net for the individual student who encounters difficulties that cannot be anticipated by course designers, instructors, and administrators. “It is to treat these problems, problems that will not affect everyone—but may strike anyone—that is the mission of a learner support system” (p. 142). In contrast, Moore contends that emotions such as insecurity in the student role, defensiveness against the kinds of personal change that usually accompanies learning, need for reassurance, and need for dependence on authority are sources of great difficulty in sustaining motivation in the isolation of the distant environment. Further, problems with institutional procedures, problems with course scheduling/pacing, problems concerning tutorial assistance, and instructional design problems pose potential institutional barriers to persistence (Chyung, 2001; and Garland, 1993).

Support from family was another essential part of the learner network system that influenced persistence for the respondents in this study. Many of the respondents talked
about the importance of family support to their persistence in the online program and added that they could not have completed the program without this support. Whether it was technical support, help with household chores, or taking care of the children, support from family members made this new learning experience and environment more endurable. Because of the high drop out rate associated with distance learning, research calls for further study that focuses on the psychological factors of the distance students, their milieu, conditions and stress of multiple roles (Berge and Mrozowski, 2001; Garland, 1993). Further, limited research shows that situational circumstances play a significant role in persistence (Zalenski, 2001). Wilkes and Burnham (1991) contend that because highly motivated learners may be willing to endure almost any educational environment to achieve a passing grade, more than grades need to be examined to evaluate educational experiences of individual adult students. While family support was very important to the respondents in this study, there is limited research to substantiate this finding. It is my belief that the respondents in this study would have had a more difficult time persisting in the online environment without family support. Many of them commented on how difficult it would be for anyone learning online not to have a supportive family because so much of the learning takes place within the confines of home and usually in conjunction with other family activities.

Finally, results of this study show that support from employers and colleagues contributed to respondents’ persistence. Many of the respondents commented on the support they received from their employers and colleagues who encouraged them to participate in a learning program that was totally different from previous learning experiences. From notification of the program, to payment of tuition in some cases, to
technical assistance, the respondents appreciated the employer and collegial support and encouragement. Osborn (2001) and Zalenski (2001) found that students who receive support from their employers are more likely to graduate than students who do not. Further, adults who have trouble balancing the demands of work and school have more difficulty persisting (Pearson, 2000).

Goal proximity had a major influence on persistence for the respondents in this study. All of the respondents had a specific goal in mind when they enrolled in the online program—to obtain the add-on certification in interrelated special education. It was clear to the participants from the beginning that the online program met all of the state requirements within a time period that coincided or fell within their provisional teaching period. Research shows initial commitment to completion of a degree as a factor in persistence in distance education (Landtroop, 1998; Osborne, 2001; Pearson, 2000) and lack of a clear goal as a barrier (Garland, 1993; Zielinski, 2000). Further, research shows that students who have a specific reason for completing their degrees are more likely to graduate (Clow, 1998; Zalenski, 2001), as shown by the data in this study.

Results of this study also reveal that persistence in online learning is influenced by the relevancy and applicability of program content. The respondents saw the relevancy and applicability of the program content as a reason to persist in the program. As noted earlier, the respondents either had degrees in special education or were changing their teaching field to special education. Teachers who were changing fields as well as veteran special education teachers were highly complimentary of the courses chosen by the university and were quick to note that they began to immediately apply the knowledge gained from the program in their classroom situations. Scheibel (1998) and Garland
(1993) found that persistence in online learning is influenced by program content that builds on personal and professional experiences of participants and relates to real situations. Further, the experiences of others and new perspectives gained from course content provide learners with relevant information that can be applied in their own professional situations (Howland, 2000; Scheibel, 1998). In contrast, Garland (1993) discovered that among factors that hinder persistence in online learning is course content that lacks personal relevance. Therefore, course content itself cannot be ignored in any theoretical or practical consideration of distance education. Instruction that is motivationally appealing, interesting, and relevant to their interests and goals influences online learners’ persistence (Chyung, 2001; Zielinski, 2000).

Adaptation to online learning was a final factor that influenced persistence in this study. This was the first online learning experience for all of the respondents. They had to adapt to this environment by exercising self-discipline, dedicating a place for online learning, organizing to meet deadlines, and avoiding procrastination. Despite the popularity of online distance learning, adults trying out online learning for the first time may receive little guidance about how to participate, organize their lives, and interact with the computer and content materials to ensure successful completion of the program. According to Rubenson (1986) and Santovec (2002) adults develop and apply their own learning approaches based on their individual learning preferences, philosophy, and style. In the case of online distance education, they must adapt to an environment that is often lonely and frustrating, manage their time wisely, and concentrate on details and deadlines. In contrast, research shows that a continuous lack of learner preparation for the online learning environment as well as poor learning environment and lack of time management skills hinder persistence (Blum, 1999; Santovec, 2002; Schilke, 2001). However,
there is limited research on the process by which students adapt to a text-based learning environment (Smith-Stoner and Jean, 2000).

**Conclusion two:** Adults are motivated to enroll an online cohort graduate certificate program by its relevance to their employment needs and the convenience and flexibility of its format. Employment options that provided for job security in their teaching field or getting a job influenced the respondents’ decision to enroll in the online cohort graduate certificate program. Respondents who had been in the teaching field for several years, as well as those with a shorter career path, and those respondents who were looking for jobs, saw the interrelated special education certificate as an assurance of job security in a field and at a school of their choice. More significantly, enrolling in the online program assured the participants that they could attend part-time and continue to work full-time.

Research shows that employment-related reasons account for the majority of participant interest in continuing education (Aslanian, 2001; Cervero, 1989; Kasworm, Sandmann, & Sissel, 2000; Lindner, Dooley & Murphy, 2001; Mallory, 2001; Spear & Mocker, 1989; UCEA, 2000; Valentine, 1997; Zalenski, 2001). Additionally, these studies show that a greater number of adults are going back to school to earn graduate degrees that will benefit them professionally. Further, while more Americans are earning college degrees, the traditional method of obtaining these degrees is rapidly changing from full-time status to part-time status (Aslanian, 2001; Courtney, 1992; Lindner, Dooley, & Murphy, 2001; Liu, 1999; Paul, 2001; Schrum, 2000; Stroer, 2001; UCEA, 2000). Moreover, many states have a significant interest in the quality of services offered by the nation’s professionals, and as a result, are mandating continuing education for a number of
professions (Cervero, 1989; Queeney, 2000). These professions, as well as other organizations, are turning to colleges and universities to provide custom, on-site training programs through self-contained, distance education courseware (Gibson, 1995; Sammons & Kozoll, 1994; Queeney, 2000, UCEA, 2000). For these reasons, distance education provides the opportunity to update professional knowledge.

After employment options, the convenience and flexibility of online learning was given as the second reason for choosing the online program and was equally as important as certification for these respondents when enrolling in a program of study. All of the respondents had full-time jobs at the time of enrollment and the majority had children at home and lived more than an hour from the university. They were most straightforward about the time and cost involved in traveling to the university. While three of the respondents live within a ten-mile radius of campus, they still preferred online learning rather than driving to campus, finding a parking space, attending class at set times, and working out meals and child care at home. Online learning fit their work schedules, family schedules, and family vacations. Interestingly enough, even though many of the respondents admitted that they missed the face-to-face interaction, all of them said that because of the convenience and flexibility of online learning, they would take online courses again rather than face-to-face courses.

With the costs of technology declining and more higher education institutions offering courses electronically, learning at home has become a reality for increasing numbers of Americans, making distance education an appealing alternative for working adults with career and family responsibilities (Aslanian, 2001; Machtmes and Asher, 2000; UCEA, 2000). The convenience of home-based study, the time factor, and the
possibility to continue to earn an income are among the most important reasons for choosing distance education (Rubenson, 1986). It is reported that at the university level in the United States distance education enrollments are in the high six figures nationally (Chung, 2000; Hanson, Maushak, Schlosser, Anderson, Sorensen, & Simonson, 1997; UCEA, 2000). Although adults indicate a classroom setting with a professor present as their preferred method of instruction, their life schedules and strong need for convenience outweigh this option and they opt for distance learning options if a classroom setting is not available (Aslanian, 2001; UCEA, 2000). Further, the most preferred distance method is online. These student groups constitute a majority of postsecondary enrollments and include students who are in the workforce, have family responsibilities, reside in remote locations, or have mobility impairments (Kasworm, Sandmann, & Sissel, 2000; UCEA, 2000). While the lack of face-to-face interaction is reported to be a primary stumbling block for electronic education (Chyung, 2001; Perdue and Valentine, 2002; Rubenson, 1986; Schilke, 2001; Wilkes and Burnham, 1982; Zielinski, 2000), this was not shown to be true in my study. The convenience and flexibility of online learning was a contributing factor to their enrollment and several of the respondents admitted that if the program had not been available online they would have completed their provisional status and then sought another teaching field.

Conclusion three: In an online cohort graduate certificate program, adults may decide to withdraw as a result of unique personal circumstances or early achievement of the goals that motivated them to enroll. Individual reasons for withdrawals that are either unexpected or idiosyncratic and do not show a pattern as well as early goal accomplishment differentiate non-completers from the completers in this study. A
difficult pregnancy followed by medical issues with her young twins forced one of the respondents to withdraw from the program during the third course. Another respondent retired during her enrollment in the program and consequently withdrew after the second course. A third non-completer was not teaching at the time of her enrollment and found it very difficult to complete the assignments that related to classroom experiences and withdrew after the second course. Three of the non-completers of the program did not need to complete all of the program requirements in order to receive state certification. They met certification requirements either through experience or previous completion of course work.

Garland (1993) and Kember (1995) argue that each student is subject to a complicated interplay of positive factors encouraging persistence and negative factors promoting withdrawals—factors that are complex, are context-dependent, act additively and synergistically in such a multitude of ways that decisions to withdraw appear idiosyncratic in nature and suggest that there is no one solution to the dropout problem. The results of this study conform to previous research on withdrawal from online programs. In contrast, Garland (1993), Zalenski (2001) and Osborn, (2001) report several reasons for withdrawal among which are lack of computer expertise, working long hours while enrolled, lack of home computer, lack of face-to-face interaction, or lack of previous online learning experience. These factors did not influence withdrawal for the respondents in this study. Most of the respondents who withdrew had minimal computer experience when they enrolled in the program and in fact were quite apprehensive about learning in a text-base environment. Second, this was the first online program for all of the respondents who withdrew. Third, lack of face-to-face interaction was not a factor in withdrawal. While they admitted they missed the face-to-face interaction, this did not
influence their withdrawal. Finally, all of the withdrawing students had full-time jobs and yet this was not a factor in withdrawal.

Finally, results of this study conform to previous research that predicts at what point students withdraw from online programs. Rubenson (1986), Eastmond (1998), and Chyung (2001) found that students are more likely to drop out after the first couple of online courses than after they have taken a larger number of courses. Respondents who withdrew from this online certificate program did so early in the program, in most cases after the second course or third course, again as reported above, for unique reasons.

Implications for Theory and Practice

The significance of this study lies in several areas. First, the results of this study expand the knowledge base related to understanding of the influence of the cohort on persistence in an online cohort graduate certificate program. While the cohort has been espoused to be essential to persistence, this study shows the cohort to be only minimally influential to program completion. However, a better understanding of adult learning in online cohorts can guide the practitioner in creating learning environments that maximize the potential for persistence through cohort support. Instructors who understand that students come into the learning group with no prior knowledge of each other and perhaps little in common except a mutual desire to complete their degrees have the opportunity to instill a sense of community and camaraderie by encouraging students to share experiences over time so that they get to know each other. Instructors who understand learning in cohorts from the learners’ perspectives can influence the experience by promoting a safe, non-threatening environment for discussion and reflection. In the end, persistence is molded by interactions between faculty and students and between students and students.
Second, results of this study expand the knowledge base related to the importance of factors that do influence persistence in distance learning. Goal proximity, support, relevance and applicability of program content, and adaptation to online learning were shown to influence persistence for the respondents in this study. Program planners now have an opportunity to develop total academic programs that meet students’ needs in a timely manner and that offer relevant and applicable content. Further, while the delivery mechanism behind electronic teaching represents a departure from traditional instructor-led teaching, its goals are identical—the wide support given to classroom instruction needs to be extended to electronic instruction. Practitioners and program planners who understand the importance of their support and who can build in their presence and personality have numerous opportunities to influence whether students stay or leave. The students, who in many cases are first-time online learners, benefit from being made to feel a part of the learning institution as well as a part of the learning community while they are apart from each other. Finally, exercising self-discipline, dedicating a place for online learning, organizing to meet deadlines, and avoiding procrastination were offered by the respondents as ways to succeed in a text-based environment. A checklist or outline of what has worked for other successful online learners may benefit future online learners.

Third, results of this online cohort graduate certificate program add to the knowledge base related to adult participation in distance education. Employment options and the convenience and flexibility of online learning were found to contribute to these respondents’ enrollment in an online cohort graduate certificate program. As the value of baccalaureate and post-baccalaureate level study increases, and as the rewards of advanced degrees prove to be worth it, more and more adults are seeking further education that will benefit them.
professionally. However, as job and family responsibilities prevent many adults from participating as full-time students, adults look to colleges and universities to provide customized programs through self-contained, distance education courses, or face-to-face instruction. These learners represent potential customers for colleges and universities who provide higher education opportunities for adults. With the knowledge of the importance of total academic programs, planners have the opportunity to offer programs that meet employment needs. Further, courses can be selected and planned that ensure for career advancement. Finally, in addition to earning advanced degrees that will benefit them professionally, adults look to colleges and universities for programs that are convenient and flexible and that fit into their work and personal lifestyles.

While a classroom setting with a professor present is their preferred method of instruction, adults will choose distance learning because of their life schedules and strong need for convenience. With this knowledge, institutions must re-evaluate how they deliver content to students, seek ways to prepare online learners for the online environment, find sources of funding for instructional technology, and compete with private sector education providers with virtual campuses.

Fourth, the results of this study add to our understanding of what differentiates completers from non-completers in an online certificate program. Factors influencing withdrawals are complex, are context-dependent, and act in such a multitude of ways that decisions to withdraw appear idiosyncratic in nature. While program planners and practitioners have the opportunity to influence persistence in online programs in ways mentioned above, there very well may be factors that affect drop out that may always remain beyond their control.
Recommendations for Further Study

Based on the findings in this study on an online cohort graduate certificate program, not a degree program, the gap in the literature on persistence in a total academic program was addressed. However, the following recommendations are made for further research.

1. Although this study examined the influence of the cohort on persistence in a graduate certificate program, few studies extend over the duration of an online degree program and provide only snapshot profiles of student persistence or attrition. More studies are needed on total academic programs.

2. This study should be replicated using similar groups of professionals learning in an online cohort. It is possible that other contextual factors may be identified with other professional groups that would help explain why some adults who choose to enter an online certificate or degree program continue to completion while others do not.

3. This study did not seek to learn if the withdrawing students returned to the program in a later cohort. Follow-up research on non-completers who return could help clarify if they were successful and, if so, what contributed to their persistence.

Further research into all aspects of this escalating method of distance delivery is critical to the development of practice. It is important to give voice to online learners’ experiences in order to assist the growing number of online program planners and instructors in designing courses where the content is relevant and the process of learning is supportive.
REFERENCES


Cook, E. (2002). Engineering online excellence: Wisconsin’s engineering MS the product of careful planning. Distance Education Report, 6(2), 1-2.


Mallory, M. (April, 2001). Diplomas are often the difference. *Atlanta Journal Constitution.* Georgia.


Paper presented at the 40th Annual Forum of the Association for Institutional Research, Cincinnati, OH.


## General Research in Distance Education

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<thead>
<tr>
<th>Author/s</th>
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<th>Data Collection Techniques</th>
<th>Analysis</th>
<th>Selected Salient Results</th>
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<tbody>
<tr>
<td>Moore, M. &amp; Thompson, M. 1960s-mid-1990s (1997)</td>
<td>To present overview of research on effectiveness of DE from 1986-1996</td>
<td>Adults-higher education</td>
<td>Literature review</td>
<td>Integrative reviews – selective review of literature to summarize past research in course design, student support &amp; management, administration &amp; policy in DE</td>
<td>Teaching and studying at a distance, especially that which uses interactive electronic telecommunications media, is effective when effectiveness is measured by achievement of learning, attitudes of students and teachers, and return on investment.</td>
</tr>
<tr>
<td>Hanson, D., Maushak, N., Schlosser, C., Anderson, M., Sorensen, C., Simonson, M., 1990-1995 (1997)</td>
<td>To present overview of research in DE on learner attributes, perceptions, interaction patterns that contribute to a positive learning experience</td>
<td>Adults-higher and continuing education</td>
<td>Literature review</td>
<td>Integrative reviews- summarize past literature of a cross section of all research dealing with DE</td>
<td>Distance education is an effective method for teaching and learning.</td>
</tr>
<tr>
<td>Berge, Z., &amp; Mrozowski, S., 1990-1999 (2001)</td>
<td>Lit. Review to provide a summary of dissertations &amp; published research in DE in the 1990s</td>
<td>Adults-higher and continuing education</td>
<td>Meta-analysis n=890 dissertations &amp; abstracts</td>
<td>Integrative reviews – summarize past research using Sherry’s (1996) categorization system based on learner characteristics &amp; needs, media influence on the instructional process, access issues, &amp; the changing roles of the site facilitator, &amp; student; Sherry’s classification system accommodates the nuances in DE research especially in the area of pedagogy.</td>
<td>Pedagogical themes (design issues, learner characteristics, &amp; strategies for active learning &amp; increased interactivity) dominated the research &amp; appear to be increasing. Gaps in what is being researched: research has tended to emphasize student outcomes for individual courses rather than for a total academic program; research does not adequately address dropout rates of distance learners; the research focuses mostly on the impact of individual technologies rather than on the interaction of multiple technologies; the research does not adequately address the effectiveness of digital libraries.</td>
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## Research on Web-Based Distance Education

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<tr>
<td>Eastmond, D. (1995)</td>
<td>To explore adult distance study through computer conferencing</td>
<td>Adults-university level – N = 20</td>
<td>Observations, fieldnotes, interviews</td>
<td>Qualitative constant comparative</td>
<td>Computer conferencing brings together diverse students &amp; encourages them to share their perspectives with one another, exposing their differences, while working toward commonality. Technology brings dimensions of control over communications—to decide how, when, and whether we will interact with others.</td>
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<tr>
<td>Holt, M., Klieber, P., Swenson, J., Rees, E., &amp; Milton, J. (1998)</td>
<td>To develop a better understanding of the nature of electronically facilitated study groups N=unidentifiable</td>
<td>Adults-university level -Ithaca College, NY &amp; University of Georgia, Athens</td>
<td>Electronic mailing lists &amp; Web-based conferencing</td>
<td>Review of documents – content analysis</td>
<td>Asynchronous communication allows flexibility in individual schedules. More people can participate without restraints of time and place. People who may not be comfortable participating in face-to-face groups have a voice.</td>
</tr>
<tr>
<td>Winfield, W., Mealy, M., &amp; Scheibel, P. (1998)</td>
<td>To provide an overview of an instructional design model for web delivered courses</td>
<td>N=16 nurses</td>
<td>End-of-the-course student surveys; review of student technology support reports (review of documents-content analysis); contribution analysis</td>
<td>End-of-course evaluation – descriptive analysis – field study</td>
<td>The design guidelines were a success in building up user confidence with technology which in turn enhanced confidence and participation in the Web courses.</td>
</tr>
<tr>
<td>Russell, M. &amp; Ginsberg, L. (1999)</td>
<td>To describe the general features of online learning communities that combine elements of DE &amp; traditional f2f instruction</td>
<td>Adult learners N = unidentifiable</td>
<td>Method of data collection unidentifiable</td>
<td>Report on 3 case studies – analysis method unidentifiable</td>
<td>The goals and outcomes of each online learning community are complementary to those of adult education in general and adult literacy in particular.</td>
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<td>Schrum, L. (1998)</td>
<td>To examine pedagogical, organizational, and institutional issues for effective Internet-based instruction N = unidentifiable</td>
<td>Instructors &amp; adult students</td>
<td>Personal experience of researcher, Web survey, &amp; interviews with DE students &amp; instructors</td>
<td>Case study -Substantive needs assessment, document analysis, purposeful sampling, snowball model, web survey, Likert questions analyzed using simple descriptive statistics, open-ended question analyzed using constant comparative analysis,</td>
<td>Create a mini-course that learners can take to test hardware, learn software skills, experience on-line education, and determine if it is an effective learning environment for them. Begin with a few courses and expand gradually. Continuously revise and improve courses.</td>
</tr>
<tr>
<td>Davis, M. &amp; Denning, K. (1998)</td>
<td>To explore aspects of the use of computer-mediated-communication (CMC) during the teaching of a postgraduate course.</td>
<td>Graduate students - University of Georgia, Athens and University of Manchester, UK N = 16</td>
<td>Computer-mediated-communication (CMC) transcripts</td>
<td>Review of documents, content analysis</td>
<td>There are different kinds of activity in a CMC environment, that is, to lurk in cyberspace does not mean that one is not taking part. Capacity to be reflective was a positive outcome on the CMC class.</td>
</tr>
<tr>
<td>Wilkerson, J. &amp; Elkins, S. (2000)</td>
<td>To provide an in-depth assessment of a CAD/CAM course delivered for first time in US and Canada.</td>
<td>N = 20 Adult students in a machining environment.</td>
<td>Telephone interviews, e-mail, observation, questionnaire, and student grades.</td>
<td>Case study- direct interpretation of the individual instance &amp; categorical aggregation; descriptive statistics – z-scores from pre-test/post-test</td>
<td>It is possible to have the flexibility and responsiveness of Web-based instruction and still meet students’ learning expectations in a course as highly technical and graphics intensive as CAD/CAM.</td>
</tr>
<tr>
<td>Howland, J. (2000)</td>
<td>To examine the way women discerned their learning in an Internet classroom</td>
<td>Graduate level Internet class using computer-mediated-communication (CMC)N=7 women, 2 men</td>
<td>Interviews</td>
<td>Case study- grounded theory methods</td>
<td>Women demonstrated self-directed leaning strategies in connecting with learning opportunities through the instructor, instructional materials, and other students.</td>
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<tr>
<td>Smith-Stoner &amp; Jean, M. (2000)</td>
<td>To assist the growing numbers of online educators to develop vitally alive virtual classrooms &amp; provide learning experiences which evoke passion in the rapidly expanding computer-mediated educational programs</td>
<td>Graduate level women, N=26</td>
<td>Phenomenology - data collected via Internet</td>
<td>Case study- incorporated phenomenology, appreciative inquire, &amp; collaboration – to develop a theory of meaningful online learning for women</td>
<td>Virtual environments using computer-mediated-communications (CMC) show the most amount of promise for freeing women from being silenced.</td>
</tr>
<tr>
<td>Lim, C. (2001)</td>
<td>To develop a predictive model of satisfaction of adult learners in a Web-based DE course &amp; their intent to participate in future Web-based DE</td>
<td>Graduate, undergraduate &amp; continuing education students in a Web-based course N=235</td>
<td>Instrument includes: questionnaire developed by author; Eachus &amp; Cassidy’s (1996) Computer User Self-Efficacy Scale; exploration of adult learners’ satisfaction with Web-based DE courses &amp; intent to participate in future (unidentifiable scale); the General Academic Self-Concept Scale (Marsh, 1987)</td>
<td>Quantitative study – instrument posted by either listserv or the Web during spring and summer semesters; multiple regression used to test the hypotheses</td>
<td>Overall, adult learners with higher computer self-efficacy were more likely to be satisfied with their Web-based distance education courses and they were more likely to take future Web-based courses.</td>
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<td>Whittington L. (1997)</td>
<td>To investigate the effect of selected variables on achievement &amp; persistence among students involved in DE &amp; to determine if selected variables may be used to discriminate between traditional and nontraditional status</td>
<td>University students N=168 [unidentified DE delivery method]</td>
<td>Participation in DE Questionnaire (PIDEQ); Rotter’s Internal-External Locus of Control Scale</td>
<td>Quantitative study – instruments administered during fall semester; discriminant analysis</td>
<td>There is no significant difference in the means of either persistence or achievement between traditional versus nontraditional status. The variables program rating, audio visual media, hi-tech media, and age predict achievement. The variables audio visual media, education, income, field of study, and age predict persistence.</td>
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<tr>
<td>Suciati (1990)</td>
<td>To examine the effect of motivation on academic achievement and persistence in a DE setting</td>
<td>First semester university students, N=220 [unidentifiable DE delivery method]</td>
<td>Questionnaire &amp; interviews – random sample</td>
<td>Quantitative - first semester to measure motivation, achievement, persistence; qualitative –in-depth interview first semester – (type of data analysis method unidentifiable)</td>
<td>Inter-correlations for all indicators of motivation, persistence, and achievement showed that some factors of motivation correlated with persistence as well as achievement, and that some factors of persistence correlated with achievement.</td>
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<td>Landtroop, D.</td>
<td>To investigate alumni (graduates &amp; dropouts) Master-level, theological, DE at a</td>
<td>Master’s level students N=88</td>
<td>Survey using Likert scale rating; review of</td>
<td>Quantitative study – descriptive statistics, correlations, regression</td>
<td>In addition to goal commitment, persistence is molded by interactions between faculty and students and between students and students.</td>
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<tr>
<td>(1998)</td>
<td>seminary to determine if social integration factors have significant</td>
<td>[correspondence DE delivery</td>
<td>documents- content analysis</td>
<td>analysis (analyzing the collective &amp; separate effects of two or more</td>
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<td>associations with student attrition</td>
<td>method]</td>
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<td>independent variables on a dependent variable)</td>
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<tr>
<td>Brindley, J.</td>
<td>To evaluate the effect of an early intervention on distance learning outcomes,</td>
<td>N=186 Adults; University level</td>
<td>Instrument designed by the author: The Starter</td>
<td>Quantitative study- random assignment of paired study participants to</td>
<td>There was no significant effect of the intervention of social support on learner behavior or satisfaction. However, findings did reveal a strong positive relationship between social support and intention to re-enroll.</td>
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<td>(2000)</td>
<td>specifically learner behavior associated with persistence and academic</td>
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<td>Kit – method of data collection unidentifiable</td>
<td>either an experimental or a comparison (control) group – t-tests, chi-</td>
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<td>achievement, learner satisfaction, and intention to re-enroll</td>
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<td>square analyses, post-hoc regression analyses</td>
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<tr>
<td>Garland, M. (1993)</td>
<td>To increase understanding of student perceptions of situational, institutional, dispositional &amp; epistemological barriers to persistence</td>
<td>University students N=47 (30 persisting; 17 withdrawing) [multiple DE delivery methods; print based, TV broadcast, video, audio, slides, face-to-face]</td>
<td>Ethnographic interviews; Myers-Briggs Type Indicator</td>
<td>Qualitative analysis using ethnography-componental analysis of semantic domains, that is, concern with the cultural context &amp; using the things people say to derive in a systematic way, insights into how they construe their world of experience); quantitative analysis of student characteristics preceded the interview-Likert scale</td>
<td>Analyses of student characteristics as measured by the Meyers-Briggs Type Indicator revealed no differences between the withdrawal and persisting cohorts. Ethnographic interviews revealed that the two cohorts report similar hindering or facilitating incidents in 4 areas: situational, institutional, dispositional, &amp; epistemological.</td>
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<tr>
<td>Osborn, V. (2001)</td>
<td>To assess the ability of a student to complete a distance learning course</td>
<td>University students N=396 [multiple DE delivery methods-videoconferencing &amp; Web-based]</td>
<td>Survey instrument – 28 Likert-scale items</td>
<td>Quantitative study-survey completed near beginning of semester &amp; again at end of semester- Likert-scale indicators-discriminant analysis</td>
<td>At-risk students were taking more credit hours and working fewer hours per week, had not taken distance learning courses prior to participation in the study, were continuing students or students who had been away from college less than two years, and had less-stable study environment. Study environment, motivation, and computer confidence were the strongest in differentiating completing students from non-completing students.</td>
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<tr>
<td>Zalenski, A.</td>
<td>To identify variables that predict graduation</td>
<td>University students- matriculates &amp; graduates N=815 [multiple DE delivery</td>
<td>Questionnaire</td>
<td>Quantitative study — cross tabulations, T-tests, &amp; logistic regression</td>
<td>Personal characteristics, life experiences, and financial factors play a larger role in persistence and graduation than do either academic or institutional factors. Students who enter the program with more earned hours, have a specific reason for completing their degrees, and receive support from their employers are more likely to graduate than students who do not.</td>
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<td>(2001)</td>
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<td>methods-corresponcence, 2-way audio-video, WWW, DE sites]</td>
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<td>Iverson, K.</td>
<td>To predict the potential for completion of telecourses using an inventory</td>
<td>University students N=231 [telecourse DE delivery method]</td>
<td>Telecourse Success Prediction Inventory – survey instrument using 5-point Likert-type scale</td>
<td>Quantitative study—registrants during 1 year – linear discriminant analysis – Spearman-Brown Split-half reliability coefficient</td>
<td>Attribution style (attribution to ability/success), achievement motivation, and use of institutional support were found to be predictive of telecourse completion.</td>
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<td>(1995)</td>
<td>developed by the author</td>
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<tr>
<td>Clow, E.</td>
<td>To explore the relationship between learning strategies &amp; student academic</td>
<td>2-year college students N=197 [telecourse DE delivery method – GSAMS])</td>
<td>Questionnaire &amp; The Learning and Study Strategies Inventory (LASSI)</td>
<td>Quantitative study – LASSI used as pre-course assessment tool [second class meeting of the quarter]; - research model uses both descriptive &amp; correlational/predictive elements; primary statistical techniques used were correlation coefficients &amp; discriminant analysis</td>
<td>Motivation was the most useful variable in predicting academic success. No variable was significant in predicting course completion (persistence).</td>
</tr>
<tr>
<td>(1998)</td>
<td>achievement as evidenced by persistence &amp; performance in two-way DE courses</td>
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<tr>
<td>Machtmes, K. &amp; Asher, J. (2000)</td>
<td>To review evidence concerning the effectiveness of telecourses</td>
<td>N= 19 studies out of 700 possible studies [telecourse DE delivery method]</td>
<td>Literature search of databases: Educational Resources Information Center (ERIC), Psychology Abstracts, Agricola, Agriculture Abstracts, Education Index, &amp; Dissertation Abstracts International</td>
<td>Meta-analysis to examine experimental research literature; weighted effect size analysis procedures used</td>
<td>Methods that enable distance learners to become more personally involved in the course contribute to the likelihood that students will succeed. The issue of high dropout rate was not discussed in articles reviewed.</td>
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**Studies Reporting Web-based Delivery Method**

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<tr>
<td>MacGregor, C. (2002)</td>
<td>To add to the limited body of knowledge about distance education students’ personality characteristics by focusing on their psychological attributes</td>
<td>Adults-continuing education division in a small, mid-western, private college – 5 online classes &amp; 5 face-to-face classes N = 158</td>
<td>I6PF Fifth Edition (Cattell &amp; Cattell, 1995) Classroom Experiences Survey (CES)</td>
<td>Quantitative using independent t-tests</td>
<td>Personality does appear to matter when predicting who is likely to complete an online course successfully, versus who will complete face-to-face classes. The face-to-face students &amp; the online students were quite different with respect to personality. Online students who successfully completed their courses were more apprehensive, less lively, less socially bold, &amp; less open to change than students in face-to-face classrooms. They were also more worrisome, serious, shy, and accepting of the status quo. In addition, the online students were less extraverted, less independent, and higher in self-control than the face-to-face classroom students. Students whose personality characteristics are unlike the typical online student could be advised to consider face-to-face class formats or better prepare for difficulties they might encounter in an online class.</td>
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<td>Author/s</td>
<td>Purpose of Study</td>
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<td>Data Collection Techniques</td>
<td>Analysis</td>
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<td>Spendlove, L.</td>
<td>To determine whether a cause-and-effect relationship existed between student</td>
<td>Adults – University level Psychology course –</td>
<td>Moderated Instructional Model developed by author; designed to separate students into small,</td>
<td>Quasi-experimental study – small-group, moderated communication versus large-group, non-</td>
<td>The data indicated that students in the smaller, moderated classes were more likely to persist</td>
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<td>(2000)</td>
<td>persistence and method of instruction</td>
<td>Number of participants unidentifiable;</td>
<td>moderated discussion groups as opposed to one large, non-moderated group</td>
<td>moderated communication (time of instrument administration unidentifiable)-analysis through</td>
<td>in the course than students in the larger, non-moderated class. Effective interaction is credited with increasing persistence.</td>
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<td></td>
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<td>[Web-based DE delivery method)</td>
<td></td>
<td>cause &amp; effect; however, analysis methods unidentifiable</td>
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<tr>
<td>Chyung, Y.</td>
<td>To explain how a higher education institution applied theory-based systemic and</td>
<td>Adults-University level – N=139 [Web-based</td>
<td>Exit interviews before &amp; after application of Keller’s 1987 ARCS model (attention,</td>
<td>Long-term evaluation case study-combination of pretest, posttest, and t-test results</td>
<td>Almost half of the students who dropped out of the program did so because of dissatisfaction with the online learning environment, that is, the online</td>
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<td>(2001)</td>
<td>systemic approaches to solving the attrition problem in its online degree</td>
<td>delivery method]</td>
<td>relevance, confidence, satisfaction) &amp; Kaufman’s 1988 OEM model (Organizational</td>
<td></td>
<td>learning environment was not attractive to them, what they learned form the online instruction was not relevant to their interests or goals, they had low</td>
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<td></td>
<td>program</td>
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<td>Elements Model)</td>
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<td>confidence levels and low satisfaction levels toward the instructional process.</td>
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<td>Purpose of Study</td>
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<td>Schilke, R. (2001)</td>
<td>To examine attrition from web-based courses through the online classroom experiences of learners who dropped out of these courses</td>
<td>Community college students N=27 [Web-based DE delivery method]</td>
<td>Interviews</td>
<td>Case study of dropouts using constant-comparative method – analysis compared to existing research on attrition in DE; replicated Garland’s 1993 study</td>
<td>Analysis of data reveals a continuous lack of learner preparation for the demand of the online-learning environment. However, Web-based courses provide a better opportunity for interaction among the learners and the instructors and among the learners themselves than earlier DE modes.</td>
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<tr>
<td>Hill, C. (2002)</td>
<td>To report on successful retention concepts</td>
<td>Law school students- approximately 600 students are enrolled in its Juris Doctor &amp; Executive Juris Doctor programs (2002)[Web-based DE delivery method]</td>
<td>Interview with dean of law school</td>
<td>Report on retention success — analysis method unidentifiable</td>
<td>Successful program was result of immediate feedback on papers and quizzes, a genuinely interactive atmosphere, and a genuine learning community.</td>
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<td>Santovec, M. (2002)</td>
<td>To report on motivations and barriers to women online learners</td>
<td>University level women distance education students N=481 women &amp; 53 men</td>
<td>Survey, in-depth interviews, &amp; an online questionnaire; report resulted from interview with Professor Cheris Kramarae, author of study “The Third Shift: Women Learning Online”</td>
<td>Report on study by the American Association of University Women; data collected over a 16-month analysis method unidentifiable</td>
<td>Online students are seeking the same intellectual engagement &amp; richness that students seek in the traditional context. Most of the women were highly motivated and self-directed. Taking online courses is more difficult than those taken on campus, requiring time-management skills and maturity.</td>
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<tr>
<td>Wilkes, C. &amp; Burnham, B. (1991)</td>
<td>To examine learner motivations &amp; learner perceptions of the electronic DE environment</td>
<td>Graduate &amp; undergraduate students N=156 DE students; 85 traditional students</td>
<td>(1) Motivational orientation measured by Boshier’s Education Participation Scale (E.P.S.); (2) participants’ perceptions of the learning environment measured using the Material Environment subscale from the Learning Environment Inventory (LEI), the Satisfaction &amp; Involvement subscales from the College &amp; University Classroom Environmental Inventory (CUCEI); both use a Likert scale; (3) questionnaire</td>
<td>Quantitative study – correlation coefficients; one-way ANOVA; multiple regression analyses; Qualitative aspect added through interviews &amp; observations: Comparison groups: electronic distance education compared with traditional on campus delivery method</td>
<td>There appears to be little practical relationship between motivation orientations and participants’ satisfaction. External variables, such as those which influence good instruction, may be more influential in student participation than internal variables.</td>
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<td>Blum, K. (1999)</td>
<td>To compare gender differences in preferred learning styles, participation barriers, &amp; communication patterns in CMC learning</td>
<td>Higher education students in computer mediated communication DE – Number of participants unidentifiable</td>
<td>Document analysis of online student messages</td>
<td>Interpretative qualitative case study- 1 year - male &amp; female preferred learning styles, communication patterns &amp; participation barriers compared for differences by gender; online differences were contrasted with traditional gender differences in face-to-face higher education environments – analysis methods unidentifiable</td>
<td>Female distance education students have higher dispositional, situational, and institutional barriers to distance education than do male distance education students.</td>
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<td>Perdue, K. &amp; Valentine, T. (2000)</td>
<td>To examine the perceptions of certified public accounts concerning deterrents to participation in Web-based continuing professional education</td>
<td>N = 444 Certified public accountants in Web-based distance education/ sample from Membership Directory</td>
<td>Self-completion survey instrument mailed to a random sample</td>
<td>Quantitative study/ factor analysis – SPSS for Windows; exploratory factory analytic procedures; principal components analysis; orthogonal rotation using the Varimax procedure; intercorrelations between scores</td>
<td>Lack of face-to-face interaction is a primary stumbling block for electronic education. Second barrier to electronic education is concern for quality of the course offerings.</td>
</tr>
<tr>
<td>Zielinski, D. (2000)</td>
<td>To explore employees’ reasons for withdrawing from DE courses</td>
<td>Employee training using DE delivery</td>
<td>Interviews from formal study by American Society for Training &amp; Development</td>
<td>Report on employees’ learning-delivery preferences – analysis methods unidentifiable</td>
<td>Employees prefer instructor-led training over online training. Lack of incentive, conduciveness of physical environment to learning, lack of manager oversight are offered as further deterrents to distance learning.</td>
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<td>Lawrence, R. (1996)</td>
<td>To explore the life world of the cohort by trying to understand the intersubjective experience of the participants from their perspective.</td>
<td>N=29 adults representing 12 different cohorts at the university level</td>
<td>Interviews, focus groups, student reflective papers</td>
<td>Qualitative analysis – hermeneutic phenomenology</td>
<td>Twenty-four dimensions constituted the structures of the experience of learning in a cohort group through 6 broad themes: Building a Learning Community, Experiencing a Collaborative Process, Knowing and Learning, Valuing Multiple Perspectives, Bridging Interpersonal Connections, and Facilitating Individual Development.</td>
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APPENDIX B

INTERVIEW QUESTIONS
Interview Guide

Research question:
• Why do adult learners say they enroll in an online cohort graduate certificate program?

Interview questions:
1. Why did you choose this particular online graduate certificate program?

2. Why did you choose an online cohort learning environment as opposed to the traditional face-to-face environment?

Research question:
• How does being in a cohort influence adult learners’ persistence in or withdrawal from an online cohort graduate certificate program?

Interview questions:
1. How did being in the cohort influence your persistence in the program? Can you give me some specific examples of times or instances?

2. If you withdrew from the program before completion, how did being in the cohort influence your withdrawal from the program? Can you give me some specific examples of times or instances?

Research question:
• What factors differentiate completers and non-completers in an online cohort graduate certificate program?

Interview questions:
1. What would you say motivated you to complete the program? Give as many reasons as apply.

2. What would you say deterred you from completing the program? Give as many reasons as apply.

Please respond to the following questions and return as soon as possible in the stamped, self-addressed envelope.

I agree with your analysis of Entry and Persistence in an Online Cohort Graduate Certificate Program.

I disagree with your analysis of Entry and Persistence in an Online Cohort Graduate Certificate Program for the following reasons.

I agree with the abstract for dissertation “Apart But A Part in Adult Distance Study: Persistence in an Online Cohort Graduate Certificate Program”.

I disagree with the abstract for dissertation “Apart But A Part in Adult Distance Study: Persistence in an Online Cohort Graduate Certificate Program” for the following reasons.

Thank you again for your support in this significant research study.

Lois Neighbors
706-543-6434
1030 Forrest Hills Drive
Bogart, GA 30622