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An analysis of the motivational characteristics of higher education students in pursuing distance learning courses at California State University, San Bernardino

Patricia Arlene Turner

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AN ANALYSIS OF THE MOTIVATIONAL CHARACTERISTICS OF HIGHER EDUCATION STUDENTS IN PURSUING DISTANCE LEARNING COURSES AT CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment of the Requirements for the Degree Master of Arts in Education: Vocational Education

by

Patricia Arlene Turner

June 1996
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Approved by:

Allen D. Truell, Ph.D., First Reader

Theodore H. Zimmerman, Ed.D., Second Reader
ABSTRACT

There is a growing interest in student motivation for pursuing courses through distance education. The purpose of this study was 1) to determine the level of motivation to participate in distance education among selected students at California State University, San Bernardino in relation to seven factors of Boshier's (1982) Education Participation Scale and 2) to determine the relative difference in motivation between selected full-time and part-time students relative to distance education.

Literature pertaining to adult education and distance education was reviewed. The population surveyed consisted of students enrolled in vocational education classes in the winter quarter 1996 at California State University, San Bernardino. The primary instrument to gather information was the Education Participation Scale developed by Boshier (1982). Additional information was gather from a personal data sheet.

A total of 83 participants provided the usable data for this study. Results indicated professional advancement, educational preparation and cognitive interest were ranked highest in influence for participation in a distance education class by the study participants. No supporting data was discovered to differentiate motivational factors of part-time and full-time students. The study results indicated that the majority of the students at CSUSB enrolled in vocational education classes during the winter quarter of 1996 were 35 to 49 years of age (65.1%), working full-time (74.7%), and taking 8 or more school units (71.1%). Of the respondents, 88% drove 50 miles or less one-way to campus. Of the participants 67.4% already possessed an associate's or a bachelor's degree.
ACKNOWLEDGEMENTS

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Chapter 1

Introduction

Three centuries ago, distance education was being used to enhance education by providing additional learning opportunities in the United States and Europe. Distance education in the United States can be formally traced back to 1728 when home study shorthand instruction was offered in Boston (Valore & Diehl, 1987). This offering had been generally accepted as the first publicly announced opportunity for distance education in the United States.

By 1866 the number of adult learning institutions, with an emphasis on worker education, had increased significantly. These institutions placed an additional emphasis on correspondence education which provided instructors with greater opportunities to reach a wider base of students. Distance education provided adult learners access to additional resources such as a wider variety of classes and expert instruction. This growth was further enhanced by the development of organizations, such as labor unions, within business and industry. These organizations promoted the awareness and skills of the worker. With technological changes in agriculture and industry brought on by the industrial revolution, specific skills were required to meet increased production demands. These skills needed to be delivered to a widening variety of workers in a widening range of locations.

By the late 1800s, a movement to expand distance education programs was being fueled by people who believed that everyone had a right to an education. In 1878, John Vincent created a home reading circle to encourage adult learning. Vincent was one of the founders of the Chautauqua movement, an educational society based on the principle of access to education for all U.S. citizens (Lightly, [1915] 1971). Moore (1989) called Chautauqua "the first significant distance education effort in America" (p. 223). Formal
recognition of distance education occurred in 1883, when the State of New York authorized Chautauqua Institute the authority to award degrees through the delivery method of home study (Valore & Diehl, 1987).

As the industrial age momentum continued to increase in the early 1900s, focus on distance training and distance education, as a median to deliver necessary knowledge and skills, expanded. Vocational skills programs sprang up for technical training in agriculture and homemaking. Schools administrators expanded their use of independent studies through distance education.

Electricity had driven the changes in education since the early 1900s with the invention of the radio and the television. In 1919, University of Wisconsin professors started educational broadcasting on an amateur wireless radio station (Engel, 1936). From the 1930s universities began using educational television broadcasts. This growth continued with use of radio and television as the primary delivery systems, but the limited interaction that was available between the instructor and the student was provided by the United States mail, and later the telephone.

Beginning in the early 1960s, funding from the federal government led to an increased number of programs in distance learning to facilitate instruction in all areas of life, home, and work. By the 1970s, increased versatility with computers added additional opportunities for expansion of distance learning programs in areas such as business, liberal arts and all fields of science. With the application of electronic media, the age of information had begun.

By 1983, 100 accredited programs were offering external degrees by some method of distance education. The Adult Learning Service (ALS) provided education to over a million adult learners between 1981 and 1988 on the Public Broadcast Service (PBS) (Public Broadcasting Services, 1989). The Adult Learning Service estimated that over
100,000 students enrolled in telecourse programs in higher education each year within this program (Brock & Goldstein, 1985). Furthermore, it was estimated that an additional 100,000 students took classes via video tapes, video conferencing, telelectures, and telecourses for college credit. The Electronic University, another consortia of universities blanketing the United States, had over 300,000 students enrolled in credit courses in 1993. Over 30,000 of these 300,000 learners were enrolled in degree programs (Peterson's Guides, 1993).

Distance learners presented a potentially large market of consumers with unlimited economic opportunities for various school sites. There was a growing realization by administrators and educators that innovation could be aptly applied to educational institutions with their need to meet the changing requirements of their students. The students needed additional accessibility for expert instruction from highly qualified instructors and greater convenience. Furthermore, distance education could provide various alternatives to administrators in meeting their need for additional space and additional faculty while increasing enrollment and controlling operating costs.

Various challenges facing higher education as reported in the U. S. News & World Report-Fifth Annual Guide to Colleges (1991) included increased operating costs, reduced traditional student enrollments due to a decline in the number of high school graduates, caps on student enrollment due to state budget requirements, reduced yearly course offerings to cut costs, and a reduction in faculty in an effort to restrain rising costs. To meet such demands required that educators, particularly at post-secondary levels, be able to identify the on-going and ever-changing needs and requirements of the student population to best meet the needs of society and the community at large. To identify and meet their own requirements, higher education institution faculty and administrators needed knowledge of the factors motivating the students which they served.
Various factors related to the limited growth of traditional education were identified by Downey (1985) as 1) the declining population rates in the 20-35 year age group, 2) rising costs, 3) family economics, 4) an emerging bimodal income distribution and 5) decreasing financial aid for the non-traditional student. Factors that favored the growth of adult, or non-traditional, education in the United States were 1) high cost of regular matriculation tuition fees, 2) multiple career changes, 3) career progression/enrichment and 4) job reentry by women. These changing factors created a reciprocal need for adjustments in educational institutions including the growth of additional distance education programs (Downey, 1985).

Based on these findings, it becomes necessary to look at the needs of the students. The needs of adult learners in higher education are changing. Composition of the student base is changing as well. Adult students are becoming a significant sector of the post-secondary educational system. These adult learners have specific needs with increased demands on time, energy and money. Education can no longer be seen as just a matter of lecturing and imparting knowledge by the instructor to be received by student. Facts are now easily accessed via electronic media by the student. Focus must now center on providing the student with skills to locate and process information on a continuous basis throughout a life time. Additional studies are required to determine 1) what factors contributed to the specific requirements of adult learners and 2) what motivational characteristics are intrinsic to this growing segment of students (Boshier, 1973; Boshier, 1976; Brown, 1986; Verduin & Clark, 1991).

Purpose of the Study

The purpose of this study was 1) to determine the level of motivation among selected students at California State University, San Bernardino in relation to seven factors of Boshier's (1982) Education Participation Scale, and 2) to determine the relative difference
in motivation between selected full-time and part-time students relative to distance education. Specifically, answers to the following questions were sought:

1. What is the demographic profile of the study participants?
2. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale?
3. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale relative to selected demographic variables?
4. Is there a difference between full-time and part-time students at California State University, San Bernardino on the overall level of motivation?
5. Is there a difference between full-time and part-time students at California State University, San Bernardino on the level of motivation on each of the seven motivation factors on Boshier's (1982) Education Participation Scale?

Significance of the Study

With changes brought on by the information age, changes in global business communities, and changes in economic and political forces, many adults will be forced back to school or into training programs to upgrade skills or to develop skills for a new career. The additional expansion of the number of women in the working community and a growing number of skilled minorities wishing to enhance their social status and marketability has also spurred an interest in further personal development and training.

Drucker (1989) stated that one of the most important developments in business and in the political world of today is the growing perception that knowledge is the most important wealth producing asset. The focus is now on the learning and the knowledge of the worker. With the increase in information and the need to access new discoveries to stay on the cutting edge in a given field, the emphasis is placed on learning to locate and
process new information. Demands for specific skills and competencies are of growing importance and concern to the business world. Changes in societal expectations coupled with changes in education and employment demands during the last decade has required adjustments within educational institutions to meet these needs.

The motivational factors and educational needs of non-traditional students coupled with the rapid changes in technology creates the need for on-going adjustments in post-secondary education curriculums and delivery systems to enhance the skills and knowledge of the student. Additionally, the working environment requires current information and frequent retraining due to restructuring of jobs or additional information necessary to stay on the cutting edge in a particular field. Recent innovations in education as a result of computer technology has created new delivery systems enhanced to provide timely communication between professors and students over telephone lines. As Eric Ashby, a famous British academic noted, the application of electronic technology is the fourth revolution in education (Knapper, 1980).

Results of this study will provide college administrators at California State University, San Bernardino with insight into full-time and part-time student motivational characteristics toward distance education. This insight could assist administrators and educators in developing delivery systems and curriculums designed to meet the needs of the adult learners and to increase student achievement, satisfaction and enrollment. As adult learners continue to increase in numbers, it would be especially important to understand their motivations and characteristics. In addition, the study serves as a base for any future studies involving adult learner motivation in regard to distance education at California State University, San Bernardino. Finally, the researcher sought to provide information to encourage the additional use of distance education in post-secondary education programs by building an awareness of the needs of various adult learners.
Limitations and Delimitations

The limitations and delimitations of the study are presented in the next section.

Clarification of the limited scope of the study is clearly defined.

Limitations

1. This study was limited in that the sample of participants was not a probability sample. Therefore, the sample may not necessarily be representative of the students at California State University, San Bernardino.

2. This study was further limited to the reflective responses of the participants.

Delimitations

1. The participants in this study were delimited to those full-time and part-time vocational education students attending California State University, San Bernardino in the winter quarter of 1996.

Definition of Terms

Adult Learner - A person over the age of twenty-five who has been away from education for five years or longer.

CSUSB - California State University, San Bernardino.

Delivery Method - Potential and current approaches available for presentation of course instruction.

Distance Education - Consisting of all arrangements for providing instruction through print or electronic communications media to persons engaged in planned learning in a place or time different from that of the instructor or instructors, a majority of the time (Moore, 1989).

Distance Learner - One who is geographically distant from the instructor of the course.
**Lifelong Learning** - The purposeful activities that people undertake with the intention of increasing their knowledge, developing and updating their skills, and modifying their attitudes throughout their life times.

**Likert-Type Scale** - The construction of statements about an object that would assess attitudes towards a topic by asking respondents to indicate whether they strongly agree, agree, undecided, disagree, or strongly disagree.

**Motivation** - Inferred intrapersonal processes that direct, activate and maintain behavior. In practice a study made of the conditions that produce behaviors that occur under specific conditions.

**Non-traditional student** - For the purpose of this study a student over the age of 25 with at least five years of work experience.

**School Unit** - For the purpose of this study a school unit is the value assigned to the course in terms of school credits to be earned for each course taken by a student.

**Traditional student** - A student between the ages of 18-22 who is participating in college level classes with no break, or a very short break, between high school and college.

**Organization**

This thesis is divided into five chapters. Chapter One provides the statement of the problem, purpose of the study, significance of the study, the limitations and delimitations of the study, the definition of terms and the organization of the study. Chapter Two consists of a review of the literature. Chapter Three outlines the research design, the methodology, and the data collection procedures. Chapter Four presents the findings of the study. Chapter Five provides a review of the conclusions and the recommendations. The appendices and the reference list follow Chapter Five.
Chapter 2
Review of Related Literature

This chapter contains a review of literature pertinent to this study. Topics discussed include the historical development of distance education, various types of distance education delivery, strengths and limitations of distance education, rationale for the selection of the instrument and application of the instrument in educational settings. A brief discussion of the variables, motivation factors, adult learning theory, changing demographics, a review of distance education at California State University, San Bernardino and a chapter summary follows.

Historical Development of Distance Education

As Frick (1991) noted in his fastback, Restructuring Education Through Technology, education and communication have been changed significantly by technology throughout time. The first significant change was the ability to create pictures and instruments with which to draw and communicate before spoken language was known. The second major change was with the advent of spoken language which transformed communication into storytelling to convey social norms and requirements as well as history, expanding the knowledge base for the individual. The next major step was the creation of the written language, with the symbols, paper, parchment, stone tablets, and writing instruments. The last major event was the advent of the printing press which created the opportunity not only for a significant increase in available information, but also an opportunity for the masses to have access to the printed word creating a need to be able to read and write. As a result, formal learning could be completed in an independent setting, which provided the setting for distance education.

In 1840, Isaac Pitman, recognized as the first of the modern distance educators, had students in England copy Bible scripture in shorthand (Valore & Diehl, 1987). The
students taking this instruction were directed to copy brief passages of the Bible and return the scriptures by mail to Pitman for grading. Within a short period of time, Pitman had to hire a staff to do the grading.

In 1873, Anna Elliot Ticknor founded the Society to Encourage Study at Home. Ticknor was dubbed the mother of American correspondence study. Furthermore, Ticknor originated the practice of exchanging comments, as well as grades, with students in the Society. The Society to Encourage Study at Home had originally been organized in support of education for women (Aggasiz, 1971).

Formal recognition of distance education occurred in 1883, when the State of New York authorized Chautauqua Institute to award degrees through the delivery method of home study (Valore & Diehl, 1987). One of the founders of the Chautauqua movement, John Vincent, supported the popular idea of access to education for all citizens of the United States (Lighty [1915], 1971).

William Rainey Harper was considered one of the earliest pioneers of correspondence education. In 1892, Harper became the first president of the University of Chicago, and founded the first university-level correspondence study division in the United States (Keegan, 1991). Harper persuaded the educators of the Chautauqua movement to allow him to start a correspondence study program for university students (Valore & Diehl, 1987). The opportunity to study at home opened the door to higher education for a growing number of adults.

In the early 1900s, distance training courseware expanded as programs sprang up for technical and vocational skills. University, college, and private school faculty and administrators expanded their use of independent studies with the vehicle of distance education. In 1915, the National University Extension Association was created to provide an accreditation body to assure quality and ethical practices in all aspects of distance
education (Moulton, 1915). The purpose of the association was to monitor the quality and standards of programs offered at college and university level. The initial meeting of the National University Extension Association was held at the University of Wisconsin.

Similarly, the National Home Study Council (NHSC) was created in 1926. This council was an organization designed to address the same type of concerns, quality and ethical practices, in independent programs offered to the public. The National Home Study Council was to provide a basis of creditability for the general public when taking courses that were not under the umbrella of higher educational institutions.

Most of the growth of independent studies, or distance education as it was later to be known, was inhibited by the limited percentage of degrees that could be completed without having to attend classes on campus. There was also a limit on the number of classes that could be taken other than on the campus from which the degree would be issued. Many universities and colleges maintained this policy to retain enrolled students started in a given program.

Requiring at least some classroom time be completed on campus was the well defined pattern post-secondary education had been in since the middle ages. As an independent bureaucracy with its own organization and vested interests, administrators of the bureaucracy had little motivation to change their established criteria and requirements. Change in education would be forced by changes in technology, as it had been in the past (Weitman, 1992).

When placed in the context of history, the phenomena of new technology was not as dramatic as it appeared to the restricted vision of 20th century viewers. Electricity provided new forms of delivery in education early in the 1900s with the advent of radio, television, and finally computers. As early as 1932, the University of Iowa broadcasted educational television programs (Koenig and Hill, 1967). In the mid-1950s, the Chicago
City College actively used television courses for at home students (Brock and Goldstein, 1985). These early attempts to devise new media with more accessibility provided the blueprint for the growth of the distance education delivery format through the 1960s. As the 1960s progressed, universities and colleges with strong science and technical schools began using televised lectures to enhance delivery and to reach additional students (Brock & Goldstein, 1985).

While computer technology was not new, computers had not been used for teaching prior to 1960. Computer modem instruction began at the University of Illinois with Programmed Logic for Automatic Teaching Operations (PLATO) in 1960 (Verduin & Clark, 1991). Initial programs were limited in flexibility and use due to the limited memory capabilities of the computers and the limited number of students with access to computers. As continued development and technological advances provided new opportunities for the use of computers in instructional programs, computer use expanded.

By 1974, the University of Mid-America faculty were offering classes by distance education (Zigerell, 1984; Lewis, 1988). This consortium had been created by university administrators and faculty from seven midwestern states. The consortium of universities served over 20,000 students until its demise in 1982. The program failed due to inter-organizational politics and poor planning (Zigerell, 1984; Lewis, 1988).

In 1982, cooperation of various colleges and university administrators and faculty provided credit and non-credit courses with the delivery form being distance learning. By 1983, 100 accredited programs were offering external degrees of some method of distance education. Less than 25% of the requirements for these degrees were campus-based as reported by the American Council on Education (Sprairights, Bushner & Timpson, 1985).

The Adult Learning Service (ALS) provided access to education to over a million adult learners between 1981 and 1988 on the Public Broadcast Service (PBS) (Public
Over 100,000 students signed up for telecourse programs in higher education each year within this program, with an additional 100,000 students taking classes via video tapes, video conferencing, telelectures, and telecourses for college credit (Brock & Goldstein, 1985). The Electronic University, another consortia of universities blanketing the United States, had over 300,000 students enrolled for credit courses, in 1993, with over 30,000 of these learners enrolled in degree programs (Peterson's Guides, 1993).

A trend was seen in the increase of the establishment of remote campuses, use of electronic delivery systems, and increase in adult education (Berman, 1988). Distance education programs were becoming more numerous and more visible in society. Administrators and faculty from educational institutions were developing distance education programs to offer a wider variety of specialized coursework, easier accessibility and to create more cost effective course work.

Delivery Methods

There are a variety of distance education delivery methods including correspondence, video, instructional television, and the computer/modem delivery systems. Distance education has been conducted through print, mechanical, and electronic delivery systems. Various sources such as individuals, media centers, instructional development units, specialized services and projects, institutions, and government agencies can provide distance education opportunities. These delivery methods can be specifically designed to meet the needs of the students and the instructor. A discussion of each of these methods follows.

Correspondence

Correspondence education was the primary method of delivery in distance education from the 1700s until the early 1900s. Correspondence education was the only method
available with the limited technology and the communication systems of the times. This method utilized written communication as a media to exchange information between the teacher and the student. Occasional meetings between instructors and students might also take place.

The system for correspondence education in the United States copied and paralleled the systems used in Europe in the late 1800s. In Sweden in 1898, Hermod designed coursework for higher learning by use of the postal system as the delivery method (Verduin & Clark, 1991). Private correspondence colleges in London such as Skerry's College and the University Correspondence College, began preparing students for post-secondary degrees in 1885. United States educators in the development of distance courseware would model similar programs (Curzon, 1977).

The industrial revolution created increased demands by the business communities requiring specialized well trained workers to meet production requirements. In 1891, Foster, a newspaper editor in Pennsylvania, began to teach mining and safety courses by correspondence (Verduin & Clark, 1991). Courses in agriculture, focused on technological and scientific changes, were offered to the public both privately and through educational institutions. Development of programs to enhance skills of women and minority groups were popular and were supported by special interest groups.

**Video**

Delivery enhancements grew with technology. Courses with the use of distance education as a form of delivery, were offered combining high-quality text and videotaped materials. The tapes could be viewed by the student when convenient. The tapes could be watched many times and stopped where necessary, so the student could grasp the material.
The use of text and videotaped materials had been successful in England at the Open University of the United Kingdom (OUUK). Faculty at the University of Houston, the University of Maryland, and Rutgers University followed a similar format in the design of their distance education programs. Administrators and faculty at the University of Mid-America emulated this system of delivery (Zigerell, 1984). The University of Mid-America was founded in 1974 and was in business for eight years. Other consortiums had prospered with the use of this type of delivery for some courses and instructional television for other courses, providing a mixture from which the students could choose, based on student preference for delivery.

Instructional Television

Electricity had driven the changes in education since the early 1900s with the invention of the radio and the television. In the 1930s educational institutions were testing television on a limited basis to present instructional information to students in remote locations. Koenig and Hill (1967) noted that educational television began at the University of Iowa in 1932. By the mid-1950s, the Chicago City College actively used television courses for at home students (Brock & Goldstein, 1985). Broadcasts from one campus to another, from campus to work locations, as well as directly to the home of the student, became available in many parts of the United States. Because television was a one-way median, students were expected to communicate with the instructor via the mail and the telephone.

Courses could be presented by telelectures, videoconferencing, and telecourses. Often this type of delivery was inconvenient for the student at the times it was broadcast. Furthermore, although this type of delivery provided the opportunity for greater visual input for the students, enhancing their ability to relate to the instructor and the materials, it was still haunted by the lack of effective two-way communication.
Computer/Modem Instruction

Most of the previous delivery systems had been inhibited by the lack of effective and efficient two-way communication between the student and instructor. This condition changed rapidly with advances in computer technology. Through the use of a computer and modem, written communication was now as fast as a telephone call and could provide immediate feedback to the student. Instant two-way communication in written form had become a reality. Communication could also be paced to fit the convenience of the student and the instructor. The advent of easily accessed electronic bulletin boards, E-mail, and computer programs created a surge of interest in computer/modem communication for distance education.

Brooks and Kopp (1990) noted that a new era for teaching/learning interaction was entered with videocassette recorders (VCRs), computer graphics, videodisks, laser pointers, laser disks, projection pads, and computer networks. The Office of Technology Assessment personnel reported that computer-based distance education offered a viable response to society training and educational needs, and had become a significant force in higher educational institutions (Moore, 1989).

Strengths and Limitations

There are numerous strengths and limitations in the use of distance education as a form of delivery for education. In the next section an overview of some of the strengths and limitations are discussed.

Strengths

Dirr (1990) cited four basic concerns to be overcome in meeting the educational needs of American students as being distance, time, access to rich resources, and rising costs. All of these barriers were of major concern to adults in gaining additional training and
knowledge, and could be overcome with judicious use of distance education. Adult learners needed access to a continuous method of learning that would not disrupt their lives.

Accessability to information, the richest resource, had become a reality. With the use of the computer and modem, and the necessary software, a touch of the finger could place the world within reach. Reference materials were available from a computer anywhere in the world through local area networks and wide area networks. Shared information could be sent across the country, or even the world, in a stroke of a key board. Students could interact with other students and the instructor in real time. Distance education could now offer opportunities for not just formal education, but provide the key to a whole new world. This world could be explored from a desktop to broaden personal horizons and knowledge.

Convenience for the student had become a reality. Students no longer were required to commute to take classes. Students might spend hours of unproductive time and energy in travel (Foell, 1987). Classes could now be accessed from both work and home. Students with physical limitations could access distance learning with the same ease as any other student. Time need not be wasted away from family and home to further develop skills and knowledge. If the course a student wished to take was not offered locally, a student could take the class from other universities in another state. Manwaring (1981) noted that there were three good reasons to use distance learning methods in education:

1. It might be the only way some students can receive training or education.
2. It might be the preferred and chosen way for some students to learn.
3. In the current financial climate, it might be a way for institutions to get students.

Students found that sitting through classes at the end of the work day was no longer necessary. Business people found that they could pursue additional education goals even
though their jobs required extensive erratic travel schedules. The computer and videos could be taken along in the suitcase. The lesson could be completed at the convenience of the student.

Commute cost in terms of gas, use of automobile, and parking could be reduced, however these costs had to be compared carefully against other additional costs of taking classes at home. Even when these costs savings were off-set by the expenses of distance education, many students found that other personal benefits outweighted the cost factors.

A national classroom had become a reality. Classes might consist of students from eight to ten states, or even other countries. Many ethnic backgrounds could be represented in the same class providing the students with a wider diversity of classmates. This was an opportunity to broaden interaction, and at times broaden student understanding, of various cultural needs and challenges. This interaction could provide the students with a clearer understanding of demographic differences and various needs of their classmates.

Limitations

Some students found that specific factors inhibited them from learning in environments other than the classroom. Learning or relearning good study habits and time management became key factors in successful distance learning. Students might experience difficulties in 1) planning and organizing time, 2) tension between demands of study time and family and friends, 3) poor course design, 4) environmental factors, such as illness, change in marital status, or moving, 5) work-related problems, 6) lack of support by spouse or employer, 7) change in financial circumstances, 8) educational disadvantaged, 9) role conflicts and 10) lack of emotional adjustment in returning to school and studying (Moore, 1989).
Students might need additional training to access the technology that could afford them the luxury of home study. Computer training might be required before taking a distance education class. Additional training, and access to the necessary equipment could prove costly to the student. Prohibitive costs in equipment and training in start-ups, with additional concerns over the rapidly changing technology, discouraged many individuals before they were ready to start such programs.

Students had to weight the benefits of distance education with the responsibilities and liabilities associated with independent study methods. Some students might not be sufficiently motivated or need additional structure to be successful. A student might need a structured environment providing weekly interaction with other students and an instructor. Instructors needed to be aware that students without the necessary skills to study independently would not be successful in distance education programs.

Instructors and administrators were cautious about the expanded use of distance education. Distance education was regarded as a threat by many traditional educators and, as such, was slow to evolve. In many instances distance education programs were not supported by faculty who felt threatened in the face of the new technology. Keegan (1991) stated that distance education was often identified by faculty as an unwanted competitor to traditional methods of education. Not only were faculty concerned with having to learn the new technology, but also with the suspicion that they could perhaps be replaced by this technology.

In addition, instructors had a vested interest in maintaining current educational structure. The desire to make adjustments in current programs at institutional levels, or individual instructor levels, were inhibited by the extra work as well as the perceived and the inherent challenges. Instructors might perceive a loss of control and a loss of status within these new paradigms.
Faculty and administrative support was limited, at times, for distance education programs. In addition, many educators were concerned with the number of growing programs in distance education for a variety of reasons, other than the personal effect on their own positions. Lack of quality control and established standards might result in lower academic achievement. Lack of research supported data on the design and support of distance education was a cause for concern. Lack of cooperation at state and institutional levels could inhibit the creation of quality programs. Material that might be explained in the classroom, must stand alone when presented to a distance learning student creating concerns with media presentation. Poor course design or poor delivery resulted in difficulties for the students and the faculty. Poor quality of video or televised instruction could disrupt learning and cause a higher drop rate among the students.

Rationale for Selecting Boshier’s Education Participation Scale

Boshier’s Education Participation Scale (1982) was selected as the base for this study for two reasons. One, a number of researchers have tested the applicability of Boshier’s Education Participation Scale (1971) and the revised Education Participation Scale A (1982) in educational settings. The results of these numerous studies lend support for its continued use in educational settings. Presentations of studies supporting continued use of Boshier’s Education Participation Scale (1982) (Appendix A) are reviewed in the discussion of variables section of this chapter. Two, the publisher granted the researcher permission (Appendix B) to use the Education Participation Scale (1982). An expanded discussion of the instrument appears in Chapter Three.

Application of Education Participation Scale in Educational Settings

The Education Participation Scale has been used in numerous studies in educational settings. Boshier (1977) used the Education Participation Scale in a study of age, occupation, income, educational attainment, social participation, and previous
participation in adult education. In one such study, subjects were enrollees in high school and college evening non-credit courses in Vancouver, British Columbia, Canada. As a result of that study, Boshier (1977) concluded that older students were more likely to enroll for cognitive interests, while younger students were more likely to enroll as a result of external expectations. Further, as noted by Boshier (1977) the less educated students were significantly more likely to be taking courses for professional advancement or because of external expectations than those with more education.

During the last decade, the Education Participation Scale data had been collected from over 13,000 learners around the world for use of combination and subjection to a cluster analysis designed to examine the extent to which Houle's typology fit the reality of adult education participants (Boshier & Collins, 1985). Works citing this tripartite typology and the investigative attempts to substantiate this typology were cited extensively by authors in works published in Adult Education between 1968 and 1977 (Boshier & Pichard, 1979). The number of citing of studies applying this instrument in relation to the support of Houle's typology was due to the growing interest in motivational characteristics of adult participation in continuing education.

Dependent Variable

A discussion of the dependent variable distance learning follows. The various definitions of distance learning are also presented.

Distance Learning

A principal problem in distance learning research is in the use of various definitions of distance learning discussed in the literature. Authors from various periods of time have applied the terminology in a variety of ways to include independent study, external study, nontraditional learning, and out-of-school learning (Verduin & Clark, 1991). The term
distance education could include all of these, or only one or two delivery methods based on the interpretation of the administrators and instructors of a particular institution.

Part of the problem with defining distance education stems from the fact that distance educators do not share a large body of knowledge, theory, or philosophy common to all (Verduin & Clark, 1991). Wedemeyer (1983) stated that "five terms are used to include all the types of programs that are non-classroom based: distance education, non-traditional learning, independent study, out-of-school learning, and external studies" (p. 54). Only the term distance education includes all of these terms. As distance education continued to evolve, consistent interaction between the student and the instructor plays a vital part in the variety of courseware design and delivery.

In addition, a previous key descriptor of distance education had been the separation between student and teacher. Holmberg (1989) cited six basic descriptors of distance education as being:

1. Preproduced courses as the main basis for study.
2. Existence of organized two-way communication between the student and the supporting organization.
3. Planned and specific catering to individual study.
4. Cost effectiveness for the educational facility when large numbers of students use the same preproduced courseware.
5. Industrial work methods application to production of learning materials and administration of distance education.
6. The idea that distance study was a mediated form of guided didactic conversation.

In another study, Keegan identified the following four elements of distance education (Verduin & Clark, 1991):
1. The separation of teacher and learner during at least a majority of the instructional process.
2. The influence of an educational organization, including the provision of student evaluation.
3. The use of educational media to unite teacher and learner and carry course content.
4. The provision of two-way communication between teacher, tutor, or educational agency and learner.

For the purpose of this study distance learning is defined as all arrangements for providing instruction through print or electronic communications media to persons engaged in planned learning in a place or time different, the majority of the time, from that of the instructor or instructors (Moore, 1989). This does not prohibit the occasional meeting between the instructor and the student. Courses that are normally presented in a classroom environment may be converted to independent study with limited interaction, for the convenience of student and instructor and still be considered distance learning.

Motivation is defined as the inferred intrapersonal processes that direct, activate and maintain behavior. In practice, this is a study made of attitudes and perceptions that produce a specific behavior or response under specific conditions. An example would be the study of students enrolled in distance education courses and their perceived reasons for approaching further education in a non-traditional method. Another example might well be a study of the perceived needs and requirements of students in a particular system, to determine if the perceived needs of the students are being met.

Independent Variables

The independent variables in this study include gender, age, level of education, school
Gender has been explored by Gordon (1993) in a study of the motivational orientations of adult education graduates in off-campus credit programs. Gordon (1993) found that the majority of the participants were women who were influenced to take the courses for professional advancement and cognitive interest reasons rather than for social contact or social stimulation reasons. The researcher credited the high influence in the factor of professional advancement and cognitive interest to the growing number of women working full-time in a wider range of occupations.

Brown (1986) in an exploratory study of the motivational characteristics of adult distance telecourse learners, found that 81% (n=223) of the population of the 274 adults surveyed were women. While women may be drawn to courses for the same motivational reasons as men, the approaches used to attract the two genders to the courses being offered may vary considerably. Brown (1986) noted that men may be better approached through the employer for additional educational requirements.

Alsanian and Brickell (1988) in a study of over 1000 adults, 25 years and older, who had taken a college credit course in a two-year period, found that 58% were women. The researchers attributed the participation rate, particularly of the younger adults, to life changes such as career moves that would possibly motivate an adult to return to school for additional education.

Age

Gordon found that the highest percentage of participants in a study of the motivational orientations of adult education graduates in off-campus credit program were 35-39 years of age (26%). This group was closely followed by those participants 30-34 years of age.
Brown (1986), in an exploratory study of the motivational characteristics of adult distance telecourse learners, reported a median age of 35 years of age for the participants. Findings from various demographic studies indicated that telecourse students were slightly older than average with substantial education experience (Luskin, 1985). Richards (1994), in a study of computer/modem students at a community college, reported that computer/modem students tended to be older than traditional 18-22 years of age students. Alsanian and Brickell (1988), in a study of over 1000 adults, 25 years and older who had taken a college credit course in a two-year period, noted that 75% of the adult learners who were surveyed were between 25 and 44 years of age. Participation declined rapidly after that age. The researchers deduced that this was due to the limited amount of career adjustments and changes to be faced after the age of 55.

Level of Education

Brown (1986), in an exploratory study of the motivational characteristics of adult distance telecourse learners, reported that 24% had high school degrees, 62% of the respondents had college degrees, and 11% had graduate degrees. Many of the degreed professionals were taking additional courses because of continuing certification requirements as they were teachers or nurses (Brown, 1986). Studies such as the one completed by Gordon (1993) were designed with level of education as a fixed factor in surveying graduate students.

Employment Status

Employment status has been included in various studies of participants in distance education including Gordon (1993), Richards (1994), and Alsanian and Brickell (1988). Gordon (1993), in a study of the motivational orientations of adult education graduates in off-campus credit program, noted that 90% of the participants in the study were employed. Richards (1994), in a study of computer/modem students at a community college...
college, reported that almost half of the computer/modem students were employed full-time.

Alsanian and Brickell (1988) reported that 71% of the adult learners worked full-time while taking classes. The study was conducted by telephoning over 1000 adults learners, 25 years or older who had taken a college credit course over a two-year period.

School Units

Alsanian and Brickell (1988) noted that 80% of adult learners were part-time students, rather than full-time students in their study of over 1000 adults, 25 years and older who had taken a college credit course over a two-year period. A direct correlation of working full-time and being part-time students was drawn by the researchers of the study. Alsanian and Brickell reported that full-time workers usually attended school on a part-time basis.

Miles to Campus

Waltman (1990) noted that geographical distance from campus was an obstacle for some students. However, geographic distance from campus had not differed extensively in comparison studies between on campus adult students and distance education students.

Alsanian and Brickell (1988), in a study of over 1000 adults, 25 years and older who had taken a college credit course in a two-year period, noted 70% of the students gave convenience as a reason for selecting a campus in attending classes. In the study distance was not a factor, but the convenience for the student was a factor. Results of the study indicated that 90% of adult learners lived within 45 minutes from campus. Alsanian and Brickell (1988) summed up the demographic factor of convenience by stating: "The image of the busy adult emerges once again from these data. Rationing too little time among too many demands, adults have little time for class, less time for study, and no time to waste simply getting to class" (p. 82).
Motivation Factors

One of the key issues during early studies of distance education, was discovering what motivates students to obtain an education in a non-traditional fashion. Manwaring (1981) indicated that the way to plan a course in distance learning was to consider the needs of the potential students. Adult learners are considered unique individuals with personal needs, specific motivators, and specific learning styles.

Studies were completed indicating that the adult learner was the focal point in providing for the training and development in adult education. The framework of this learner centeredness provided the method of how learners understood their world and approached all learning processes (Wagner & McCombs [McCombs et al., 1992], 1995). In addition, early studies provided information that indicated that successful distance education students demonstrated a high degree of self-efficacy and a willingly to take on challenging tasks that were based upon previous experiences of success.

Distance learning instructors believed that distance students were adults who were highly motivated and perceived that they themselves had a great deal of personal control over life outcomes. As adults they also perceived themselves as able to overcome distance education obstacles such as the lack of structure, guidance or immediate feedback from teachers (Riddle, 1994). Results of supporting studies showed that the telecourse students had strong self-images, work well independently, and knew how to manage time (Brown, 1986).

Adult Learning

One of the challenges that faced adult educators was the fact that adults already possessed a vast foundation of learning experiences. Adult learners had their own set of values, beliefs, individual experiences and base their world on their own set of assumptions. Verduin and Clark (1991) noted "...adults are continuous learners in an
informal way as they adjust to the various roles changes that confront them in life. Further, adults are motivated learners: they take classes at a given point to learn more about a topic" (p.25). The study of the motivational characteristics of adult learners began with Houle and Knowles in the early 1960s.

Houle (1961) began an era of studying adult learners as well as the reason for participation in learning. Houle (1961) promoted "research which takes as its starting-point not the act of participation but the participant" (pp.8-9). Houle proposed that adult learners were goal, learning, or activity oriented (Boshier & Collins, 1985).

Andragogy, a theory and philosophy of adult teaching and learning, delinates differences between adults and children in terms of self-directedness, experience, developmental readiness, and problem orientation (Knowles, 1980). Knowles (1980) believed that the readiness to learn is tied to adult development tasks and promoted adult learner independence. The needs of adult learners had been studied to provide additional data to educational institutions to determine how best to design courseware and delivery systems for the growing adult student segment of the population. One such study was completed by Knowles.

Knowles (1989) listed the following principles as constituting the foundation of modern adult learning theory:

1. Adults are motivated to learn as they experience needs and interests that learning will satisfy; therefore, these needs and interests are appropriate starting points for adult learning activities.
2. Adult orientation to learning is life-centered; therefore, the appropriate units for organizing adult learning are life situations.
3. Experience is the richest resource of adult learning; therefore, the core methodology of adult education is the analysis of experience.
4. Adults have a deep need to be self-directed; therefore, the role of the teachers is to engage in a process of mutual inquiry rather than to transmit knowledge of them and then evaluate their conformity to it.

5. Individual differences among people increase with age; therefore, adult education must make optimal provision for difference in style, time, place and pace of learning.

Knox (1980) suggested that much of the intentional learning activity of adults is motivated by the desire of adults to move from one proficiency level to another. Proficiency was that capability to perform a task effectively. Proficiency usually required a combination of knowledge, skills, and attitudes that were possessed by the adult (Knox, 1980). In this regard, adults were motivated learners, who emphasized the practical utility of the information or skill learned. Knox (1980) further noted that adult learners vary greatly in their learning abilities and the rate of speed in which they learn. A self-pacing strategy for learning would be effective in adult learning. Individual effort would be a critical factor.

### Changing Demographics

As reported in the Digest of Education Statistics 1995, higher education enrollment increased by about 45% between 1973 and 1993. From 1983 to 1993 this increase in student enrollment amounted to 1.8 million additional students in the post-secondary education system. Much of the growth was credited to the rise of part-time and female students. Between 1983 and 1993 female enrollment increased 22% compared to a rise in male enrollment of 7% (Digest of Education Statistics 1995).

Minority enrollment has increased during the period of 1973 to 1993. In 1973 the percentage of minorities of college students was 15.7%. In 1993 the percentage had risen
to 23.4% with much of the increase being credited to the rise of Hispanics and Asians students.

As reported in the Digest of Education Statistics 1995, during the 1992-1993 school year, 67.2% of the students in post-secondary education were part-time students. Only 32.8% were full-time students. A contributing factor was the growing number of displaced and underemployed adults who began seeking ways to improve and gain new skills to enhance their marketability.

Closely related to student status was the dependent/independent status of the student. During the 1992-1993 school year, 52.1% of the students in post-secondary education were classified as independent or self-supporting (Digest of Education Statistics 1995). Work status was directly related to this independent status and the need to be self-supporting. McCrathen (1988) reported that 70% of the undergraduates students were working at least part-time, if not full-time.

Another changing demographic was age. By 1990 more than one half of college students were over 25 years of age. Enrollment of persons over 25 years of age increased by 34% between 1980 and 1990. By comparison, the under 25 group increased by only 3% for the same period of time. According to Seitz (1988) by the year 2000, approximately 65% of United States citizens will be between 30-44 years of age continuing to reinforce this new demographic variable. This change will result in restructuring of adult education, both in the curriculum and delivery, to meet the changing needs of the adult learner.

Distance Education at California State University, San Bernardino

California State University, San Bernardino (CSUSB) has a designated service area of over 27,000 square miles. Many students live in remote areas and find it hard to access the campus for participation in higher education. While CSUSB administrators and
faculty tentatively ventured into distance education as early as 1982, the real interest in
distance education began in the early 1990s.

During the 1980s CSUSB support systems personnel did not broadcast to community
college locations due to the low enrollment and competition the community colleges
administrators envisioned by having CSUSB courses at their location. By 1991 the low
enrollment levels were changing. Nine community colleges in Riverside and San
Bernardino counties turned away approximately 15,000 students who were admitted to
the various community colleges, but who could not get needed courses. CSUSB faculty
could now provide support to students in offering additional classes by distance education.

Distance education as a delivery system has been a topic since the early 1980s at
CSUSB. The first venture was to apply for an FCC license and begin implementation of a
one-way video/two-way audio system, Instructional Television Fixed System (ITFS), in
1982. This delivery system connected the main campus of CSUSB with sites in Yucaipa,
Beaumont, Banning and Palm Springs High Schools. This limited delivery system was
successfully implemented. By 1985, when this delivery system was in place, broadcasting
to the College of the Desert was attempted. This effort failed due to
transmission/technical difficulties (Task Force on Distance Learning, 1992).

In the early 1990s, a growing realization that distance education presented greater
opportunities in curriculum development and a wider range of delivery methods, created
additional interest for faculty and administrators (D. Sweeney, personal communication,
February 1, 1996). By the end of summer 1991, a Task Force on Distance Education was
charged with the responsibility of researching and compiling a report on the state of
distance learning at CSUSB. The Task Force members believed that there was an urgent
need to implement distance learning at CSUSB. The members further stated that since
there was little chance of future satellite campuses, CSUSB administrators and faculty
must make a move to establish and support on-going distance education programs. This enthusiastic support was tempered by faculty who still perceived a lack of sufficient support and incentives as road blocks to becoming involved with the program.

As early as 1992, other CSU campuses were beginning to offer live, off-campus courses and televised instruction in the CSUSB service area (Task Force on Distance Learning, 1992). The penetration of post-secondary classes from other institutions into the CSUSB delivery area created pressure and concern for administrators and faculty to regain control of the entire service area. Students who could be enticed to another institution for courses must be retained by CSUSB if local alternatives were available.

In 1992 the CSUSB administrators continued to hold a Federal Communication Commission (FCC) license approval to operate one channel of instructional television via microwave repeaters to Palm Desert (Task Force on Distance Learning, 1992). CSUSB had also applied to develop four channels of ITFS to Victorville and Barstow, although these were not fully developed as of 1996. As the Task Force noted, little specific or coordinated direction for a distance learning program had been established at CSUSB. The conflict between system and campus interests was still impeding the cooperative efforts to team with other campuses inside the service area, inside the California State University system, as well as with other colleges and universities.

With a grant from the Air Quality Management Department (AQMD) and funds from the university, additional equipment and software was purchased and new facilities were developed. In 1994 a new CODEC system was linked from the main campus to Coachella Valley Center, located at the College of the Desert in Palm Desert. This system was used to broadcast classes and provide additional support for faculty conferences.

In 1994, the new media center opened on the main campus expanding capabilities with additional hardware, software and expertise. The former audio and academic computing
departments formed to be the new Computing and Media Department in support of staff, faculty and student development. Training from the new department personnel in support of distance learning is offered to instructors and to staff.

While some additional courses and independent study are offered by various instructors, the main campus faculty has had a limited application for the technology available. However, increased interest in paperless classes, E-mail capabilities for student/faculty interaction, and support of student services through the use of new technology is expanding. Faculty and staff training on new technology and presentation of distance education materials began in 1995. As of January 1996, this has had limited impact due to the limited interest and use by the faculty, and limited financial support (D. Sweeney, personal communication, February 1, 1996).

Other community campus administrators and faculty are beginning to investigate opportunities to tie the county educational system together. Valley College administrators requested a feasibility study in 1995 to project the costs and the advantages of being linked to the CSUSB system. Additional studies on the opportunity to link with other community colleges in the area have yet to be completed as of April 1996. Opportunities to link with businesses in the county with the university demand further investigation as well, if those businesses have equipment compatible with technology currently available on campus.

Cost considerations for equipment are a major factor in distance education programs. The initial cost of equipment, and the cost for upgrading caused by the rapid changes in technology can make equipment obsolete as quickly as it is bought. Advances in the student media facilities with pentium computers and links to the internet have provided many students access to new technologies and additional information. Students are
becoming more computer literate with user friendly equipment and software, as well as the instance availability of support personnel to give addition direction when necessary.

The Faculty Senate White Paper on Distance Education: Issues and Concerns (Educational Policy and Resources Committee, 1994, February) noted the concern voiced by many students in taking classes on campus due to the vast area serviced by CSUSB. The vast geographic area created concerns for students with coordinating basic adult responsibilities such as work and family with commuting time for students and faculty. This commute time may be one factor that will provide motivation for the growth of a wider variety of delivery systems for future students at CSUSB.

Summary

This chapter has been presented as an overview of the literature pertinent to the study. Clarification of the definition of distance education, with a review of the variety of definitions previously applied to distance education, was noted. A brief review of the history of distance education, of the studies specific to the dependent and independent variables, as well as the application of the designated instrument were covered.
Chapter 3
Research Methodology

The contents of this chapter describe the research design and the methodological procedures that were used to complete this study. In addition, the participants are described and rationale for their selection is discussed. The survey distribution and collection methods are presented as well as the statistical treatments of survey responses. This survey research study is of an exploratory nature using descriptive statistics. The purpose is to test the feasibility of undertaking a broader study with wider application, and develop the methods to be employed in a broader study of distance education motivational factors. This type of study is essential when the subject of the study is relatively new and unstudied.

Research Design

Survey research methodology was used to complete this study. Survey research is one of the oldest methods of collecting data dating back to the time of the Egyptians (Babbie, 1995). Typically, survey research consists of identifying and selecting a sample of participants to which a researcher administers a standardized questionnaire. Surveys may be used for descriptive, exploratory, and/or explanatory studies (Babbie, 1995). Surveys may be composed of self-administered questionnaires, interviews or telephone surveys. The research must be of some practical applied value. Applied research studies are those that concentrate on educational methodology and structure so as to be of use to practicing educators (Borg & Gall, 1983). This design has been selected for two reasons including 1) its ability to provide answers to the questions under investigation and 2) its previous use by researchers to investigate the motivation among distance education students (Brown, 1986; Gordon, 1993).
Strengths and Weaknesses

Strengths

Researchers have noted some unique strengths in survey research methods. The use of standardized questionnaires provides the researcher with a consistent measurement tool. Exactly the same question can be asked of every participant in exactly the same way. In addition, the researchers maintain flexibility in the design of the research questionnaire. Surveys make possible the consolidation of information from large numbers of respondents.

Massive amounts of data is often a required for social science statistics and can be necessary to maintain the validity of a study. The ability to analyze and draw conclusions from the data requires the reduction of the material from unmanageable details to manageable summaries for the reader (Babbie, 1995). This analysis allows the researcher to describe the association between one variable and another. The researcher is able to summarize univariate data for averages such as the mean and standard deviation.

Weaknesses

Investigators have noted a number of weaknesses in applying survey research. The requirement for a standardize questionnaire often represents the least common denominator in assessing the attitudes, orientations, circumstances of people as well as their experiences (Babbie, 1995). Survey research is inflexible in changes that could be made in field studies. If a particular variable is identified as important in a field study, an adjustment can be made. In survey research the questionnaire is rigid in the application. Often the data being sought is unmeasurable in terms of the questionnaire being used for the study. In addition, the respondents may not have given any prior thought to their feelings or attitudes for the selected topic. The respondent may form an opinion at the time of the survey which may not be consistent with their true beliefs.
Participants

After receiving a letter of permission from the University Human Subjects Committee (Appendix C), instructors of the vocational education classes were contacted to obtain their permission to distribute the survey in all vocational education classes during the winter quarter of 1996. Students who were present the day their particular class was surveyed were asked to participate in the study. All surveys were distributed and collected between February 21, 1996 and March 11, 1996. The researcher distributed the questionnaire to the students after reading a letter concerning the study and requesting their voluntary participation in the study (Appendix D). Students were provided a survey, a letter of intent and introduction and a form to complete if they wished to receive a copy of the survey results.

Students in vocational education were selected 1) because they were adult learners, 2) because they represented a wide variety of occupational backgrounds, and 3) because of their presumed diverse educational goals. All three of the instructors in the vocational education program were supportive in this endeavor.

Instrumentation

A discussion of the instrumentation used during the study is presented. The personal data form is described followed by a presentation of the survey instrument used during the study, Boshier's (1982) Education Participation Scale.

Personal Data Form

Information on the personal data form was developed by the researcher to collect specific demographic information. The personal data form (Appendix E) included questions concerning the participants' gender, age, level of education, work status, number of school units in which the student was enrolled, and miles lived from campus.
Education Participation Scale

The Education Participation Scale was designed to test Houle's theory of the characteristics of adult learners. Interviews by C. D. Houle in 1961 (Cross, 1981) determined adult learners to be either goal, activity or learning oriented. The Education Participation Scale (Boshier, 1982) was designed to examine the extent to which Houle's typology fit the reality of adult education participants.

This learner-centeredness theory was enhanced by the marketability and publicity strategies that paralleled the needs and the motives of potential participants (Boshier & Collins, 1985). Houle's (1961) typology was easily communicated to other researchers. The typology demonstrated sufficient clarity to lend the theory creditability in the field of adult learning. Numerous studies were undertaken in educational settings to support the theory (e.g., Boshier, 1971; Boshier & Collins, 1983; Boshier & Collins, 1985).

In 1971, Boshier developed a questionnaire based on Houle's (1961) findings on adult learners. Boshier (1971) used factor analysis as one of his scale development techniques to study motivational orientations of adult learners. The instrument developed was the Educational Participation Scale. The original instrument used a 40-item Likert scale scored on 1) no influence, 2) little influence, 3) moderate influence and 4) much influence.

The questionnaire was revised by Boshier in 1982 to include 42 questions of seven factors with six questions for each factor. This "A" form was the form of questionnaire used in this study for data collection. This instrument was scored on a four point Likert type basis of 1) no influence, 2) little influence, 3) moderate influence, and 4) much influence. The 42 items were broken down into the following seven factors: 1) social contact, 2) social stimulation, 3) professional advancement, 4) family togetherness, 5) communicational improvement, 6) educational preparation, and 7) cognitive interest. Permission for use of this instrument was given by the publisher (Appendix B).
Reliability

The Education Participation Scale (1982) has verified face and construct validity. The coefficient alpha for each factor was calculated. The seven following factors were all satisfactorily high with results for communication improvement .89, social contact .91, educational preparation .80, professional advancement .79, family togetherness .82, social stimulation .80, and cognitive interest .76 (Boshier 1988).

Data Collection

Survey materials were distributed to the study participants by the researcher. The researcher collected the survey materials directly after completion. The letter of introduction and intent was read by the researcher to each class requesting their voluntary participation in the study (Appendix D). Data was collected between February 21, 1996 to March 11, 1996. All participants were asked to complete the questionnaire during class time.

Treatment of the Data

A restatement of the purpose of the study and the research questions follow. The statistical procedures to analyze each research question are also presented.

Restatement of the Purpose and Research Questions

The two-fold purpose of this study was 1) to determine the level of motivation among selected students at California State University, San Bernardino in relation to seven factors of Boshier's (1982) Education Participation Scale and 2) to determine the relative difference in motivation between selected full-time and part-time students relative to distance education. Specifically, answers to the following questions were sought:

1. What is the demographic profile of the study participants?
2. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale?
3. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale relative to selected demographic variables?

4. Is there a difference between full-time and part-time students at California State University, San Bernardino on the overall level of motivation?

5. Is there a difference between full-time and part-time students at California State University, San Bernardino on the level of motivation on each of the seven motivation factors on Boshier's (1982) Education Participation Scale?

Data Analysis Procedures

Data was analyzed with the statistical programs Sys Stat and SPSS. An a priori alpha for all tests of significance was set at .05. Specific statistical analyses related to each research question was as follows:

1. Descriptive statistics were used to describe the demographic characteristics of the study participants.

2. The mean and standard deviation were used to determine the level of motivation on each of the seven factors of the Education Participation Scale (Boshier, 1982).

3. The mean and standard deviation were applied to selected demographic variables to determine the level of motivation of the study participants relative to each of the seven factors of Boshier's (1982) Education Participation Scale.

4. The overall F-value of a MANOVA model, Hotelling-Lawley Trace, was used to determine if there is a difference between full-time and part-time students at CSUSB on the overall level of motivation on the seven factors of Boshier's (1982) Education Participation Scale.

5. The overall F-value of a MANOVA model, Hotelling-Lawley Trace, was used to determine the level of motivation of full-time and part-time students at
California State University, San Bernardino on the level of motivation relative to the seven factors of Boshier's (1982) Education Participation Scale. No significant F was discovered therefore, no post hoc procedures were necessary.

Summary

This chapter reviewed the research methodology used for the study. The participants were described with the rationale for their selection. Discussion of the instrumentation and data analysis procedure were presented.
Chapter 4

Results of the Study

This chapter presents the results of the methodological procedures described in Chapter Three. The first section examines the response information based on the personal data sheets. The second section presents the findings of demographic data provided by participants. The third section presents information about the reliability of the instrument used in the study. Finally, the results of analysis procedures relating to each research question are presented.

Survey Response Rates

Data collection procedures were presented in Chapter Three. The data was collected by the researcher distributing the instrument to the individuals in the vocational education classes surveyed. A total of 85 surveys were completed, 83 of which were usable. These 83 usable surveys provided the data used in the analysis of this study.

Demographic Data

Responses to personal data form were used to describe the participants. These responses were also used to determine relationships between the demographic variables and the motivation to pursue distance learning classes.

Gender

There were 83 responses to the item gender. Table 1 provides a complete breakdown of the responses by number and percent. Of the respondents 50.6% (n=42) were male and 49.4% (n=41) were female.

Age

A breakdown of participant response to the item age by number and percent is presented in Table 2. Age classification was broken down into five year increments.
starting with age 25-29. The youngest participant in the survey was 25 years of age while the oldest was 65 years of age. One participant did not report age.

Level of Education

There 82 responses to the item level education. The level of education reported by the participants ranged from high school diploma through the doctoral degree. Table 3 provides a breakdown by number and percent for each category. One participant was missing information on this item.

Employment Status

There were 83 responses to the item employment. Table 4 provides a breakdown by number and percent for each category. The level of employment ranged from unemployed to full-time employment.

School Units

There were 82 responses to the item units. The item units was to determine the number of school credit units in which the participant was currently enrolled. The units were subdivided into two categories. The first category was seven or less units being taken by the survey participant. The second category was eight units or more. Table 5 provides a breakdown by number of units being taken by the participants and the percent.

Miles to Campus

There were 81 responses to the item miles. Table 6 provides the breakdown of the miles driven one way to campus by each respondent. The item miles was broken down into increments of 25 miles to a categories beginning with 1-25 miles. The range of miles one-way to campus driven by participants was 1 mile to 85 miles.
Table 1

Gender Distribution

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>42</td>
<td>50.6</td>
</tr>
<tr>
<td>Female</td>
<td>41</td>
<td>49.4</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>100.0</td>
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</table>
Table 2
Age Distribution

<table>
<thead>
<tr>
<th>Age Group</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 29</td>
<td>4</td>
<td>4.8</td>
</tr>
<tr>
<td>30 - 34</td>
<td>12</td>
<td>14.4</td>
</tr>
<tr>
<td>35 - 39</td>
<td>21</td>
<td>25.3</td>
</tr>
<tr>
<td>40 - 44</td>
<td>17</td>
<td>20.5</td>
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<tr>
<td>45 - 49</td>
<td>16</td>
<td>19.3</td>
</tr>
<tr>
<td>50 - 54</td>
<td>10</td>
<td>12.1</td>
</tr>
<tr>
<td>55 - 59</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>60 - 64</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>65 - 69</td>
<td>1</td>
<td>1.2</td>
</tr>
</tbody>
</table>

No Response | 1  | 1.2 |

Total | 83 | 100.0 |
<table>
<thead>
<tr>
<th>Level of Education</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>10</td>
<td>12.1</td>
</tr>
<tr>
<td>Post-secondary</td>
<td>11</td>
<td>13.3</td>
</tr>
<tr>
<td>Certificate or Diploma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate</td>
<td>29</td>
<td>34.9</td>
</tr>
<tr>
<td>Bachelor</td>
<td>27</td>
<td>32.5</td>
</tr>
<tr>
<td>Master</td>
<td>4</td>
<td>4.8</td>
</tr>
<tr>
<td>Educational Specialist/CAGS</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Doctorate</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 4

Employment Status

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-time</td>
<td>16</td>
<td>19.3</td>
</tr>
<tr>
<td>Full-time</td>
<td>62</td>
<td>74.7</td>
</tr>
<tr>
<td>Unemployed</td>
<td>5</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Total 83 100.0
Table 5
School Units

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 or more units</td>
<td>59</td>
<td>71.1</td>
</tr>
<tr>
<td>7 or fewer units</td>
<td>23</td>
<td>27.7</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>83</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 6
Miles to Campus

<table>
<thead>
<tr>
<th>Miles to Campus</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 25</td>
<td>40</td>
<td>48.2</td>
</tr>
<tr>
<td>26 - 50</td>
<td>33</td>
<td>39.8</td>
</tr>
<tr>
<td>51 - 75</td>
<td>7</td>
<td>8.4</td>
</tr>
<tr>
<td>76 - 100</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Survey Reliability

Cronbach's Alpha was used to determine the internal consistency of the seven factors of the Boshier's Education Participation Scale. These reliability coefficients, presented in Table 7, ranged from .90 to .76 for the current study. Additionally, the Cronbach's Alpha was used to determine the internal consistency of the overall motivation scores. Results indicated a reliability coefficient of .86 for the overall motivation scale.
Table 7
Cronbach’s Alpha Reliability Coefficients for the Seven Factors of Boshier’s Education Participation Scale

<table>
<thead>
<tr>
<th>Scale</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Improvement</td>
<td>.79</td>
</tr>
<tr>
<td>Social Contact</td>
<td>.90</td>
</tr>
<tr>
<td>Educational Preparation</td>
<td>.75</td>
</tr>
<tr>
<td>Professional Advancement</td>
<td>.80</td>
</tr>
<tr>
<td>Family Togetherness</td>
<td>.89</td>
</tr>
<tr>
<td>Social Stimulation</td>
<td>.76</td>
</tr>
<tr>
<td>Cognitive Interest</td>
<td>.81</td>
</tr>
<tr>
<td>Overall Scores</td>
<td>.86</td>
</tr>
</tbody>
</table>
Data Analysis

Five research questions were explored 1) to determine the level of motivation among selected students at California State University, San Bernardino relative to seven factors of Boshier's (1982) Education Participation Scale and 2) to determine the relative difference in motivation between selected full-time and part-time students relative to distance education.

Specifically, answers to the following questions were sought:

1. What is the demographic profile of the study participants?

Descriptive statistics were used to describe the demographic data of the participants. Results of these analysis are presented next and displayed in Tables 1 - 6.

There were 83 responses to the item gender. Table 1 provides a complete breakdown of the responses with males being 50.6% (n=42) and females being 49.4% (n=41) of the responses.

A total of 82 participants responded to the item age. A breakdown of the number and percent is presented in Table 2. Age classification was broken down into five year increments starting with the age of 25-29 continuing to 65-69. Overall, the youngest participant in the survey was 25 years of age while the oldest was 65 years of age. The largest category of participants (25.3%) was in the 35-39 years of age with 21 participants. The next largest category occurred in the 40-44 years of age with 20.5%. The next category was the 45-49 years of age group with 19.3%.

There were 82 responses to the item level of education. The level of education reported by the participants ranged from high school diploma through the doctoral degree. Table 3 provides a breakdown by number and percent for each category. The largest category was the associate's degree with 34.9% (n=29) of the participants. The second largest category was the bachelor's degree with 32.5% (n=27).
There were 83 responses to the item of employment status. Table 4 provides a breakdown by number and percent for each category of employment. The level of employment ranged from unemployed to full-time employment. The largest percent in employment was in the full-time employment category with 74.7% (n=62) of the respondents working 36 hours or more a week.

There were 82 responses to the item of school units. The units were subdivided into two categories. The first category eight or more school units in which the participant is currently enrolled. The second category consisted of seven or fewer units in which the participant is currently enrolled. The majority of participants, 71.1% (n=59), were taking eight units or more in school with only 27.7% (n=23) taking seven units or less. Table 5 provides a breakdown by number and percent of units being taken by the participants.

There were 81 responses to the item miles to campus. Table 6 provides the breakdown of the miles driven one way to campus by each respondent. The item miles was broken down into increments of 25 miles beginning with the categories of 1-25 miles. The participants indicated they drove from a range of 1 mile to 85 miles in one-way travel to campus. The largest category was 25 miles or less one-way to campus which consisted of 48.2% (n=40) of the respondents followed closely by the category of 26-50 miles with 39.8% (n=33).

2. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale?

Each question of the Education Participation Scale (1982) is answered on a Likert scale scored on 1) no influence, 2) little influence, 3) moderate influence, and 4) much influence. The questions are then recorded on the scoring key (Appendix F) provided by Dr. Boshier with the Education Participation Scale (1982). Each of the seven factors have
six applicable questions. The scoring on the level of motivation by factors could range from six, one point for each of the six questions in the field, to a high of 24, four points for each of the six pertinent questions.

The mean and standard deviation of each motivational factor are reported on Table 8. The overall motivation mean (standard deviation) for the category of professional advancement was 19.843 (4.224), the highest factor. The second highest mean score was 17.145 (4.220) for educational preparation. Cognitive interest had a mean score of 15.843 (4.241), followed by communication improvement with a mean of 12.795 (4.096). The three lowest scoring factors were family togetherness with a mean of 11.349 (4.697), social stimulation with a mean of 9.663 (3.842), with the lowest being social contact with a mean of 9.928 (4.054).
Table 8

Level of Motivation for the Seven Factors of Boshier's Education Participation Scale

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Improvement</td>
<td>12.795</td>
<td>4.096</td>
</tr>
<tr>
<td>Social Contact</td>
<td>9.928</td>
<td>4.054</td>
</tr>
<tr>
<td>Educational Preparation</td>
<td>17.145</td>
<td>4.220</td>
</tr>
<tr>
<td>Professional Advancement</td>
<td>19.843</td>
<td>4.224</td>
</tr>
<tr>
<td>Family Togetherness</td>
<td>11.349</td>
<td>4.697</td>
</tr>
<tr>
<td>Social Stimulation</td>
<td>9.663</td>
<td>3.842</td>
</tr>
<tr>
<td>Cognitive Interest</td>
<td>15.843</td>
<td>4.241</td>
</tr>
</tbody>
</table>
3. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale relative to selected demographic variables?

The demographic variable under consideration for this question were gender, age and education. The mean and standard deviation for the each of the seven factors of Boshier's (1982) Education Participation Scale were calculated relative to each of the demographic variables.

Table 9 displays the findings for the demographic variable of gender. The highest level of motivation mean (standard deviation) for the gender female was in the factor of professional advancement at 20.927 (3.566). The second highest level of motivation mean for the gender female was educational preparation at 18.000 (3.566). The lowest mean was in the factor of social contact 9.57 (3.769). These means ranged from 9.57 to 20.927 for the gender female.

The highest level of motivation mean for the gender male was in the factor of professional advancement at 18.786 (4.577). The second highest level of motivation was in the factor of educational preparation at 16.310 (4.458). The lowest was in the factor of social stimulation with a mean of 9.333 (3.476). The means of these factors in relation to the variable of gender for males ranged from 9.333 to 18.786.

Table 10 displays the findings of the motivation for the demographic variable of age. Professional advancement ranked highest in the mean of each age group except the one individual in the 65-69 age group. Means ranged from 18.938 to 24.00 for professional advancement. Consistently the factor of educational preparedness, of which the means ranged from 16.500 to 22.000 was second highest for all groups but the individual in the 65-69 age group. The third highest was cognitive interest with the means ranging from 14.333 to 16.190 in each age group except the individual in the age category of 65-69.
Table 11 displays the findings for the demographic variable of education. Professional advancement ranked highest of all the factors for all levels of education. Means ranged from 17.000 for the master's category to 23.182 for the post-secondary certificate or diploma. The second highest ranking factor was educational preparedness in all categories except for the master's category which ranked cognitive interest as a more influential motivational factor than educational preparedness. The means in educational preparedness ranged from 11.250 for the master's category to 22.000 for the missing data category. The doctoral category had a tie in the mean scores of educational preparedness and communication improvement at a mean of 17.000. Overall the lowest category was social stimulation with mean scores of 6.000 to 10.379, with the category of social contact following a very close second with mean scores of 6.500 to 11.000.

4. Is there a difference between full-time and part-time students at California State University, San Bernardino on the overall level of motivation?

No significant difference was noted between full-time and part-time students in relation to the overall motivation as defined by the factors in Boshier's Education Participation Scale (1982). Applying a MANOVA to obtain the necessary information an F of .46 was obtained and determined to be not significant at alpha = .05. Since no significant difference was noted, post hoc tests were not necessary.

5. Is there a difference between full-time and part-time students at California State University, San Bernardino on the level of motivation on each of the seven motivation factors on Boshier's (1982) Education Participation Scale?

No significant difference in the overall level of motivation were noted, therefore, no post hoc tests were needed or conducted.
Table 9

Level of Motivation for the Seven Factors of Boshier's Education Participation Scale Relative to the Demographic Variable of Gender

<table>
<thead>
<tr>
<th>Factor</th>
<th>Female Mean/SD</th>
<th>Male Mean/SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Improvement</td>
<td>13.512 (4.112)</td>
<td>12.095 (4.005)</td>
</tr>
<tr>
<td>Social Contact</td>
<td>9.57 (3.769)</td>
<td>10.310 (4.325)</td>
</tr>
<tr>
<td>Educational Preparation</td>
<td>18.000 (3.828)</td>
<td>16.310 (4.458)</td>
</tr>
<tr>
<td>Professional Advancement</td>
<td>20.927 (3.566)</td>
<td>18.786 (4.577)</td>
</tr>
<tr>
<td>Family Togetherness</td>
<td>11.927 (5.096)</td>
<td>10.786 (4.257)</td>
</tr>
<tr>
<td>Social Stimulation</td>
<td>10.000 (4.201)</td>
<td>9.333 (3.476)</td>
</tr>
<tr>
<td>Cognitive Interest</td>
<td>16.341 (4.830)</td>
<td>15.357 (3.567)</td>
</tr>
</tbody>
</table>
### Table 10

Level of Motivation for the Seven Factors of Boshier's Education Participation Scale

Relative to the Demographic Variable of Age

<table>
<thead>
<tr>
<th>Factor</th>
<th>25-29 Mean</th>
<th>30-34 Mean</th>
<th>35-39 Mean</th>
<th>40-44 Mean</th>
<th>45-49 Mean</th>
<th>50-54 Mean</th>
<th>55-59 Mean</th>
<th>60-64 Mean</th>
<th>65-69 Mean</th>
<th>No Response Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>12.250</td>
<td>12.833</td>
<td>12.190</td>
<td>13.471</td>
<td>12.625</td>
<td>12.000</td>
<td>19.000</td>
<td>0</td>
<td>20.000</td>
<td>13.000</td>
</tr>
<tr>
<td></td>
<td>(2.363)</td>
<td>(3.486)</td>
<td>(3.473)</td>
<td>(3.520)</td>
<td>(5.679)</td>
<td>(4.570)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>10.250</td>
<td>9.167</td>
<td>10.143</td>
<td>10.059</td>
<td>9.938</td>
<td>9.200</td>
<td>11.000</td>
<td>0</td>
<td>17.000</td>
<td>10.000</td>
</tr>
<tr>
<td></td>
<td>(3.304)</td>
<td>(3.186)</td>
<td>(3.838)</td>
<td>(3.363)</td>
<td>(5.744)</td>
<td>(4.315)</td>
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<td></td>
</tr>
<tr>
<td>EP</td>
<td>16.500</td>
<td>17.583</td>
<td>17.381</td>
<td>16.824</td>
<td>16.750</td>
<td>17.400</td>
<td>22.000</td>
<td>0</td>
<td>12.000</td>
<td>19.000</td>
</tr>
<tr>
<td></td>
<td>(3.697)</td>
<td>(3.370)</td>
<td>(4.307)</td>
<td>(3.026)</td>
<td>(5.675)</td>
<td>(5.060)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA</td>
<td>19.750</td>
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CI - Communication Improvement  
SC - Social Contact  
EP - Educational Preparation  
PA - Professional Advancement  
FT - Family Togetherness  
SS - Social Stimulation  
COG - Cognitive Interest
Table 11

Level of Motivation for the Seven Factors of Boshier's Education Participation Scale
Relative to the Demographic Variable of Education

<table>
<thead>
<tr>
<th>Factor</th>
<th>HS Mean</th>
<th>C/D Mean</th>
<th>AS Mean</th>
<th>BACH Mean</th>
<th>MAST Mean</th>
<th>ED.S Mean</th>
<th>DOC Mean</th>
<th>No Response Mean</th>
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<tr>
<td></td>
<td>SD</td>
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</table>

CI - Communication Improvement  HS - High school
SC - Social Contact             C/D - Post-secondary certificate or diploma
EP - Educational Preparation    AS - Associate's degree
PA - Professional Advancement  BACH - Bachelor's degree
FT - Family Togetherness       MAST - Master's degree
SS - Social Stimulation        ED.S - Ed.S/CAGS
COG - Cognitive Interest       DOC - Doctoral degree
Summary

This chapter described the procedures and findings of the study. The reliability of the instrument used in the study was reviewed. The demographic data was presented, followed by the data analysis which provided the information to answer each of the research questions.
Chapter 5
Conclusions and Recommendations

This chapter is divided into five sections. The first section presents a review of the purpose of the study and the research methods employed in the study. The second section briefly reviews the findings. The third section presents the conclusions. The fourth section contains recommendations for application at CSUSB. The fifth section specifies recommendations for future studies.

Review of the Purpose and Research Methods

The purpose of this study was 1) to determine the level of motivation among selected students at California State University, San Bernardino in relation to seven factors of Boshier's (1982) Education Participation Scale, and 2) to determine the relative difference in motivation between selected full-time and part-time students relative to distance education. Specific questions which assisted in the determination of the research procedure to be used were:

1. What is the demographic profile of the study participants?
2. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale?
3. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale relative to selected demographic variables?
4. Is there a difference between full-time and part-time students at California State University, San Bernardino on the overall level of motivation?
5. Is there a difference between full-time and part-time students at California State University, San Bernardino on the level of motivation on each of the seven motivation factors on Boshier's (1982) Education Participation Scale?
The surveys were distributed in the vocational education classes during the winter quarter of 1996. Students who were present the day their particular class was surveyed were asked to participate in the study. All surveys were distributed between the dates of February 21, 1996 and March 11, 1996. The researcher distributed the questionnaire to the students after reading a letter describing the survey and requesting their voluntary participation in the study. Students were provided a survey, a letter of intent and introduction, and a form to complete if they wished to receive a copy of the survey results.

A total of 85 surveys were returned with 83 surveys containing usable data. The survey consisted of the Education Participation Scale (Boshier, 1982) and a personal data sheet requesting demographic information with the variables of gender, age, education, employment status, school units and miles from campus. The data provided by the participants was analyzed using the statistical packages of Sys Stat and SPSS.

Participant response to the Education Participation Scale (Boshier, 1982) was tallied on the scoring sheet provided by Boshier (1982) with the Education Participation Scale. There were 42 questions on the Education Participation Scale compromising seven factors of six questions each. These factors were 1) social contact, 2) social stimulation, 3) professional advancement, 4) family togetherness, 5) communication improvement, 6) educational preparation, and 7) cognitive interest (Appendix A).

Permission for use of this instrument for this study was given by the publisher (Appendix B).

A variety of procedures were used to analyse the data. The results of this data analysis is in the next section -- review of the findings.

Review of the Findings

The research questions will provide the outline for the review of the findings.

1. What is the demographic profile of the study participants?
There were 83 responses to the item gender. Of the participants who responded 42 were male (50.6%) and 41 were female (49.4%).

A total of 82 participants responded to the item age. The largest percent of participants were in the 35-39 years old at 25.3% (n=21), followed by the 40-44 years old group at 20.5% (n=17), the 45-49 years old group at 19.3% (n=16), the 30-34 years old group at 14.4% (n=12), and the 50-54 years old group at 12.1% (n=10). This accounted for 91.6% of the respondents (n=76). The youngest participant in the survey was 25 years of age while the oldest was 65 years of age.

There were 82 responses to the item level of education. The level of education reported by the participants ranged from high school diploma through the doctoral degree. The largest group of participants were in the associate's group with 34.9% (n=29). The bachelor's group had the second largest percentage with 32.5% (n=27). The post-secondary certificate or diploma and the high school diploma groups were at 13.3% (n=11) and 12.1% (n=10) respectively.

There were 83 responses to the item of employment. The level of employment ranged from unemployed to full-time employment. Full-time employment counted for 74.7% (n=62) of the respondents. Only 19.3% (n=16) of the participants reported part-time employment status with only 6% (n=5) reported as being unemployed.

There were 82 responses to the item of school units. School units were subdivided into two categories. The first category was eight units or more in which the participant is enrolled. The second category was seven or less units in which the participant was enrolled. Participants enrolled in eight units or more accounted for 71.1% (n=59) of the respondents. Participants enrolled in seven units or less accounted for 27.7% (n=23).
There were 81 responses to the item miles. The item miles was broken down into increments consisting of 25 miles to each category starting with 1-25 miles. The participants indicated they drove from 1 to 85 miles one-way to campus. The largest percentage of students, 48.2% (n=40), drove 1-25 miles one-way to campus. The second largest percentage 39.8% (n=33) drove 26-50 miles one-way to campus. Only 8.4% (n=7) drove 51-75 miles to campus.

2. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale?

The overall motivation mean (standard deviation) for the category of professional advancement was 19.843 (4.224), the highest factor. The second highest mean score was 17.145 (4.220) for educational preparation. Cognitive interest had a mean score of 15.843 (4.241), followed by communication improvement with a mean of 12.795 (4.096). The three lowest scoring factors were family togetherness at 11.349 (4.697), social stimulation 9.663 (3.842), with the lowest being social contact at 9.928 (4.054).

3. What is the level of motivation of the study participants on each of the seven factors of Boshier's (1982) Education Participation Scale relative to selected demographic variables?

The demographic variables under consideration for this question were gender, age and education. The mean and standard deviation for the each of the seven factors of Boshier's (1982) Education Participation Scale were calculated relative to each of these demographic variables.

The highest level of motivation means (standard deviation) for the gender female was in the factor of professional advancement at 20.927 (3.566). The second highest level of motivation mean for the gender female was educational preparation at 18.000 (3.566). The lowest mean was in the factor of social contact 9.57 (3.769).
The highest level of motivation mean for the gender male was in the factor of professional advancement at 18.786 (4.577). The second highest level of motivation was in the factor of educational preparation at 16.310 (4.458). The lowest was in the factor of social stimulation with a mean of 9.333 (3.476).

Professional advancement ranks highest in the mean of each age group except the one individual in the 65-69 age group. Means ranged from 18.938 to 24.00 for professional advancement. Consistently the factor of educational preparedness, of which the means ranged from 16.500 to 22.000, was second highest for all groups but the individual in the 65-69 age group. The third highest was cognitive interest ranging from 14.333 to 16.190 in each age group except for the individual in the age category of 65-69.

Professional advancement ranked highest of all the factors for all levels of education. Means ranged from 17.000 for the masters category to 23.182 for the post-secondary certificate or diploma. The second highest ranking factor was educational preparedness in all categories except for the masters category which ranked cognitive interest as a more influential motivational factor than educational preparedness. Overall the lowest category was social stimulation with mean scores of 6.000 to 10.379, with the category of social contact following a very close second with mean scores of 6.500 to 11.000.

4. Is there a difference between full-time and part-time students at California State University, San Bernardino on the overall level of motivation?

No significant difference was noted between full-time and part-time students in relation to the overall motivation as defined by the factors in Boshier's Education Participation Scale (1982). Applying a MANOVA to obtain the necessary information, an F of .46 was obtained and determined to be not significant at alpha = .05. Since no significant difference was noted, post hoc tests were not necessary.
5. Is there a difference between full-time and part-time students at California State University, San Bernardino on the level of motivation on each of the seven motivation factors on Boshier's (1982) Education Participation Scale?

As no significant difference in the overall levels of motivation were noted, no significant differences were noted on the individual factors when each factor was tested separately.

Conclusions

Based on the findings of this study the following conclusions have been drawn:

1. The majority of the students enrolled in vocational education classes for the winter quarter of 1996 were 35 to 49 years of age (65.1%), working full-time (74.7%) and taking 8 or more school units (71.1%). Of the respondents 88% drove 50 miles or less one way to campus. Of the participants, 67.4% possessed an associate's or a bachelor's degree. There was a relatively equal amount of males and females enrolled in vocational education classes during the winter quarter.

2. On an overall motivation analysis of all the participants surveyed the three factors that were most influential were professional advancement, educational preparation and cognitive interest. The four factors that were the least influential were communication improvement, family togetherness, social stimulation and social contact.

3. Relative to the variables of gender, age and education the three most influential overall motivational factors in decending order were professional advancement, educational preparation, and cognitive interest. This finding is consistent with the overall motivation levels for the survey.

4. No significant or practical motivation differences exist between part-time and full-time students in their interest in pursing distance education courses at CSUSB
Discussion

The finding of this study were organized around five research questions. A general discussion of the research questions, the findings and related literature follows. Numerous studies have been completed describing the demographic variables that might have an effect on student enrollment in distance education classes. The variables of gender, age, education, employment, school units and miles from campus were considered in this study.

Previous studies have indicated that more females than males participate in distance education classes. Gordon (1993) in a study of off-campus graduate classes found that the majority of the participants were women influenced to take distance education courses for professional advancement and cognitive interest reasons. Gordon (1993) credited this finding to the growing number of women working full-time in a wider range of occupations. No supporting data resulted from the analysis of this survey information that females participants would be more likely to participate in distance courses than would males.

Alsanian and Brickell (1988) in a study of over 1000 adults, 25 years and older, who had taken a college credit course in a designated two-year period, found that 58% were women. Brown (1986) in an exploratory study of the motivational characteristics of adult distance telecourse learners, found that 81% (n=223) of the population of the 274 adults surveyed were women. The current study concerned students who might be interested in taking distance education classes rather than those enrolled in a distance education class. The lack of random selection of participants and the department in which the current study was completed may have an effect on this variable.

This study supported the previous findings in the variable of age with 65.1% of the participants being 35 to 49 years of age. Previous studies by Gordon (1993), Brown
(1986), Richards (1994), and Alsanian and Brickell (1988) are consistent with these findings. This variable may be meaningful in terms of adult students returning for additional education and training whether in a distance education class or in an on-campus class. The significance of this finding is that both on-campus and off-campus adult students are primarily in this age group. This demographic variable would assist in the identification of the motivational concerns of these students. Age has proven to be a meaningful variable in distance education.

Gordon found that the highest percentage of participants in a study of the motivational orientations of adult education graduates in off-campus credit program were 35-39 years of age (26%) with the age group of 30-34 years of age (23%) following a close second. While the second age group is younger than those indicated in the current study, these results may be due to the type of classes the current participants were surveyed in for this study. The difference between the studies may also be due to the fact that Gordon (1993) was surveying graduate students.

Brown (1986), in an exploratory study of the motivational characteristics of adult distance telecourse learners, reported a median age of 35 years of age for the participants. Alsanian and Brickell (1988), in a study of over 1000 adults, 25 years and older who had taken a college credit course in a two year period, noted that 75% of the adult learners who were surveyed were between 25 and 44 years of age. Participation declined rapidly after that age. The current survey indicated that participation declined after the age of 49. The results of the study further indicated that participation in education for credit dropped dramatically after the age of 55.

Education results from this study were consistent with the finding of previous studies. In this study, 73.4% of the participants had an associate's degree or higher. Brown (1986), in an exploratory study of the motivational characteristics of adult distance
telecourse learners, reported that 62% of the respondents had college degrees and 11%
had graduate degrees. Many of the degreed professional were taking additional courses
because of continuing certification requirements as they were teachers or nurses (Brown,
1986). This was consistent with the courses which were surveyed at CSUSB. Many of
these classes were required for credentialling or for additional course work for
certification.

Employment status has been included in various studies of participants in distance
The results of this study indicated that 94% of the participants were employed with 74.7%
being employed full-time. Gordon (1993), in a study of the motivational orientations of
adult education graduates in off-campus credit program, noted that 90% of the
participants in the study were employed. Alsanian and Brickell (1988) reported that 71%
of the adult learners worked full-time while taking classes in a study of 1000 adults
learners, 25 years or older who had taken a college credit course in a two year period.

These findings indicate a consistency in that most adults have the need to be self-
supporting while continuing their education. This requirement may make student studies a
second priority rather than the first priority as it is with traditional students. As time
constrains become tighter with additional commitments the time and effort an adult may
be able to commit to class work as well as the convenience of continuing educational
studies may well become an important issue.

Participants in this study indicated that 71.1% were taking two or more classes during
the quarter in which they were surveyed. Yet, at the same time, 74.7% were employed
full-time. This is not consistent with the findings of other studies as it indicates that many
of the adult students surveyed were attempting full-time studies, in taking eight school
units or more while being employed full-time. This inconsistency with other studies may
have been due to the selection of vocational students as participants. Many of these students may have been attempting to complete specific credentialling requirements in one or two school quarters.

Previous studies have indicated a more consistent pattern of part-time studies with full-time employment. Alsanian and Brickell (1988) noted that 80% of adult learners were part-time students in their study of over 1000 adults, 25 years and older who had taken a college credit course in a two-year period. A direct correlation of working full-time and being part-time students was drawn by the researchers of that study.

Miles from campus were not an obstacle in motivational concerns for pursuing further on-campus classwork or distance education. While studies such as Waltman (1990) noted that geographical distance may be an obstacle for some students, participants in this study indicated that time, not distance, was a more critical variable in their decisions to pursue education. This variable would need to be addressed in future studies. The location of the CSUSB campus in the Los Angeles basin area at the foot of the San Bernardino mountains provides more of a challenge for the students in terms of traffic conditions and weather conditions rather than actual miles to be driven. Inability on the part of a student to be able to attend classes scheduled, may result in a higher dropout rate, or lack of enrollment because of the lack of control over weather conditions or traffic conditions.

Consistent with this finding is the previous study by Alsanian and Brickell (1988), in a study of over 1000 adults, 25 years and older who had taken a college credit course in a designated two-year period, noted 70% of the students gave convenience as a reason for selecting a campus in attending classes. Convenience for the student was a variable which was addressed for the reason for taking a class. Results of the study indicated that 90% of adult learners lived within 45 minutes from campus which parrelled the findings of this study in which 88% drove 50 miles or less one-way to campus.
On an overall motivation analysis of all the participants surveyed the three factors that were most influential were professional advancement, educational preparation and cognitive interest. The four factors that were the least influential were communication improvement, family togetherness, social stimulation and social contact. Many of these participants were enrolled in classes required by the state for credentialling for teaching in vocational education. This may well be indicative of the students at CSUSB or may only be unique to the participants who were surveyed as the survey base was not a random selection of students at CSUSB.

However, this was consistent with previous findings from the Education Participation Scale used in studies of adult students. Gordon (1993) in a study of off-campus credit programs for graduate students found that the majority of the participants were influenced to take the courses for professional advancement and cognitive interest reasons listed on the Education Participation Scale (1982) rather than for social contact or social stimulation reasons. In similar studies Miller and Crawford (1990) indicated that the greatest motivator in participating in learning off campus was cognitive interest. The same study indicated that professional advancement was rated significantly higher than the normative group in the study.

In support of the results indicated by the survey of the most influential overall motivation factors correlation with the variables of gender, age, and education were consistent. Professional advancement, educational preparation and cognitive interest were ranked highest in influence for participation in a distance education class. These results appears to indicate that adult students are motivated to take on-campus classes and distance classes for the same motivational reasons regardless of gender, age, or level of education. Time constraints and convenience may be the primary variables that affect the selection of distance education classes versus on-campus classes.
No supporting data was discovered to differentiate motivational factors of part-time and full-time students. Overall consistency in the data indicates that the primary motivational reasons for taking distance education classes would be the same for part-time and full-time students. In this regard, in application to adult students, professional advancement, educational preparation and cognitive interest would be the primary focus for the instructors in developing future curriculums and delivery systems. In addition, administrators and faculty would be able to focus on future planning with these factors in mind.

Recommendations for Application at CSUSB

The findings of this study survey as the basis for recommendations for application at CSUSB.

1. This study provides a baseline for future studies of adult students in distance education at the CSUSB campus. Further analysis of the motivational and demographic variables of adult students on a wider basis will provide additional insight for planning of marketing, student services, curriculum, and delivery systems.

2. Data analysis from this survey supports the findings that adult students primary educational interests are professional advancement and educational preparation. Administrators and faculty should consider these motivational factors in the design of curriculum and delivery systems as well as in future recruitment.

3. Future materials and programs should be promoted to meet the changing needs of the students in terms of content, purpose, time, and delivery. Programs and classes must be designed to meet the professional and educational requirements as defined by student needs. Physical class times and physical locations should be determined by student scheduling requirements.
4. A study of the preferences of adult students for various delivery systems in distance education would provide additional insight into the method of delivery most preferred by the students. In addition, a study of these preferences would provide additional insight for administrators and faculty in development of future distance education programs.

5. Development of an awareness in the students and the faculty of the various applications and methods of distance education would provide a greater opportunity for application and use.

Recommendation for Future Studies

The results of this study are the baseline for the following recommendations for future studies of adult students in distance education.

1. The continued study of adult students in distance education classes and in on-campus classes would be useful in determining the changes in student demographics and how these changes affect the motivation of students to participate in distance education.

2. Selection of additional meaningful demographic variables is recommended. Further insight might be provided by consideration of convenience, ethnicity, level of income, and experience with distance education.

3. Additional studies on demographic information such as zip code research would indicate the number of students in the CSUSB service area who are taking distance education classes through other universities or consortiums. This information would provide specific insight for administrators and faculty in developing distance education programs to locally meet the needs of the students.

4. Future studies should seek to increase the understanding of researchers regarding the level of motivation for the various factors which encourage the participation in
distance learning programs.

5. A study using a probability sample of the part-time and full-time students at CSUSB is recommended to determine if the findings are consistent with this study.

6. Similar studies should be undertaken at various locations to determine if findings are consistent with the findings of this study in relationship to the level of motivation of the students in taking distance education classes.

Summary

This chapter has served as a review of the purpose of the study, the research method and the findings of this study. Conclusions and a discussion of the conclusions were presented. Recommendations for application at CSUSB and future research were discussed.
APPENDIX A:

Education Participation Scale used in Study
To What Extent Would These Reasons Influence You To Enroll In A Distance Education Class?

Think of your future participation in planned learning and indicate the extent to which each of the reasons listed below would influence you to participate. Circle the category which best reflects the extent to which each reason would influence you to enroll. Circle one category for each reason. Be frank. There are no right or wrong answers.

<table>
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<th>Reason</th>
<th>No Influence</th>
<th>Little Influence</th>
<th>Moderate Influence</th>
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<td>2. To become acquainted with friendly people</td>
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<td>3. To make up for a narrow previous education</td>
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<td>5. To get ready for changes in my family</td>
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<td>6. To overcome the frustration of day to day living</td>
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<td>7. To get something meaningful out of life</td>
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<td>8. To speak better</td>
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<td>9. To have a good time with friends</td>
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<td>10. To get education I missed earlier in life</td>
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<td>11. To achieve an occupational goal</td>
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<td>12. To share a common interest with my spouse or friend</td>
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<td>13. To get away from loneliness</td>
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<td>15. To learn another language</td>
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<td>17. To acquire knowledge to help with other educational courses</td>
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<td>18. To prepare for getting a job</td>
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</table>
19. To keep up with others in my family

20. To get relief from boredom

21. To learn just for the joy of learning

22. To write better

23. To make friends

24. To prepare for further education

25. To give me higher status in my job

26. To keep up with my children

27. To get a break in the routine of home or work

28. To satisfy an enquiring mind

29. To help me understand what people are saying and writing

30. To make new friends

31. To do courses needed for another school or college

32. To get a better job

33. To answer questions asked by my children

34. To do something rather than nothing

35. To seek knowledge for its own sake

36. To learn about the usual customs here

37. To meet new people

38. To get entrance to another school or college

39. To increase my job competence

40. To help me talk with my children

41. To escape an unhappy relationship

42. To expand my mind
APPENDIX B:

Permission to use and modify EPS from the Publisher
Jan. 17, 1996

INVOICE

Goods Sold to:
Patricia Turner,
15352 Dakota Rd,
Apple Valley,
California 92307,
USA
Tel (619) 240-0837

<table>
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<tr>
<th>Description</th>
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<td>200 copies of the E.P.S. (A-form).</td>
<td>$120.00</td>
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<td>1 A-Form Scoring Keys</td>
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<td>Postage/handling to USA</td>
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You have our permission to change the question to accommodate your study on reasons for taking distance education courses. Payment of this invoice will constitute permission to use the EPS.
APPENDIX C:

University Exemption for Study Completed by Students on Campus
February 20, 1996

Patricia Turner  
c/o Secondary/Vocational Education  
California State University  
5500 University Parkway  
San Bernardino, California 92407  

Dear Ms. Turner:

Your application to use human subjects in research has been reviewed by the Institutional Review Board (IRB). Your application has been approved. Please notify the IRB if any substantive changes are made in your research prospectus and/or any unanticipated risks to subjects arise.

Your informed consent statement should contain a statement that reads, “This research has been reviewed and approved by the Institutional Review Board of California State University, San Bernardino.”

If your project lasts longer than one year, you must reapply for approval at the end of each year. You are required to keep copies of the informed consent forms and data for at least three years.

If you have any questions regarding the IRB decision, please contact Lynn Douglass, IRB Secretary. Ms. Douglass can be reached by phone at (909) 880-5027, by fax at (909) 880-7028, or by email at ldouglass@wiley.csusb.edu. Please include your application identification number (above) in all correspondence.

Best of luck with your research.

Sincerely,

Joseph Lovett, Chair  
Institutional Review Board  

JL/ld  
cc: Allen Truell, Secondary/Vocational Education
APPENDIX D:

Letter to Students Participating in the Study
Dear participant:

Although there is much discussion concerning alternative forms of instruction for students, little research has been done to determine student interests or needs for off-campus instruction. Even less research has been specifically directed at the motivational factors related to adult students, in terms of their reasons for pursuing further education and how they feel their needs can best be met. Adults students are those defined as age 25 or older, who have at least 5 years of work experience. This study addresses the motivational needs of adult students who might consider use of distance education* as a form of course delivery, as an alternative solution to on-campus classes for all course work. This research has been reviewed and approved by the Institutional Review Board of California State University, San Bernardino.

I would appreciate your completing the questionnaire which I will be giving you in class. Filling out this questionnaire is optional. If you decide to participate, I will hand the questionnaires out and then collect them upon completion. The questionnaire will take about 10 minutes to complete. Attached to this letter is an additional form for your name and address if you would like the results of the findings of this survey mailed to you. It will be collected separately from the survey questionnaire. As a participant in this study, you may be assured of complete confidentiality. Your name will never be revealed as a participant in this study.

I appreciate your participation in this project. Your cooperation and support in assisting with this study, which is aimed at helping determine student needs and preferences in their education, is needed. The results will provide additional insight into adult student needs for administrators and faculty at CSUSB. In addition, the study will serve as a base for any future studies involving student motivation in distance learning at CSUSB.

Please note: If you are not an adult student (age 25 or older, who has at least 5 years of work experience) you need not fill out the questionnaire.

Sincerely,

Patricia A. Turner
Principal Investigator

* Distance Education - Consisting of all arrangements for providing instruction through print or electronic communications media to persons engaged in planned learning in a place or time different from that of the instructor or instructors.
APPENDIX E:

Personal Data Survey
Distance Learning Personnel Data Questionnaire

Instructions:
Respond to each item by checking the appropriate answer or by entering the requested information.

If you have difficulty in responding to any item, give your best estimate or appraisal. You may wish to clarify your response by commenting in the margin or on the back.

It is very important that ALL items have a response.

1. Gender:
   ___ 1. Female
   ___ 2. Male

2. Age on last birthday __________

3. Highest Level of education completed:
   ___ 1. High school
   ___ 2. Postsecondary certificate or diploma
   ___ 3. Associate degree
   ___ 4. Bachelor's degree
   ___ 5. Master's degree
   ___ 6. Ed.S./CAGS
   ___ 7. Doctoral degree
   ___ 8. Other (please specify) ________________________________

4. How many hours a week do you work?
   ___ 1. Part-time (less than 36 hours a week)
   ___ 2. Full-time (36 hours a week or more)
   ___ 3. Not Employed at this time

5. How many units are you currently enrolled in at:
   ___ 1. California State University, San Bernardino
   ___ 2. At another school or location

6. How far do you drive (in miles) one way to campus? (best estimate) __________

Please add any additional comments:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
APPENDIX F:
Survey Scoring Key
EDUCATION PARTICIPATION SCALE

Scoring Key for Basic Education Form

In the margin of your questionnaire score “No Influence” as 1; “Little Influence” as 2; “Moderate Influence” as 3; “Much Influence” as 4. Next, transfer your score for each item into the open boxes on this page. The score for item 1 is part of “Communication Improvement”; the score for item 2 is part of “Social Contact”; and so on. Finally, add the scores in each column to get a total for each factor. Your score on each factor should not be greater than 24 or less than 6.

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<th>FACTORS</th>
<th>I Communication Improvement</th>
<th>II Social Contact</th>
<th>III Educational Preparation</th>
<th>VI Professional Advancement</th>
<th>V Family Togetherness</th>
<th>VI Social Stimulation</th>
<th>VII Cognitive Interest</th>
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©Learningpress. Box 46003, Station G, 3760 West 10th Ave., Vancouver, B.C. V6R 2G0 Canada
APPENDIX G:

Permission to use information in study by Dr. Howard Gordon
Patricia A. Turner
15352 Dakota Rd
Apple Valley, Ca 92307
619-240-0837

Mrs. Turner,

I am aware that you are pursuing additional studies in the area of motivational characteristics of students in their desire to participate in distance learning programs. My study, "Analysis of the Motivational Orientations of Adult Education Graduates in Off-Campus Credit Programs" would serve as part of the basis for the instrument. Since you are researching information that should be of educational benefit and provide data for California State University at San Bernardino students, faculty, and administrators, I give my permission for this use of my study in your report.

I would like to be kept informed of the progress of the study and have a copy of the results of the study when completed. Please let me know if there are any additional questions that I might help answer in the course of your study.

Dr. Howard R. D. Gordon
Associate Professor Marshall University
434 Harris Hall
Marshall University - Dept. ATE
Huntington, West Virginia 25755
November 5, 1995
References


California State University, San Bernardino Task Force on Distance Learning (1992). *Distance learning at CSUSB: Where can we go? Where should we go?*

California State University, San Bernardino (1994). Faculty senate white paper on distance education: Issues and concerns. Educational Policy and Resources Committee and Faculty Affairs Committee. FSD 93-14.


Holmberg, B. (1989). The concept, basic character, and development potentials of distance education. Distance Education, 10(1), 127-134.


