2001

A Study to Determine the Differences Between On-Campus Degree Seeking Students and TELETECHNET Degree Seeking Students in Academic Performance

Tiffany K. Doxsee
Old Dominion University

A Study to Determine the Differences Between On-Campus Degree Seeking Students and TELETECHNET Degree Seeking Students in Academic Performance

A Research Project Presented to the Faculty of the Department of

Occupational and Technical Studies

In Partial Fulfillment of the Requirements for the

Masters of Science in Occupational and Technical Studies

By

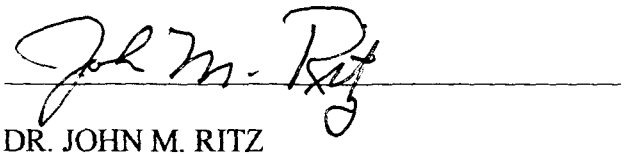
Tiffany K. Doxsee

April 2001

SIGNITURE PAGE

This research paper was prepared by Tiffany Kirsten Doxsee, under the direction of Dr. John M. Ritz, in OTED 636, Problems in Occupational and Technical Studies. It was submitted to the Graduate Program Director as partial fulfillment of the requirements for the Degree of Master of Science in Occupational and Technical Studies.

APPROVED BY:



DR. JOHN M. RITZ
Research Advisor and Graduate Program Director
Occupational and Technical Studies
Old Dominion University

Date:

4-26-01

ACKNOWLEDGEMENTS

This researcher wishes to express her sincere appreciation to those people who have motivated, inspired and assisted in the development of this paper. Ms. Marie Harding, who helped instill the belief that anything is possible all those years ago, Ms. Kathy O'Connor, who inspired me to keep going, Dr. Robert McIntyre, who motivated and guided the researcher to find her calling, and Dr. John Ritz, who provided the researcher the opportunity to develop and mature, both professionally and personally.

Finally, this researcher wishes to express her sincere love and affection to her children, Jon-Thomas and Katelyn, and those people who have had provided strength, support, and patience during those long days and late nights while this research was in progress.

Tiffany K. Doxsee

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INTRODUCTION

Rapid changes in student needs, demanding schedules and the increase in technology has spurred distance education in universities and colleges to develop curriculum and instructional material to reach virtually every person, at any time, in any location. Distance learning – the delivery of education through video, closed-circuit television or the Internet – has become one of the fastest growing trends in higher education (Roach, 1999). But its controversy over its effectiveness in higher education continues through research and some half a dozen journals that deal with college-level distance education as their theme (Meritosis & Phipps, 1999). Much of the literature found was dedicated to instructional methods for distance learning, opinions on the importance of distance learning and second-hand reports.

Technology has advanced at such a rapid pace that students and employees recognize a need for higher education. The skills required in today's job market are highly technical and require the ability to adapt at an ever-growing pace and many prospective students are faced with the need to gain new skills, but also with the practicalities of returning to school. Many considerations like location, scheduling, cost, and curriculum have drawn students to the opportunities of distance education.

Technology has provided educators with the potential to reach many students who otherwise would be unable to attend college. Via satellite, the Internet, and CD-ROM students can interact, communicate, and receive instruction from distant sites to accomplish educational and employment goals. The benefits of using technology have also made us question the abilities and limitations of distance learning.

Technology allows us to reach insurmountable heights of success at a rapid pace. But it also forces educators and instructional designers with the dilemma of how to keep up with such rapid change while providing a quality education.

Most would agree that the goal of higher education was to challenge students to examine their beliefs, to learn to think critically, to generate new solutions to problems, and to develop the written and oral communication skills necessary to contribute to social, political, economic, scientific, and artistic knowledge-building and endeavors (Davey, 1999). Whether students attend a large lecture hall on a university campus or sit down to their personal computer, technology has made distance learning a viable option for many to acquire a post-secondary degree. The purpose of this study sought to determine if there was a difference in the effectiveness of distance education as compared to classroom instruction by investigating the academic success of degree-seeking students enrolled in a Technology and Society course offered by Old Dominion University, in Norfolk, Virginia.

STATEMENT OF THE PROBLEM

The problem of this study was to determine if there was a difference in academic success between on-campus degree seeking students and TELETECHNET distance learning degree seeking students enrolled in the Occupational and Technical Studies 370 course, Technology and Society, at Old Dominion University, in Norfolk, Virginia.

RESEARCH HYPOTHESIS

To find a solution to this problem, the following hypothesis was established:

H_0: There will be no difference in academic success between on-campus degree seeking students and TELETECHNET distance learning degree seeking students in the undergraduate Occupational and Technical Studies Program at Old Dominion University, in Norfolk, Virginia.

BACKGROUND AND SIGNIFICANCE

Distance learning has been used since the 19th century (Roach, 1999). There has been a great evolution from traditional homework assignments designed to reinforce traditional instruction. Vocational correspondence has transformed into a 21st century technological revolution that includes computers, digital video, streaming, and satellites. Nowhere in higher education has there been as much change as in the use of technology to provide instruction to students (Roach, 1999). Colleges and universities around the globe are pouring millions of dollars into distance education. But there is great controversy as to the effectiveness of distance learning that has spurred the interest and need to investigate distance learning and to understand the significance of distance learning as a practical solution to student needs, decreased post-secondary funding, and technological advancement.

Distance learning has the potential to offer a practical vehicle for many students and employees to return to school at their convenience, at an affordable cost. But there are educators within university systems and educational environments who believe that distance learning is unable to deliver complete instructional material that will provide true academic success and the ability to perform at the same level as those who attend a "traditional" classroom for instruction. This research hopes to

ease the doubt of administrators, educators and students that distance education is a viable option for quality higher learning.

This study was performed to compare the academic success between those students enrolled in the same course but instructed via different methods. Using identical instructional material allowed this researcher to demonstrate the usefulness of distance learning and abilities of distance learning to provide an effective learning environment.

LIMITATIONS

The limitations of this study were as follows:

1. This study was limited to only those students registered in Occupational and Technical Studies, Technology and Society, OTS 370T, on-campus and via TELETECHNET at Old Dominion University.
2. This study was limited to degree-seeking students at Old Dominion University.
3. Given the particular course being investigated, and identical content material, it was possible that the method of instruction by the individual instructor could have influenced the translation of content material and thus, affected the results of student grades.
4. The study limited results strictly to final grades.

ASSUMPTIONS

In this study there where several factors which were assumed to be true and correct. The assumptions were as follows:

1. Final grades of the students in both distance classes and on-campus classes were true indicators of academic success in the Occupational and Technical Studies 370T, Technology and Society, class at Old Dominion University.
2. All participants were adults.
3. All participants were given the same instructional information, assignments and evaluations.
4. All participants had similar academic standing with regard to the level of coursework (i.e., junior standing for a three hundred level course).
5. All instructors graded identically based solely on academic coursework and participation.
6. All students registering for Occupational and Technical Studies 370T were degree-seeking students who registered for the class for the purpose of using the credits received toward a bachelor's degree in any program acknowledged by Old Dominion University.
7. Not all participants of the study worked to the best of their ability.
8. It was assumed that the setting of the classroom both on-campus and via distance were similarly structured with regard to educational environment.

PROCEDURES

This study compared final grades of participants in two different course sections of Occupational and Technical Studies 370T, Technology and Society, at Old Dominion University during the fall semester in the academic year 2000-2001. The two groups will be compared to determine if there was a significant difference in their academic performance.

DEFINITION OF TERMS

For clarification, the following terms should be understood:

Academic success. Academic success was defined by receiving a letter grade of C or higher on the final grade given by the instructor based on academic performance in the classroom coursework and participation.

Adult. An adult is any person over eighteen years of age.

Distance learning. Distance learning was defined as students who participated outside of the physical presence of the instructor.

Traditional instruction. Traditional instruction is defined as methods of instruction, given within a classroom or lecture hall, where the students are in the physical presence of the instructor.

Degree-seeking students. Degree-seeking students are those students who are working toward a bachelor's degree in any program acknowledged by Old Dominion University.

TELETECHNET course. The researcher used the definition of a TELETECHNET course found in Old Dominion University's Course Catalog (1998-2000). It defined TELETECHNET courses as a method of delivery for graduate and upper-division undergraduate courses to place-bound students throughout the nation. The method of delivery uses video, computer, and audio signals and is transmitted via satellite to receiver sites (p. 98).

Occupational and Technical Studies. The researcher used the definition of Occupational and Technical Studies found in Old Dominion University's Course Catalog (1998-2000). It offers five majors under the degree of Bachelor of Science in

Occupational and Technical Studies. The five bachelor's level majors offered by the department are marketing education, technology education, training specialist, fashion and industrial technology (p.136).

OTS 370T, Technology and Society. For the purpose of this study the researcher used the definition of OTS 370T, Technology and Society, found in Old Dominion University's Course Catalog (1998-2000). It defined OTS 370, Technology and Society, as a writing intensive three hour, three-credit course. It is a multidisciplinary course designed to provide insight into the fundamental, historical, and contemporary nature of technology as an area of human knowledge. Attention is given to the positive and negative aspects of technology and how they affect society (p. 282).

OVERVIEW OF CHAPTERS

This study investigated the influence of distance learning by comparing TELETECHNET, degree-seeking student grades to on-campus, degree-seeking student grades registered for the same course delivered respectively, via satellite or via the traditional classroom setting. This study sought to prove that distance learning is a viable method of instruction for undergraduate students in the Occupational and Technical Studies course, Technology and Society, OTS 370T, at Old Dominion University. A review of available literature on variables will be presented in the following chapter to include distance learning, technologies influence on education and academic success. A complete methodology of how the study was conducted will be provided. The results of the study will be described and analyzed for significance. Recommendations for further research and studies will be provided.

CHAPTER II

REVIEW OF LITERATURE

The previous chapter provides a clear historical background of distance learning and the need for further study. Throughout history there has been great interest in discovering the origins of knowledge and truth. Like many great philosophers, John Dewey and Immanuel Kant spent their lives theorizing about the origins of knowledge (New York Public Library, 1998). Taken independently, all theoretical scientists were merely breaking ground as to the functions of the mind and the very essence of pure knowledge. Just as a scientist "stirs" his ingredients to develop a new serum, the development of our beliefs about knowledge has been "stirred" by the philosophers of our lifetime.

Sir Frances Bacon once said, "Knowledge is power" (New York Public Library, 1998). Now more than ever, people around the world have come to understand that knowledge is the key to success. But as technology infiltrates the workplace, recreational activities and personal relationships, people are faced with a dilemma: to accept or reject the use of technology to acquire and develop knowledge. Research has shown that effective learning may be delivered in many forms, in both method of development and means of delivery. This research was designed to look at adult learners and the influence that technology has on their learning, specifically in distance learning.

From the beginning of time, children were the focus of training, primarily out of need. Often mothers and fathers instructed their children on household chores or the family business. As time progressed, formalized education eventually became

common place. But it was not until the mid 1800's in the United States that our society recognized the need for continuing education for adult learners. Mass production technology had exploded and adults who had already mastered a trade were faced with changing technology. No longer would these people be able to rely on what their families had taught them or what they learned through prior classroom instruction. They would be forced to find training and learn a new occupation. Adult education in the Unites States was born.

ADULT LEARNING

Andragogy is the art and science of helping adults learn (Knowles, 1973). According to Knowles (1973), instruction and training requires a different approach when facilitating adult learning. It is important to understand the fundamental differences between teaching children and teaching adults. These differences provide insight into how curriculum developers can tailor programs to meet individual learning needs while meeting the goals of the educational system.

American Heritage Dictionary defines learning as the act, process, or experience of gaining knowledge or skills and in 1998 over 2.5 million Americans over the age of 25 returned to school in order to further their education (U.S Department of Education, 1998). These adult learners may have forgotten many of their study skills and habits they acquired when they were young, but they returned to school for the unique purpose of retraining. Technology had demanded new knowledge and skills.

Workplace motivation is driven by intrinsic and extrinsic rewards. Most return to increase their knowledge to accomplish some objective, like bettering their status

or marketability. There are those who return to seek knowledge for its own sake, and others return to take part for the mere social contact (Houle, 1961). Regardless of why adults return to school, they bring to the classroom a rich collection of experiences and ideas that only life can bring.

On the basis of understanding the individuality of each adult learner, we must accept that no one learning style, method of delivery, or educational curriculum will reach all students (Dinmore, 1997). Carl Rogers (1969) was an influential psychologist of the twentieth century. He suggested two different types of learning. The first type, cognitive learning, he described as boring, meaningless, rote, repetition of facts. The second type, experiential learning or active learning refers to the useful learning of life skills. Rogers theorized about the self and its relationship to ones concepts and perceptions about the world. Adults seem to learn best through experiential learning. It is through our experience that we derive meaning.

Based on Rogers and others ideas of the time, Malcom Knowles (1973) recognized the special qualities of adult learners and the need to develop a theory for learning that focused on experiential learning. He based his theory on three basic principles. Knowles believed that adults share a number of characteristics, that assumptions can be made about how adults learn, and that based on these characteristics and assumptions, instruction can be designed to increase its chances of success.

One of the assumptions about adult learners is that they move toward independent self-direction. That is, adult learners tend to be more internally motivated. They learn best when they know why they need to learn something, when

they learn experientially, when they approach their learning as problem-solving, and when learning is viewed as an active process in the construction of meaning (Knowles, 1973).

Another assumption is that adults learn best when it is important to their life application. This learning is often associated with the knowledge and experience they already have acquired.

Distance learning is a viable alternative for adults because the knowledge they are processing already has a solid pathway of information processing. In a literal context, they have already created pathways and connections. Some might think of learning as a finite task. But scientists have discovered, though, that regular "brain exercise" appears to enhance the formation, development and survival of brain cells (Science News, 1999). They are ready to learn. In a figurative sense, as adults mature new learning is often connected to the experiences they already have.

The application of Adult Learning Theory takes the primary focus away from the instructor and moves it directly to the learner. No one person's pattern of learning is the same as another's. The goals, according to Knowles, is that the instructor recognizes the individual needs of adult learners and create and facilitate a curriculum that will be guided by the adult's self-directed learning skills. Logical problems like time, money, schedules, transportation and technological demands initiated the development of distance learning. It is important to recognize that adult learners in any learning environment will vary widely in age, ability, work experience, cultural background and personal goals. They vary in formalized educational backgrounds

and will have already developed a strong personal identity (Knowles, 1998). But distance learning was designed to meet the needs of all students.

The key to all adult education is involvement. Research suggests that people will make firm commitments to activities in which they feel they have participated and contributed to the planning. Learning is a partnership where the teacher and student share the responsibility of learning. Distance learning is no exception. Learning should become a shared activity celebrating and integrating the expertise and life experience of all participants, including the instructor (Dinmore, 1997). Teachers must be trained to create an environment conducive to learning, where there is mutual respect and trust between all the parties involved regardless of the synchronicity. The teacher will be involved in a continuous negotiation to show the learner why the material is relevant and students must assume their responsibility for planning and managing their learning with the help of others (Nelson, 1999).

Learning has become a life long process. Research has investigated the variations among learners. Many other adult educators like Knowles, recognized the value of life experience along with abstract knowledge regardless of the method or environment. Science has focused on how these experiences change the way adults learn and brings valuable light to a very new way of learning – distance education. Researchers are forced to debate the validity and reliability of distance learning.

TECHNOLOGY

In today's world, learning is technology. An Internet search for technology and distance learning delivered over 1,000,000 addresses. Using technology as a mode of instruction allows the learning process to be competitive and cooperative, as

well as collaborative and interactive within groups of students, as well as between sites.

Today's work environment of constant change in technology has created a demand for higher levels of learning in a continuous method of delivery. Technology has opened a world of incredible opportunity for distance learning. But with opportunity, comes the challenge of developing instruction to adapt to new delivery methods. Technology has changed not only the way we learn, the synchronicity of our learning, but also the contents of what we are learning. Regardless of the method of delivery, successful learning must still focus on the instructional needs of the content and the student rather than on the technology itself. It is essential to consider carefully, the ages, cultural and socioeconomic backgrounds, learning environment, interests, educational levels, and familiarity with distance education methods and delivery systems (Shamber, 1988).

DISTANCE EDUCATION

Administrators and educators, alike, have begun to understand the importance for developing programs that meet the needs of adult learners. Vornborck (1998) found that institutional distance learning was on the rise to:

- Increase student access by making courses available at convenient locations (82%)
- Increase institution's access to new audiences (64%)
- Increase student access by reducing time constraints for course taking (63%)
- Increase student enrollments (54%)

Instructors and students should also consider many factors when investigating distance education programs that are not often evaluated in the traditional learning environment. Environment, methods of instruction, delivery systems and curriculum are very important to the success of students. Vornborck (1998) developed several key considerations that one should consider in developing instruction for distance learning. They are:

- Physical distance between learner and instructor
- Sponsored by an academic institution or functional organization
- Part of a structured curriculum with stated objectives
- Provides for two-way communication and feedback between institution and learner
- Deployed outside the confines of the resident schoolhouse
- Includes process as to evaluate learning outcomes

Because distance learning requires students to ignore traditional methods of instruction, some question the quality and integrity of the instruction. Much of the student course work is done independently. In order to fulfill course requirements, student focus and maturity are an important factor in academic success. Researchers and administrators have devoted thousands of hours to solving the problems associated with the management and policy of distance education, namely (Sherry, 1996):

- New forms of assessment and evaluation
- A set of nationally accepted accreditation standards
- Teacher certification standards for distance educators

- Technology training for all involved with the distance learning process

Studies have also shown one of the most important factors in successful distance learning is a caring, concerned teachers who are confident, experienced, at ease with the equipment, uses the media creatively, and maintain a high level of interactivity with the students (Willis, 1992). Distance learning provides the following technologies to provide communication between instructor and learner. The most common found in Willis' (1992) study were:

- Two-way interactive video (57%)
- Two-way audio with one-way video (24%)
- One way prerecorded video (57%)
- Internet and other computer-based technologies (36%)

Willis (1992) also found that technologies to be pursued during the next three years were more likely to be two-way interactive video and on-line/computer-based cameras.

One of the most inviting aspects of distance learning is that it is asynchronous. It is open to all people, anytime, anywhere, whenever the student chooses. For the student, distance learning allows great flexibility, but in return, demands greater responsibility and maturity devoted to the direction and control of learning. It is driven by student need, economics, and technology. More students recognize the need for further or continuing education, but find it difficult to incorporate class schedules into their already hectic lifestyles. Economically, enrolling in distance education classes when compared to traditional education provided through public and private institutions can significantly reduce tuition costs. But Vornbrock (1998)

finds that beyond institutional benefit, distance education provides students flexibility and timeliness.

ACADEMIC SUCCESS

One evaluative tool to determine whether learning has taken place is to study academic success. Among other things, Charp (1994) found that student characteristics such as active listening skills and the ability to work independently are integral to academic success. Sponder (1990) focused on the academic success of distance learners. He identified a variety of other factors also influence the success of the distance learning process. Factors such as geography, efficiency of the postal delivery system, institutional support systems, telecommunication facilities and functionality of telecommunication equipment affected academic success. More obvious factors universal to all students, both traditional or distance learners, were miscommunication between students and teachers, interest in the course, and lack of course relevance also had negative repercussions (Sponder, 1990). Interestingly, Schlosser and Anderson (1994) reported that student failure was found to be more influenced by testwiseness, concentration, and time management skills.

SUMMARY

Whatever the motives for institutions and students alike, there are multiple variables that influence the success or failure of distance education programs. The process of adult learning, technology, the principles and methodology of education and academic success impact the issues related to distance education. This chapter sought to evaluate the significant factors within distance learning and how those factors differ from traditional methods of instruction and influence academic success.

The next chapter will discuss the methods and procedures used to determine if there was a difference in academic success between those enrolled in traditional classroom settings and those enrolled in distance learning courses.

CHAPTER III

METHODS AND PROCEDURES

Old Dominion University's Occupational Studies course, OTS 370T, Technology and Society, is a course requirement for all those seeking a degree in Occupational and Technical Studies. Through the College of Education, the Department of Occupational and Technical Studies offers both traditional and TELETECHNET distance course sections for the class. This research is an experimental study seeking to determine whether or not teaching method effects academic success. Chapter III will describe the population studied, research methodology used, type of statistical analysis performed, and a summary of the procedures.

POPULATION

There were a total of 116 students enrolled in three sections of the undergraduate college course Technology and Society, at Old Dominion University in Norfolk, Virginia, during the 2000 fall semester. Fifty-four students were enrolled in two traditional on-campus class sections of the course. Sixty-two students were enrolled in one TELETECHNET distance section of the course.

METHOD OF DATA COLLECTION

All students who independently enrolled in OTS 370T, Technology and Society, in three course sections were compared to determine if there was a difference in academic success between students enrolled in the traditional class setting and students enrolled in the TELETECHNET distance learning setting. The course required students to read material from the course text and complete assignments

found in the course pack designed to augment the instruction. There were seven assignments designed to facilitate learning. Each student received an individual grade for each assignment. The grades, weighted equally, were then averaged for a final letter grade. Appendix A illustrates that all three course sections were designed based on the same syllabus.

METHODS OF DATA COLLLECTION

Final grades were collected at the end of the Fall 2000 semester from the instructors who taught the three course sections of the Occupational and Technical Studies, Technology and Society, OTS 370T.

STATISTICAL ANALYSIS

The grades were compared to determine if significant difference existed between traditional classroom students and distance learning students. A two-tailed t-test was compared to determine if there was a difference between the means of the two groups.

SUMMARY

In the fall of 2000, a study was conducted by comparing grades from 116 students enrolled in three sections of the Occupational and Technical Studies course, Technology and Society, at Old Dominion University, to determine the success of distance learning as compared to traditional classroom instruction. The results were examined to determine if distance learning provided the necessary factors (i.e., content, information, communication and feedback from the instructor, as well as interaction with other students) to create an environment to foster learning.

CHAPTER IV

FINDINGS

The problem of this study was to determine if there was a difference in academic success between on-campus degree seeking students and TELETECHNET distance learning students enrolled in the Occupational and Technical Studies 370T course, Technology and Society, at Old Dominion University, in Norfolk, Virginia. This chapter will provide an overview of the findings as a result of a statistical analysis comparing the sample means of the on-campus degree seeking students and the TELETECHNET distance learning students. Appendix B and C contains the final grades of the traditional classroom students and the TELETECHNET distance learning students, respectfully, studied in this research. The data were converted to a nominal scale for the purpose of analysis.

RESULTS

The data were subjected to the t-test and the results were summarized in Table 1. The table value for 114 degrees of freedom at .05 level of confidence was 1.671. With a total sample size of 116 students, the obtained t value was calculated at 0.3570.

Table 1

Comparison of Sample Means at .05 Level
Two Tail t-Test

	Traditional Classroom	TELETECHNET	
Sample Size	54	62	
Mean	3.1852	3.2742	
Variance	1.1349	2.3662	
t-value	**Probability**	**Degrees of Freedom**	**Critical t-value**
-0.3570	0.7217	114	1.9810

SUMMARY

In this chapter, the results of the research study were presented. These results indicated there was no difference in the sample means of the two compared groups: traditional classroom students and TELETECHNET distance learning students in academic performance. In Chapter V, the findings will be given meaningful conclusions based on the acceptance of the null hypothesis and recommendations will be made for future study.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this research study was to determine if there was a difference in academic success between on-campus degree seeking students and TELETECHNET distance learning degree seeking students in the undergraduate Occupational and Technical Studies Program at Old Dominion University, in Norfolk, Virginia. This chapter will summarize the findings, draw conclusions based on the finding, and make recommendations for further study.

SUMMARY

The problem of this study was to determine if there was a difference in academic success between on-campus degree seeking students and TELETECHNET distance learning degree seeking students enrolled in the Occupational and Technical Studies, OTS 370T course, Technology and Society, at Old Dominion University, in Norfolk, Virginia. Students from three sections of Occupational and Technical Studies OTS 370T course, Technology and Society, at Old Dominion University were compared using a two tail t-test to show if the sample means of the two groups differed significantly in academic success. Final letter grades were collected and were compared to determine if the sample means were similar using a two-tailed t-test at the 0.05 level of significance.

CONCLUSIONS

Many conclusions may be drawn from the study of distance education. This research sought to address the primary aspect of academic success. The researcher hypothesized there would be no difference in academic success between on-campus

degree seeking students and TELETECHNET distance learning degree seeking students in the undergraduate Occupational and Technical Studies Program at Old Dominion University, in Norfolk, Virginia. The obtained t-value of .3570 did not exceed the .05 confidence level of 1.9810. It can be concluded that there was no significant difference in academic success between traditional classroom students and TELETECHNET distance learning students in Occupational and Technical Studies, OTS 370T, Technology and Society, at Old Dominion University, in Norfolk, Virginia. The null hypothesis was accepted.

RECOMMENDATIONS

Because of the increased demand for distance education in our society, the problem of academic success in relation to teaching methods had to be addressed. There are significant differences in the instructional strategies used within the traditional classroom and TELETECHNET learning environment. Based on the findings of this study we may conclude that there is no difference in academic success between on-campus degree seeking students and TELETECHNET distance learning students enrolled in the Occupational and Technical Studies 370T course, Technology and Society, at Old Dominion University, in Norfolk, Virginia. It may be concluded that there is no difference in academic success between the two groups.

Distance education, although it has been an integral part of our society, has changed dramatically due to student need and technological advancement. Job requirements and the conversion from an information industry to a knowledge management workforce has spurred the need for immediate response, faster computers, and stronger satellites. Many students find that there is an increased need

for higher education due to the changing job market. But many students who decide to continue their education beyond high school find significant obstacles to overcome. Their jobs, families, finances, scheduling and/or location of the institution make the reality of returning to school almost impossible. Incredibly, in the state of Virginia, every person in the state is within a 50-mile radius from a distance learning site with flexible classes day and night.

The freedom and flexibility for continuing education is possible through technology and distance instruction, together. Never before have distance students had the opportunity to study such diverse topics from engineering to psychology. With the increasing capacity to communicate, even laboratory sessions and simulations are becoming a reality.

Although the lack of resources and access to data make it impractical to study the academic success of the entire distance education population in comparison to the entire traditional on-campus population it is possible to look at specific groups within the distance education community. This research compared different course sections, but the results may be generalized to suggest that student academic success is the same whether the course is taken with face to face instruction or at a distance. With this assumption now validated, more research should be conducted to further investigate the issues addressing distance education.

The researcher recommends the following:

1. Comparison of a single instructor who teaches the same course both on site and at a distance to better understand the influence of individual teaching styles on distance education.

2. Investigation into other departments who utilize distance education that may not place high emphasis on technology which will provide a better understanding of the role of technology and its influence on academic success in distance education.
3. A deeper investigation of the demographics of students who enroll in distance courses and their motivation to succeed in distance education that will help instructional designers, administrators and instructors better understand their students.
4. A thorough investigation into how individual learning styles influence student enrollment, participation, and academic success in distance education.

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APPENDIX A

OLD DOMINION UNIVERSITY

OCCUPATIONAL AND TECHNICAL STUDIES

COURSE DESCRIPTION INSTRUCTOR: John M. Ritz
Technology 108 683-4305

1. Course Number: 370U

2. Course Title: Technology and Society

3. Description: A multidisciplinary course designed to provide an insight into the fundamental, historical, and contemporary ideas of the nature of technology as an area of human knowledge. Attention is given to the positive and negative aspects of technology and how they effect society.

   Purpose: This course assists in preparing the professional technology educator and other majors by providing an overview of various social systems in various regions of the world, developing a global perspective of societies, bringing the learner into contact with a multitude of cultures, describing societal change and understanding the impact that technology has on individuals, society and the environment. This course also serves as a university general education upper-division course.

4. Course Competencies: As a result of this course and its activities, the learner should:

   A. Develop a feeling of our technological culture.

   B. Appraise technologies influence on human life.

   C. Describe the relationship between technology and society.

   D. Assess the influence technology has on individuals.

   E. Know the various levels of technological development.

   F. Know the various levels of technological societies.

APPENDIX A

G. Describe technology transfer.

H. Cite the relationships between population growth and resource depletion.

I. Explain major energy issues.

J. Develop an awareness of the ecological questions raised by the development of technology.

K. List the major areas of technology.

L. Explain the relationship between technology, work, and leisure.

5. Course Requirements

A. Participate in class activities (20%). This includes topics discussed and a journal of movies viewed.

Journal entries should describe key technical concepts and their social/cultural effects. Journal summaries will be collected daily and should be written in complete and concise sentences.

B. Answer, in writing, key questions related to technological issues as assigned by the instructor (30%). The key questions are as follows:

1. Select one technological product and describe its use and the impact it has on you (future wheel).

2. Explain how new products are developed and brought into the market (2 pages).

3. Select one-third world country. Describe its geographic characteristics, major products, and why it is important to the world community (2 pages).

C. In a group of two, prepare and conduct a survey of 20 people, 10 students and 10 non-students, focusing on a major technological issue. The survey should be

APPENDIX A

made up of at least five questions and the data gathered should be tabulated and reported. A presentation of your findings will be made to the class (15%, 5% for the presentation).

D. Prepare a typed research paper (minimum 7 pages illustrated) on a major technological topic as cited in the topical outline for the course (25%).

E. Complete the take home final examination answering the following question: Cite and explain the major influences the study of technology and society has had upon you - 3 page minimum (10%). 6. Attendance:

Although class attendance is not a requirement for the course, 20 percent of your grade is based upon participation. Consequently, excess absences will take away from your participation grade. In addition, points will be taken away from assignments turned in late.

7. Grading:

93 to 100 percent = A
85 to 92 percent = B
78 to 84 percent = C
70 to 77 percent = D
69 and below = F

8. Accommodating Students with Special Learning Needs:

All learners have different learning styles. If you have a particular handicapping condition that I should know about in evaluating your course work, please notify me so that appropriate accommodations can be made.

9. Honor Pledge:

"I pledge to support the honor system of Old Dominion University. I will refrain from any form of academic dishonesty or deception, such as cheating and plagiarism. I am aware that as a member of the academic community, it is my responsibility to turn in all suspected violators of the honor system. I will report to Honor Council hearings if summoned." By

APPENDIX A

attending Old Dominion University you have accepted the responsibility to abide by this code. This is an institutional policy, approved by the Board of Visitors.

10. Office Hours:

Tuesdays and Thursdays 9:00 - 11:00
Additional office hours available by appointment.

11. Text Book:

Volti, Rudi. Society and Technological Change. New York: St. Martin's Press, 1995. 12. References:

DeVore, Paul W. Technology: An Introduction. Worcester, MA: Davis Publications, Inc., 1981.

Mesthene, Emmanuel. Technological Change. New York: Mentor Books, 1970.

Naisbitt, John. Megatrends: Ten New Directions Transforming Our Lives. New York: Warner Books, Inc., 1982.

Pytlik, Edward C., Donald P. Lauda, and David L. Johnson. Technology, Change and Society. Worcester, MA: Davis Publications, Inc., 1985.

Toffler, Alvin. The Third Wave. Toronto: Bantam Books, 1980.

APPENDIX B

Ordinal Grades for Occupational and Technical Studies
Technology and Society, OTS 370T
Fall 2000

Traditional Classroom			
Sample	Grade	Sample	Grades
1	2	37	3
2	3	38	3
3	3	39	4
4	3	40	3
5	4	41	4
6	4	42	4
7	3	43	4
8	3	44	4
9	4		
10	4		
11	3		
12	4		
13	3		
14	2		
15	3		
16	3		
17	3		
18	3		
19	3		
20	4		
21	3		
22	4		
23	3		
24	0		
25	3		
26	3		
27	4		
28	3		
29	4		
30	0		
31	4		
32	4		
33	3		
34	4		
35	3		
36	4		

APPENDIX C

Ordinal Grades for Occupational and Technical Studies
Technology and Society, OTS 370T
Fall 2000

TELETECHNET			
Sample	Grade	Sample	Grade
1	0	40	4
2	0	41	4
3	4	42	0
4	4	43	4
5	4	44	4
6	4	45	4
7	4	46	4
8	0	47	4
9	4	48	4
10	0	49	4
11	4	50	4
12	4	51	4
13	4	52	0
14	4	53	4
15	4	54	4
16	4	55	4
17	4	56	4
18	0	57	4
19	4	58	4
20	4	59	4
21	3		
22	4		
23	4		
24	4		
25	4		
26	4		
27	4		
28	4		
29	4		
30	4		
31	4		
32	0		
33	4		
34	4		
35	4		
36	0		
37	4		
38	4		
39	4		