A COMPARATIVE ANALYSIS OF THE CHARACTERISTICS OF DAY STUDENTS AND NIGHT STUDENTS AT OKLAHOMA STATE UNIVERSITY TECHNICAL INSTITUTE

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TECHNICAL INSTITUTE

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CHAPTER I

INTRODUCTION

In the history of higher education, the 1980's may stand as the decade of change. According to Cross (1981, p. 1) "the learning society is growing because it must." It would be difficult to think of a society that is changing as rapidly as ours without the means available to learn new things. Education for tomorrow is changing as well as the need for education. More and more persons in ever increasing numbers are turning to education as a way of improving the quality of their lives. Some are seeking degrees or certification while others are taking courses for nothing more than the joy of learning something new. Terms such as "life long learning" and "continuous learning" were used very little in the past. However, in the 1980's they are not only being used but, according to Hiemstra (1976), they were being put into practice by educational institutions across the country.

The trend of increasing adult participation in education comes as no surprise to educators. With the increasing availability of statistics about these "new learners" studies are being conducted to find out what needs, aspirations and preferences will be needed to meet their requirements. According to Cross (1981, p. 15) "the more education people have, the more education they want, and the more they participate in further learning activities." There are many reasons why people seek educational programs. There are those that are changing careers or

trying to increase their skill level in their current position, there is increased leisure time and the changing role of women and technological changes; all these involve people in educational programs.

Erikson (1978), Lewin (1978), Rodgers (1969), and Maslow (1968) have all stressed the need for individuals to achieve complete self-identity through the development of their potentialities. Past theories that learning is a function of youth and everything they learn during their youth is all they require to live adequately for the rest of their lives is no longer valid. This is due in part to the rapidly accelerating pace of change in their society. Facts and skills learned in their youth are no longer sufficient and have become outmouded by new technologies.

Adults are returning to colleges and universities in ever-increasing numbers. According to Johnstone and Rivera (1965):

> . . . 66 percent of all general education subjects were studied in colleges and universities, and a total of 79 percent in either colleges, universities, secondary or elementary schools (p. 63).

There have been numerous studies and much research compiled about adult learners; however, these are national in scope and offer limited help to administrators who are concerned about the problem on the local level. Therefore, this study was an attempt to research the personal characteristics and the academic variables of students at the Oklahoma State University Technical Institute in Oklahoma City, Oklahoma, in an effort to provide answers to questions related to the personal and the academic variables of day students and night students and to relate these characteristics to the registration/advisement process.

Statement of the Problem

Many universities and colleges across the country offer both day-time and night-time classes. Numerous studies and much research has been conducted on the characteristics of day-time and night-time students. However, most of the studies and research was on a national basis rather than on the local level.

No one has looked at Oklahoma State University Technical Institute's population or explored factors such as college or school of enrollment, registration status, official withdrawals, course load or American College Testing composite score to see if significant differences exist.

This study looked at the differences between those students who attended college at night and those who attended during the day to see if the registration/advisement procedures are meeting the needs of the Oklahoma State University Technical Institute's students.

Purpose of the Study

The general purpose of this study was to compare those two-year students who attended Oklahoma State University Technical Institute in Oklahoma City, Oklahoma, during the Spring semester of 1983 as night students with those who attended the Institute during the same semester as day students regarding the registration/advisement procedures. This study sought to answer the following questions:

1. What are the personal characteristics of the two groups of students?

2. What are the academic variables of the two groups of students?

3. Is there a significant difference between the two groups of students in regard to personal characteristics?

4. Is there a significant difference between the two groups of students regarding academic vairables?

5. What is the profile of the two groups based upon these characteristics found to be significantly differnt?

6. Is there a significant difference between the grade point average of day-time students versus the grade point average of night-time students in regard to full-time and part-time faculty.

Assumptions

The assumptions of this study were:

1. There are "basic differences" between day-time and night-time students regarding the registration/advisement process.

2. Students selected for the study were representative of other students in Oklahoma State University Technical Institute.

3. Instructors selected for the study were representative of the other instructors in Oklahoma State University Technical Institute.

4. There are no differences between the day-time student and the night-time student at Oklahoma State University Technical Institute.

Limitations of the Study

This study was limited to the two-year technical institute students of the Oklahoma State University Technical Institute campus who were registered for the Spring semester of 1983. It was further limited to the variables specifically selected for the study and defined in the present chapter.

Definitions

The following definitions apply throughout the study and are offered as operational definitions for various terms used in the study.

Personal Characteristics: These characteristics are personal in nature and are divided into the following five areas.

1. Age
2. Sex
3. Marital status
4. Race
5. Geographic location

Academic Variables: These variables are academic in nature and are divided into the eight following categories.

1. School of enrollment
2. Academic subdivision
3. Student admission status
4. Classification
5. Official withdrawal
6. Course load
7. Spring grade point average
8. American College Testing composite score

Border Counties: The border counties are those counties directly adjacent to Oklahoma County.

Technology or School of Enrollment: This variable was divided into the six following groups.

1. business technology
2. engineering technology

3. agricultural technology
4. nursing
5. human services
6. continuing education.

Student Admission Status: This variable was measured on a nominal scale and was divided into the following three categories.

1. New student: a student who is enrolled for the first time.
2. Continuing student: a student with uninterrupted enrollment (this semester plus previous summer and/or spring enrollment).
3. Re-entry student: a student who was previously enrolled but whose enrollment has not been continuous.

Classification: This variable was measured on a nominal scale and was divided into the following two categories.

1. freshman
2. sophomore.

Official Withdrawal: This variable was measured on a nominal scale based on those students who officially notified the admissions office in writing of their termination. These were divided into the following two categories.

1. withdrawal-students that withdrew from their courses
2. no withdrawal-students that completed their courses.

Course Load: This variable was measured on an interval scale and was comprised of the actual number of hours the student was enrolled in during the Spring semester.

Registration Status: The personal and academic status of each student when they enrolled at Oklahoma State University Technical Institute.

Night Student: A night student was not enrolled in any courses prior to 4:30 p.m.

Day Student: A day student was not enrolled in any courses after 4:30 p.m.

Major Classification: The status of a student based on his/her decision to select a major field of study or remain undecided was divided into the following two categories:

1. Declared major: this group was measured on a nominal scale on the basis of a stated major. A declared major has selected a specific field of study and was assigned to that department for advisement.
2. Undeclared major: this group was categorized on a nominal scale on the basis of no stated major. An undeclared major was undecided and was not assigned to an academic department for advisement.

Organization of the Study

Chapter I introduces the study, presenting the problem, purpose, assumptions, limitations, and definition of terms. Chapter II includes a review of related literature focusing on the areas of (1) demographic population changes, (2) changes in college and university enrollment patterns, and (3) the needs and interests of mature learners. Chapter III includes the procedures utilized in the study, including (1) selection of the subjects, (2) collection of the data, and (3) analysis of data and statistical procedures.

Chapter IV includes the presentation of findings and an analysis

of the collected data. Chapter V includes a summary of the study, conclusions, and recommendations for further research and practice.

CHAPTER II

REVIEW OF RELATED LITERATURE

The literature related to this study is presented in three categories. The categories include:

1. Demographic population changes,
2. Changes in college and university enrollment patterns, and
3. The needs and interests of mature learners.

Demographic Population Changes

According to experts like Cross (1981), Knowles (1980), Smith (1970), and Kidd (1973) there will be drastic social, economic and political change over the next quarter century. One of the prime forces behind this transformation is the baby boom that occurred just after the war's end in 1944. During this time there was an explosion in births that lasted from 1946 to 1957. About 43 million children were born during that time; this represents approximately one-fifth of the present population. These children flooded the schools in the 1950's and 1960's and the job market in the 1970's. By the 1980's and the 1990's these people will be representing the middle-aged population. According to Cross (1981, p. 3) "By the year 2000, the largest age group will be 33 to 44 year olds, with a rising curve for 45 to 64 year olds."

The baby boom after World War II was followed by the baby bust.

The total birth rate fell from a post-war high of 3.8 children per woman in 1957 to 1.8 in 1976. If this low birth rate were to continue by the year 2000 there would be a zero population growth, which would result in what demographers call a stabilized age structure in which all generations and age groups are about the same size. Demographers are projecting that if these trends continue the traditional population triangle will change into a population rectangle. If this occurs the median age would level off at about 40 years of age. This might also result in the disappearance of what is known today as the "youth culture" which was the cause of many influences on college campuses as well as on the marketplace. Drucker (1971, p. 35) maintains that "Anyone who took the trouble to look at the population figures could have predicted some type of youth revolution in the 1960's."

Individuals born during the baby boom are now between 23 and 35 years of age. According to Cross (1981, p. 7) "This is the age range of greatest participation in educational activities." Therefore, increased participation in all forms of adult education is expected. Kemp (1978, p. 3) states that "Between 1967-1968 and 1975-1976, registration in noncredit adult education courses in institutions of higher education increased 57 percent." Data from a 1978 survey suggests that the recent gain in adult education has been very little--from 12.3 percent of the eligible population in 1975 to 12.5 percent in 1978. The rise of participants from 18.1 million to 19.3 million indicates a slight increase of seven percent.

Another trend occurred during this time indicating that the nation's retirees, those persons over 65, had a desperate need to feel productive. A Harris poll conducted in 1974 indicated these retirees would still

be working if they could. The poll also indicated that with the anticipation of many productive years left, more and more people over the age of 50 are interested in embarking on new careers. This is often something totally different from what they have been involved in before.

According to the U.S. Bureau of Census, Health, Education, and Welfare, National Center for Educational Statistics (NCES) (1977):

> First-time degree-credit enrollment, which increased from 1,225,000 students in 1965 to 1,910,000 in 1975, is expected to increase to 1,955,000 in 1978, then decrease to 1,709,000 in 1985 (p. 10).

This study also indicated that:

> The percentage of first-time degree-credit enrollment that is full-time decreased from 83 percent in 1965 to 76 percent in 1975 and is expected to decrease slightly to 75 percent in 1985 (p. 10).

The United States Office of Education estimates indicate that 1977-1978 will be the peak year for the total number of high school graduates with 3,143,000. Therefore, high school graduates are expected to decline each year until 1984-1985 with 2,679,000 or a decrease of approximately 14.7 percent from the figures for 1977-1978. Projected rates for 1985-1986 show a slight increase of 20,000 graduates over the 1984-1985 group.

According to Cross (1977), who reported a study that surveyed 4,138 graduates, less than one-half of the graduates believed their education was "very useful" in giving them the knowledge and skills needed in their jobs. Many of the participants in adult education programs are persons in their twenties, some have been out of school two to three years, and they are returning to school to learn new skills that will help them in the job market. Educational institutions are just now starting to feel the sociological impact of the millions of adults who

realize that education does not end with a college degree but is a life-long process. Part-time enrollments at some institutions are fast approaching the amounts of full-time enrollment. Many institutions have part-time enrollments larger than the full-time enrollment.

For years the part-time student was looked at with disdain by the traditional public and private colleges and universities; some even considered them second class citizens. Now that the part-time student population is increasing and the fill-time population decreasing, institutions of higher learning are looking at this population with a new academic and economic viewpoint. Simultaneously, much publicity has been given to the concept of adult, continuing, nontraditional and life-long learning processes with new and innovative ideas for different types of educational experiences at the post-secondary level. These new ideas have brought with them much debate, experimentation, deliberation and administrative pressure. This pressure is causing many institutions across the nation to change their conservative traditionalfull-time programs to programs better suited for part-time students. Institutions located near large metropolitian areas are finding that the current trends in education are forcing them to rely solely on the part-time enrollments. As the plateauing of traditional enrollments occurs toward the end of the 1980's, it is inevitable that more attention will be given to the part-time students and course offerings. This will imply consideration of altering the college calendar and schedules for part-time enrollees. Courses will be changed from weekdays to weekends and from 16 week semesters to eight week and ten week semesters. Course work will be offered in one, two, and three-day workshops and seminars. Short courses of variable length will be offered for a variety of credit and non-credit

programs. Facilities such as administration, registrars office, admissions and records, computer centers, student services and the public all need to engage in the planning for a new trend in post-secondary education that will involve massive innovation in matters pertaining to these areas.

One of the most dramatic increases in college enrollments took place in the 1970's. This increase was in the enrollment of older students. Winkler (1975) stated that:

> Although half of the college students were still 18 to 21 years old, students 25 years old and over comprised one-third of all students in 1974. Of the 9.9 million persons in college in 1974, one million were 35 years old and over (p. 4).

She also stated that "The older students (25 and over) made up about two-thirds of all part-time students and one-sixth of the full-time students" (p. 4).

Wermers suggested in 1974 that:

> Instead of concentrating on the appropriate age group (18 to 22) which makes up only about nine percent of the total U.S. population, colleges should consider what is offered to the 23 to 60 year old group which constitutes approximately 59 perent of the population (p. 351).

Wermers also suggested that "state and federal employees and eventually employees in private industry and business should have arrangements worked out to have release time for college attendance" (p. 351). Recommendations have also been made so that special counseling is available to older students getting into higher education and that the older age student be exempt from certain entrance requirements.

Berendzen (1974) stated that if older students are to partially save higher education, more information is needed about them. In October, 1972, the Census Bureau for the Bureau of Labor Statistics

conducted a survey on school enrollment status (higher education or otherwise) of persons over age 34. This was one of the first surveys conducted by the Bureau of Labor Statistics to ask question about educational background information. The survey indicated that at that time there were 780,000 persons over the age of 34 that were enrolled in higher education. The largest majority of these older students were attending school part-time. Berendzen (1974) also indicated that:

> . . . many of them differed from 18-24 year old students in their activities, aspirations, and achievements, and their undergraduate grade point averages were usually lower than those of the younger students (p. 123).

Haygood (1970) stated that:

> . . . few people today believe a college should be concerned only with youth, and scarcely anyone holds that adult education is not a legitimate part of the purpose of the university (p. 195).

However, there are those that argue that funds for higher education, institutional resources and tax funds, should not be used for education for adults if it interferes with funding for full-time, daytime, degree students. According to Haygood:

> . . . this laudable concern with the education of young people sometimes prevents common sense, as in the case of providing status support for the young student who is unmotivated, unprepared, undirected, or apathetic, but who nevertheless is urged to remain in school and get a degree (p. 195).

At the same time, he stated that:

> . . . a highly motivated, goal-directed older person can often take advantage of educational resources only if he can be admitted as a regular degree student in programs designed primarily for regular, full-time college students (p. 195).

Haygood predicts that educators and administrators of higher adult education programs:

> . . . will become valued and respected as they effectively combine scholarship with innovative approaches to provide educational activities for the diverse needs of the adult population (p. 192).

It was noted that significant changes are occurring at institutions of higher education. Institutions are beginning to provide testing, counseling, and referral services for adults so that they might receive help with their educational and vocational goals and objectives. According to Smith, Aker and Kidd (1970): "Continuing education can serve to expand horizons, develop understanding, assist in creating meaningful activities and bridge the gap between generations" (p. 16). They also state that if adult educators believe that the older adult can learn, adult educators are in a unique position to organize learning experiences for them.

The needs of adult students are many and varied. Much research has been conducted to study these needs and how these needs differ from those of younger students. A study conducted by Ferguson (1964) at the University of Illinois, asked the students to list what they felt were the advantages and disadvantages older students have in comparison with students. According to Ferguson:

> With the older student comprising the minority of the students on campus, they are nevertheless a constituent part of the whole and the needs of adult students may merit more attention in the planning and administering of the undergraduate college program" (p. 350).

A study of married college students and the utilization of selected student personnel services conducted by Oppelt (1970) looked at the areas of Counseling Center, Health Center, Financial Aid Office, Scholarship Office and Placement Office. His findings supported conclusions that: (1) married students participated significantly less in all types of campus extra curricular activities except student

organizations, (2) married students make less use of the Counseling Center and Health Center than do unmarried students, (3) married students were well satisfied with all five student personnel services studied. According to Oppelt (1960):

> There was no significant relationship between marital status and the use of financial aids, scholarship, and placement offices. The problems of married students seemed to be most commonly related to immediate needs of finances (p. 361).

A study conducted by Olsen and Brechtell in the spring of 1977 at the University of Southern Mississippi surveyed 76 respondents which represented the population of pre-registration students who were 21 years of age and older with the mean age of 25.6. The study revealed that time management is valued as a very important factor in the perception of success by adult students. Over one-half of the subjects expressed this area as a fear. A majority of the adult students reported that they will couple responsibilities of spouse, children, and other dependents with college experience. Adults in this study named five student personnel services that they felt would be more useful to them: advisement, financial aid, bookstore, counseling center and laboratory, and orientation/pre-registration. They also placed the services in rank order that they would select as five first choice services for adult students as a group: advisement, financial aid, admissions, career development center, and counseling center and laboratory. Two-thirds of the subjects listed aspirations toward a degree as their main reason for entering college while 87 percent stated that they hoped to achieve a degree as the end result of the experience. While financial aid was a first choice service to the adult students, 76 percent were not receiving financial aid. The 21-25 age group appeared to contrast with

other age groups on a considerable number of items. Olsen and Brechtell (1977) also stated that: ". . . perhaps students aged 21-25 are more knowledgeable of current practices in education and more mobile as far as services of the nature of medical clinics, chaplin, etc." (p. 15). They also indicated that: "Class differences are reflected by young people but are not fixed until maturity which might account for the contrast of the 21-25 group with other brackets" (p. 15).

A study conducted by DeCrow (1975) that surveyed offerings for older Americans indicated that extension is largely supported by the public while evening colleges are more dependent on student fees. He also found that these two programs, extension and evening college, were the two main access points in higher education for the present generation of older students.

In an article by Spence (1977) he stated that:

> . . . the hope of the third century is education: the total program that reaches every individual and provides learning help on what each needs, help when he needs it, and in a way he can best use it. Because it must cover all the various decision points each person faces, it must draw on all the resources of all parts of the community to include schools and colleges (p. 259).

Kidd (1973) stresses that there are enormous individual differences in capacities and motivation among mature adults. Evidence continues to mount, that indicated grades of mature students in university courses are high and often higher than those of average "regular" students. Kidd also points out that "part-time students" obtain fewer places in the top one percent of grades than do "full-time students". Kidd continues by stating: ". . . despite such evidence, many educational administrators continue to think of part-time students, or mature students, as incapable of doing or unlikely to do academic work

of quality" (p. 34). Kidd also continues to say that: "Some assert, against all evidence, that such students are inferior in ability; others, that part-time students never have enough time or strength to do justice to academic work" (p. 34).

Some studies showed that adult students tend to do better in some subjects like government, history and literature than they do in mathematics or physics. Studies of this sort have been limited to university and evening courses; however, the research data indicated that performances on academic tests warrant the opportunity for adult students to enter any of the many colleges and university programs available to them.

Houle (1961) in his surveys of military personnel indicates that counseling is probably the most important factor in the adult students' development of curriculum and the selection of courses and should be provided in every educational situation for adults. Houle and others have indicated that since the choices for adult learners in colleges and universities is wide and varied the adult learner needs to be able to secure adequate counseling so that he or she might make an effective choice.

Knowles (1980) indicated that: "Educational counseling-guidance in the selection of educational opportunities, and vocational counseling-guidance in occupational choices, are not so much formats for learning as administrative services (p. 133).

Kidd (1973) reiterated that in choosing a curriculum for adults we must understand the needs and interests of the adult learner, the understanding of the situation in which he lives and the kinds of curriculum that will best suit his needs. Havighurst (1970) indicated

that: ". . . the young-old from 55-75 are a vigorous and well educated group that can be expected to develop new needs and to want opportunities for self-enhancement and for community participation" (p. 63).

In a study conducted by the Association of American Colleges (1976) it was indicated that a serious problem existed in the preparation of students as they come to campus. It was reported that newly admitted students were extremely deficient in reading, writing, and mathematics. The study indicated that this was not a weakness of private higher education but a reflection of broad general trends.

Major conclusions drawn from the present body of literature regarding implications of (1) demographic population changes, (2) changes in college and university enrollment patterns, and (3) the needs of interests of mature learners are:

1. The statistics and trends in education regarding curriculum choices should be reviewed in regard to the needs for student personnel services for those students who drop out and return at a later date as a part-time, night, and adult student.

2. There is a need to understand the attrition rate from the freshman year to the sophomore year for those students who withdraw or dropout of school.

3. There should be special counseling, tutoring, and learning labs to encourage the withdrawal students to remian in school.

4. The campus environment should be managed in such a way as to enhance the retention of students.

Summary of Literature Review

According to Cross (1977), Wermers (1974), and Haygood (1976),

the adult needs and changes in educational trends in higher education should begin on the local level. The statistics reveal that the population of adult learners is increasing in greater numbers every year. The characteristics of these adults need to be studied so that curriculum and services can be improved and increased. The student services areas should be studied so that retention of adult learners can be improved. Also, the areas of counseling, tutoring, and learning labs should be reviewed so that the needs of those students that are withdrawing from school could be better understood.

Now that enrollments are up and the needs and interests of all students are being recognized, institutions need to provide a foundation for student services, retention and change. With the current situation of higher education, there has never been a more desperate need for those services. The time is right, the adult learners are ready and there may never be a more popular time than the present.

CHAPTER III

METHODOLOGY

The purpose os this study was to compare two-year students attending night classes at Oklahoma State University Technical Institute in Oklahoma City, Oklahoma during the spring semester of 1983 as night students with those who attended the Institude during the same semester as day students regarding registration/advisement procedures. The study was conducted in four phases: (1) research questions, (2) description of the population and sample, (3) a description of the collection of data, and (4) a description of the procedures for analyzing the data.

Research Questions

The basic research questions in this chapter considered whether there was a significant difference in the day students and the night students in regard to demographic data and other registration advisement information collected at the time of enrollment. To investigate the basic question, 13 questions were formulated as follows:

1. Are there significant differences between students registered as day students and those registered as night students with regard to age.

2. Are there significant differences between students registered as day students and those registered as night students with regard to sex.

3. Are there significant differences between students registered as day students and those registered as night students with regard to marital status.

4. Are there significant differences between students registered as day students and those registered as night students with regard to race.

5. Are there significant differences between students registered as day students and those registered as night students with regard to geographic location.

6. Are there significant differences between students registered as day students and those registered as night students with regard to school of enrollment.

7. Are there significant differences between students registered as day students and those registered as night students with regard to academic subdivision.

8. Are there significant differences between students registered as day students and those registered as night students with regard to student admission status.

9. Are there significant differences between students registered as day students and those registered as night students with regard to classification.

10. Are there significant differences between students registered as day students and those registered as night students with regard to official withdrawal.

11. Are there significant differences between students registered as day students and those registered as night students with regard to course load.

12. Are there significant differences between students registered as day students and those registered as night students with regard to grade point average.

13. Are there significant differences between students registered as day students and those registered as night students with regard to American College Testing Composite Scores.

Selection of Subjects

The population from which the sample was drawn consisted of both day and night students and both part-time and full-time students enrolled at Oklahoma State University Technical Institute in Oklahoma City. The sample of students was selected from the spring semester, 1983, enrollment. The spring 1983 enrollment for credit classes included 2,974 individuals. The total enrollment of night students was 1,570 students and the total number enrolled in day classes was 1,404.

The sample was selected by assigning a number to each student enrolled in day classes and each student enrolled in night classes. Using the table of random numbers in Gay's (1981) Educational Research (second edition), 85 students were selected from each category. The sample size of 85 students from each group was determined by using the power tables in Cohen's (1977) book Statistical Power Analysis for Behavioral Sciences. Selection of power utilized x = .05 and the medium group size of 80 people.

Collection of Data

The information used in this study included student enrollment data obtained from each student during the spring 1983 enrollment

period. The data used in this study included age, sex, marital status, race, geographic location, college or school of enrollment, academic subdivision, student admission status, and classification. The information regarding official withdrawal, course load, and spring grade point average was calculated at the end of the spring semester. The information was collected and stored in Oklahoma State University Technical Institute's IBM 4341 computer. This information was pulled from the computer by the Oklahoma State University Technical Institute's Admissions Department for use in this research.

Analysis of Data and Statistical Procedures

The design used in this study was divided into two statistical techniques: the Chi-square test for nominal data and the independent t-test for interval data. Data were obtained from the Student Master File at Oklahoma State University Technical Institute through the Admissions Department and the utilization of the IBM 4341 computer.

The Chi-square test of independence was used to analyze the relationship between the nominal variables: sex, marital status, race, geographic location, college or school of enrollment, major classification, official withdrawal, and the registration status of the samples. The formula for the Chi-square test according to Linton and Gallo (1975) is: $\chi^2 = \frac{N(|bc - ad| - N/2)^2}{(a + b)(c + d)(a + c)(b + d)}$.

The independent t-test was used to determine whether or not significant differences existed between the night and day students on the interval data for age, grade point average, course load, and American College Testing (ACT) composite score. The formula for the t-test

according to Linton and Gallo (1975) is:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{\left(\Sigma X_1^2 - \frac{(\Sigma X_1)^2}{n_1}\right) + \left(\Sigma X_2^2 - \frac{(\Sigma X_2)^2}{n_2}\right)}{(n_1 + n_2 - 2)}\right)\left(\frac{n_1 + n_2}{(n_1)(n_2)}\right)}}.$$

CHAPTER IV

PRESENTATION OF FINDINGS

This chapter presents the findings of the research. The material is organized as follows: (1) personal characteristics, (2) academic variables (3) analysis of personal characteristics, (4) analysis of academic variables, and (5) summary.

Personal Characteristics

Age

The grouped frequency distribution of the ages of both day students and night students is presented in Table I. As shown in the table, 36.5 percent (31) of the day students fell in the age interval 21-25 years which was the largest age group and 21.2 percent (18) fell in the age interval 31-35 years which formed the second largest group. The age groups of 16-20 and 26-30 had 14 students each. No students were reported beyond the 51-55 age interval.

The largest interval for enrolled night students was the 21-25 interval with 29.4 percent (25) and the second largest was the 26-30 interval with 17.6 percent (15). The smallest age interval for night students was the 61 and above interval with 1.2 percent (1).

For the two groups combined (night and day students), the largest age interval was the 21-25 interval with 56 students for a percentage of 32.9. The second largest was the 31-35 age interval with 31

TABLE I

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR
DAY STUDENTS AND NIGHT STUDENTS BY AGE

Age	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
0 - 15	0	0.0	0	0.0	0	0.0
16 - 20	14	16.5	9	10.6	23	13.5
21 - 25	31	36.5	25	29.4	56	32.9
26 - 30	14	16.5	15	17.6	29	17.1
31 - 35	18	21.2	13	15.3	31	18.2
36 - 40	4	4.7	11	12.9	15	8.8
41 - 45	3	3.5	3	3.5	6	3.5
46 - 50	1	1.2	4	4.7	5	2.9
51 - 55	0	0.0	2	2.4	2	1.2
56 - 60	0	0.0	2	2.4	2	1.2
61 - above	0	0.0	1	1.2	1	0.6
Total	85		85		170	
Mean	26.79		30.75			
Standard Deviation	6.71		10.08			

students and a percentage of 18.2.

Both the mean and the standard deviation were calculated for each group. The mean age of the day students was 26.79 years and the standard deviation was 6.71. The mean age of the night students was 30.75 years with a standard deviation of 10.08 years.

Sex

The sex ratio of the subjects is presented in Table II. Female students attending day classes numbered 41 or 48.2 percent. Male day students were in the majority with 44 or 51.8 percent.

Male students attending night classes totaled 54 or 63.5 percent whereas female students enrolled in the night classes totaled 31 or 36.5 percent. It is apparent on the basis of the findings that a higher percentage of night students were males. For the two groups combined (day and night students), male students totaled 98 or 57.6 percent whereas female students totaled 72 for a percentage of 42.4 percent.

Marital Status

Findings as shown in Table III reveal that single day students are the largest category as measured by marital status with 58 or 68.2 percent of the 85 daytime sample in this category. Night students who were single comprised 54.1 percent of the night class group with a total of 46 subjects. This formed the largest group.

The combined group (day and night students) had 104 single subjects for 61.2 percent and 65 married students for 38.2 percent. The data collected by OSUTI did not indicate whether a student was divorced or widowed.

TABLE II

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR
DAY STUDENTS AND NIGHT STUDENTS BY SEX

Sex	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Male	44	51.8	54	63.5	98	57.6
Female	41	48.2	31	36.5	72	42.6
Total	85		85		170	

TABLE III

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR DAY STUDENTS AND NIGHT STUDENTS BY MARITAL STATUS

Marital Status	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Single	58	68.2	46	54.1.	104	61.2
Married	27	31.8	38	44.7	65	38.2
Not Reported	0	0.0	1	1.2	1	0.6
Total	85		85		170	

Race

Findings as shown in Table IV indicate that the largest majority (76 or 89.4 percent) of the day students were White, non-Hispanic. The Black, non-Hispanic students enrolled for day classes totaled four students (4.7 percent), and Hispanic, Asian, American Indian, and non-resident Alien groups were represented with a combined total of five students (5.9 percent).

The night class group was composed of 76 White, non-Hispanic students, or 89.4 percent, which comprised the largest racial category. The percentage of Black, non-Hispanic students in this group was 5.9 percent (five students). There was a combined total of four Asian, and American Indian students, or 4.7 percent.

The combined group (day and night students) was composed of 89.4 percent (152) White, non-Hispanic students. Non-resident Alien was the smallest group with one students or 0.6 percent. The Black, non-Hispanic category for the combined groups totaled nine (5.3 percent), followed by four American Indians (2.4 percent), two Asians, (1.2 percent) and two Hispanics (1.2 percent).

Geographic Location

The findings reported in Table V indicate that the majority of the day students, 62 (72.9 percent), originate from within Oklahoma County. The border counties included 14 students, or 16.5 percent, with other Oklahoma counties having four (4.7 percent) students and five (5.9) out-of-state students. The night students also originated from Oklahoma

TABLE IV

FREQUENCY DISTRIBUTION AND PERCENTAGES OF DAY STUDENTS AND NIGHT STUDENTS BY RACE

Race	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Non-resident Ailen	1	1.2	0	0	1	0.6
Black, non-Hispanic	4	4.7	5	5.9	9	5.3
American Indian	1	1.2	3	3.5	4	2.4
Asian	1	1.2	1	1.2	2	1.2
Hispanic	2	2.4	0	0	2	1.2
White, non-Hispanic	76	89.4	76	89.4	152	89.4
Refuse to Indicate	0	0	0	0	0	0
Total	85		85		170	

TABLE V

FREQUENCY DISTRIBUTION AND PERCENTAGES OF DAY STUDENTS AND NIGHT STUDENTS BY GEOGRAPHIC LOCATION

Geographic Location	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Oklahoma County	62	72.9	74	84.7	134	78.8
Border Counties *	14	16.5	10	11.8	24	14.1
Other Oklahoma Counties	4	4.7	0	0.0	4	2.4
Out-of-State	5	5.9	3	3.5	8	4.7
Total	85		85		170	

*Border Counties: Cleveland, Canadian, Kingfisher, Logan, Lincoln, and Pottawatomie

County, 72 or 84.7 percent. Border counties included 10 students (11.8 percent) with other Oklahoma counties having zero, and out-of-state having three students (3.5 percent).

In describing the areas from which heavy influxes of students originated for the combined group, Oklahoma County was the major area with 134 total students (78.8 percent). The next largest category, other border categories, was represented with a total of 24 students (14.1 percent). Other Oklahoma counties provided four students (2.4 percent) and out-of-state provided eight or 4.7 percent.

Academic Variables

School of Enrollment

The school of enrollment of the subjects is presented in Table VI. The largest school academic major area for day students was Engineering Technology with 34.1 percent (29 students), followed by the Business Technology with 28.2 percent (24 students). The smallest technology indicated was Human Services with 2.4 percent (2 students).

The night class group enrolled the highest percentage of students in Engineering Technology with 47.1 percent (40 students). Second largest in night class enrollment was the Business Technology with 28.2 percent of the population (24 students). Pre-technology was third with 11.8 percent or 10 students.

The combined group (day and night students) was found to be most heavily represented in Engineering Technology with 69 students (40.6 percent), followed by the Business Technology with 48 students (28.2 percent). The Human Services Technology included the smallest percentage

of the combined group with seven students (4.1 percent).

The data presented in Table VI reveal that 17 students (10 percent) of the total study were enrolled as pre-technology or undeclared majors. Some students may have selected a technology for concentration without enrolling in one of the associate degree programs.

Academic Subdivisions

The academic subdivison of students is presented in Table VII. Day students were enrolled primarily in three major academic subdivisons: electronics engineering, 17 students (20 percent); nurse science, 17 (20 percent); and computer programming-business, 12 students, (14.1 percent). Academic subdivisons for day students which were least often selected were computer programming-scientific, one (1.2 percent); civil technology, one (1.2 percent); surveying, one (1.2 percent); industrial drafting and design, one (1.2 percent); and instrumentation, one (1.2 percent). No students from the day sample selected computer operations management, biomedical electronics, environmental safety, fire protection environmental safety, municipal fire protection, or general engineering.

Night students as shown in Table VII were also enrolled in three major academic subdivisions: electronics engineering, 14 students (16.6 percent); computer programming-accounting, 10 students (11.8 percent); and pre-technology, 10 students (11.8 percent). Academic subdivisions for night students which were least often selected were computer operations management, one (1.2 percent); computer programming systems analysis, one (1.2 percent); and general engineering, one (1.2 percent). Among the night students sampled, there wre no selections made from the computer programming scientific, surveying, biomedical electronics, environmental

TABLE VI

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR DAY STUDENTS AND NIGHT STUDENTS BY SCHOOL OF ENROLLMENT

School of Enrollment	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Business Tech	24	28.2	24	28.2	48	28.2
Engineering Tech	29	34.1	40	47.1	69	40.6
Agriculture Tech	4	4.7	4	4.7	8	4.7
Nursing	19	22.4	2	2.4	21	12.4
Human Services	2	2.4	5	5.9	7	4.1
Pre-Technology	7	8.2	10	11.8	17	10.0
One-Year Certificate	0	0	0	0	0	0
Total	85		85		170	

TABLE VII

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR DAY STUDENTS AND NIGHT STUDENTS BY ACADEMIC SUBDIVISION

Subdivision	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Arch/Const Tech.	4	4.7	5	5.9	9	5.3
Computer Operations Mgmt.	0	0	1	1.2	1	0.6
Computer Programming	3	3.5	5	5.9	8	4.7
Accounting	6	7.1	10	11.8	16	9.4
Business	12	14.1	7	8.2	19	11.2
Scientific	1	1.2	0	0	1	0.6
Systems Analysis	2	2.4	1	1.2	3	1.8
Civil Technology	1	1.2	4	4.7	5	2.9
Surveying	1	1.2	0	0	1	0.6
Biomedical Electronics	0	0	0	0	0	0
Electronics Engineering	17	20.0	14	16.5	31	18.2
Environmental Safety	0	0	0	0	0	0
Fire Prot. Envr. Safety	0	0	0	0	0	0
Municipal Fire Protection	0	0	2	2.4	2	1.2
General Engineering	0	0	1	1.2	1	0.6
Horticulture	4	4.7	4	4.7	8	4.7
Ind. Draft & Design	1	1.2	4	4.7	5	2.9
Instrumentation	1	1.2	5	5.9	6	3.5
Nurse Science	17	20.0	0	0	17	10.0
Pre-nursing	2	2.4	2	2.4	4	2.4
Oil & Gas Field Mgmt.	2	2.4	4	4.7	6	3.5
Police Science	2	2.4	3	3.5	5	2.9
Pre-Technology	7	8.2	10	11.8	17	10.0
Technical Writing	2	2.4	3	3.5	5	2.9
Total	85		85		170	

safety, fire protection environmental safety, and nurse science areas for night students.

The combined group (day and night students), as indicated in Table VII were most heavily represented in electronics engineering with 31 students (18.2 percent), followed by computer programming-business with 19 students (11.2 percent), nurse science, 17 students (10 percent), pre-technology, 17 students (10 percent), and computer programming-accounting, 16 students (9.4 percent). The least indicated academic subdivisions were computer operations management, one student (0.6 percent); computer programming-scientific, one (0.6 percent); surveying, one student (0.6 percent); and general engineering, one (0.6 percent).

Student Admission Status

The admission status for day students indicated in Table VIII reveals that the largest frequency for day students was the new student category with 43 students, (50.6 percent) and followed by the continuing student category--uninterrupted enrollment--with 42 students (49.4 percent). Continuing students formed the largest night category with 52 students (61.2 percent), contrasted with the new student group, 33 (38.8 percent).

The combined groups (day and night students) were composed primarily of continuing students. There were 94 (55.3 percent) of the subjects who were in this category.

Classification

The classification of students is presented in Table IX. Freshmen accounted for 46 students (54.1 percent) of the day class sample.

TABLE VIII

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR DAY STUDENTS AND NIGHT STUDENTS BY ADMISSION STATUS

Admission Status	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Continuing	42	49.4	52	61.2	94	55.3
New	43	50.6	33	38.8	76	44.7
Total	85		85		170	

TABLE IX

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR DAY STUDENTS AND NIGHT STUDENTS BY CLASSIFICATION

Classification	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Freshmen	46	54.1	35	41.2	81	47.7
Sophomore	39	45.9	50	58.8	89	52.4
Graduate	0	0	0	0	0	0
Unclassified	0	0	0	0	0	0
Total	85		85		170	

Sophomores represented a total of 39 students (45.9 percent). None of the day students indicated graduate or unclassified status.

Night student sophomores accounted for 50 students (58.8 percent) of the population and freshmen accounted for 35 students (41.2 percent). None of the night students indicated graduate or unclassified status.

The largest classification for the combined group (day and night students) as presented in Table IX was sophomores. There were 89 sophomores, or 52.4 percent, and 81 freshmen, or 47.7 percent.

Official Withdrawal

The official withdrawal numbers from the Technical Institute for both groups of students are presented in Table X. Although it was not possible to account for those students who withdrew during the first month of the academic term, it is revealed in the findings that eight students (9.4 percent) officially withdrew from the day student group and 19 (22.4 percent) officially withdrew from the night student group. According to the information in the computer printout, a certain number of students officially withdrew from classes by voluntarily discontinuing class attendance. Therefore, it seems there is a greater tendency to withdraw when enrolled in night-time classes than that of day-time classes.

Course Load

The frequency distributions for the amount of academic credit (course load) for both the day students and the night students are presented in Table XI. The course load interval with the largest concentration of day students was six semester hours with 16 students or 18.8 percent of the sample. Second largest, the 13 semester hour

TABLE X

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR DAY STUDENTS AND NIGHT STUDENTS BY WITHDRAWAL STATUS

Withdrawal Status	Day		Night		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
NotWithdrawn	77	90.6	66	77.7	143	84.1
Withdrawn	8	9.4	19	22.4	27	15.9
Total	85		85		170	

TABLE XI

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR DAY STUDENTS AND NIGHT STUDENTS BY COURSE LOAD

Hours	Day N=85		Night N=85		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
21.0	1	1.2	1	1.2	2	1.2
20.0	1	1.2	0	0	1	0.6
19.0	1	1.2	0	0	1	0.6
18.0	1	1.2	0	0	1	0.6
17.0	3	3.5	0	0	3	1.8
16.0	4	4.7	2	2.4	6	3.5
15.0	4	4.7	1	1.2	5	2.9
14.0	5	5.9	2	2.4	7	4.1
13.0	9	10.6	4	4.7	13	7.7
12.0	8	9.4	4	4.7	12	7.1
11.0	5	5.9	3	3.5	8	4.7
10.0	5	5.9	4	4.7	9	5.3
9.0	1	1.2	5	5.9	6	3.5
8.0	7	8.2	1	1.2	8	4.7
7.0	4	4.7	1	1.2	5	2.9
6.0	16	18.8	17	20.0	33	19.4
5.0	1	1.2	2	2.4	3	1.8
4.0	4	4.7	16	18.8	20	11.8
3.0	5	5.9	22	25.9	27	15.9
2.0	0	0	0	0	0	0
1.0	0	0	0	0	0	0
0.0	0	0	0	0	0	0
Mean	10.19		6.72			
Standard Deviation	4.45		4.03			

course load interval, accounted for 10.6 percent (nine students). No day students audited classes and eight students (9.4 percent) were enrolled in 12 semester hours which is considered to be full-time student enrollment.

As a measure of central tendency, the mean for the course load carried by the day student sample was 10.19 semester hours with the standard deviation of 4.45. Marking the modal interval, the course load of 6.0 hours occurred for 16 day students, or 18.8 percent.

The course load interval with the largest number of night students was three semester hours with 25.9 percent of the population. Second largest, the six semester hour couse load interval, accounted for 20 percent (17) of the group. There were no students who audited classes exclusively and 4.7 percent (4) students carried a course load of 12 semester hours. The mean course load carried by the night student group was 6.72 semester hours with a standard deviation of 4.03.

The combined group (day and night students) was composed of 19.4 percent (33) enrolled for six semester hours, followed by the course load interval three semester hours which totaled 15.9 percent or 27 students. The course load intervals with fewest entries for the combined group were 20, 19, and 18 semester hours with one student (0.6), respectively,

Spring Grade Point Average

The spring grade point for both day and night students are presented in Tabel XII. The grades are based on an A=4.00 scale. The day students produced a mean of 2.71 and a standard deviaiton of 1.20 accounting for the largest cluster of subjects the 3.000-3.499 and the

TABLE XII

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR DAY STUDENTS AND NIGHT STUDENTS BY GRADE POINT AVERAGE

Grade Point Average	Day N=85		Night N=85		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
0.000-0.499	6	7.8	3	4.7	9	6.4
0.500-0.999	1	1.3	0	0.0	1	0.7
1.000-1.499	4	5.2	6	9.4	10	7.1
1.500-1.999	4	5.2	2	3.1	6	4.3
2.000-2.499	14	18.2	7	10.9	21	14.9
2.500-2.999	4	5.2	3	4.7	7	5.0
3.000-3.499	19	24.7	21	32.8	40	28.4
3.500-3.999	6	7.8	1	1.6	7	5.0
4.000	19	24.7	21	32.8	40	28.4
Mean	2.71		2.89			
Standard Deviation	1.20		1.14			

4.000 for enrolled day students had the same number of students with 19 (24.7 percent). In the range accounting for the second highest interval of concentration, the 2.000-2.499 category for day students accounted for 18.2 percent (14 students). The 0.000-0.499 bracket for grade point average distribution included 7.8 percent (6 students) who enrolled in courses but failed to pass them, therefore, not making a grade point for the course.

Night students achieved a mean of 2.89 with a standard deviation of 1.14 and a cluster around the interval of 3.000-3.499 and 4.000 with 21 students and 32.8 percent each. The second highest bracket for enrolled night students was 2.000-2.499 with 10.9 percent (7) of the sample recorded. The 0.000-0.499 bracket for grade point average distribution included 4.7 percent (three students) who enrolled in courses but failed to pass them, therefore, not making a grade point for the course. One night student audited courses during this semester.

The combined group (day students and night students) established the same grade point average interval 3.000-3.499 with 40 subjects and 4.000 with 40 subjects or 28.4 percent each, followed by interval 2.000-2.499 with 21 students. The least number of subjects in the combined group was in the 0.500-0.999 interval with one subject or 0.7 percent.

American College Test Composite Score

The frequency distribution for the American College Test (ACT) composite scores of day and night students as shown in Table XIII revealed that 49 day students were not required to have scores for admission. It is inferred that the group that entered withour scores were

TABLE XIII

FREQUENCY DISTRIBUTION AND PERCENTAGES FOR DAY STUDENTS AND NIGHT STUDENTS BY ACT COMPOSITE SCORES

Score	Day N=85		Night N=85		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
36	0	0	0	0	0	0
35	0	0	0	0	0	0
34	0	0	0	0	0	0
33	0	0	0	0	0	0
32	0	0	0	0	0	0
31	0	0	0	0	0	0
30	0	0	0	0	0	0
29	2	5.6	0	0	2	3.3
28	1	2.8	2	8.3	3	5.0
27	3	8.3	0	0	3	5.0
26	1	2.8	1	4.2	2	3.3
25	1	2.8	0	0	1	1.7
24	1	2.8	1	4.2	2	3.3
23	1	2.8	3	12.5	4	6.7
22	2	5.6	0	0	2	3.3
21	2	5.6	0	0	2	3.3
20	4	11.1	1	4.2	5	8.3
19	1	2.8	3	12.5	4	6.7
18	2	5.6	5	20.8	7	11.7
17	1	2.8	3	12.5	4	6.7
16	3	8.3	0	0	3	5.0
15	2	5.6	1	4.2	3	5.0
14	1	2.8	0	0	1	1.7
13	1	2.8	1	4.2	2	3.3
12	1	2.8	1	4.2	2	3.3
11	1	2.8	1	4.2	2	3.3
10	1	2.8	0	0	1	1.7
9	1	2.8	1	4.2	2	3.3
8	1	2.8	0	0	1	1.7
7	1	2.8	0	0	1	1.7
6	1	1.0	1	1.0	1	1.0
5	1	2.8	0	0	1	1.7
Total	36		24		60	
No Score	49		61		110	
Mean	18.61		18.88			
Standard Deviation	6.46		4.86			

21 years or older or have transferred from another school with at least 12.0 or more semester hours. This information indicates that night students have a far greater tendency to enter as transfer students than as new freshmen.

The ACT data are presented for descriptive purposes to show the frequency distribution, percentage, mean, and standard deviation. The mean ACT score for 36 day students was 18.61 with a standard deviation of 6.46. Marking the modal interval for ACT score distribution four subjects (11.1 percent) of the enrolled day students achieved a composite of 20. There were 49 students who enrolled through procedures other than ACT.

Night school students who reported scores (24) were found to have a mean of 18.88 with a standard deviation of 4.86. There were 61 students enrolled for night school through other methods of admission. It is interesting to note that of the total number of ACT scores 28 and greater, five (8.3 percent), generally thought to be outstanding students, approximately three-fifths (three students; 1.8 percent) were day students although night students were not as apt to enter with scores.

Analysis of Personal Characteristics

The previous portion of this chapter provided a description of the two groups of students utilized in the study in regard to 13 variables. This portion of the chapter examines the two groups to determine if significant differences exist relative to the 13 variables and presents profiles of the two groups based on the variables that show significant differences. The independent t-test was used for

those variables comprised of interval data and the Chi-square test of independence was used for those variables measured on a nominal scale.

The analysis of data used in answering the research question is presented in Table XIV. As noted in the table, the average age of the day students was 26.8, while the average age of the night students was 30.8. The difference between these two means was 3.96 years. The independent t-test produced a t value of 1.01 (df=168) which was not statistically significant at the .05 level. This funding indicates that the two groups of students, day students and night students, were not different with regard to age.

The analysis of data used in answering the research question is shown in Table XV. As noted in the table, the Chi-square test of independence was used to test the frequency of occurrence. The difference between the observed and expected frequencies produced a Chi-square of 1.95 (df=1), which was not statistically significant at the .05 level. This result indicates that the two groups of students, day students and the night students, were not significantly different in regard to observed and expected frequencies.

The analysis of data used in answering the research question is presented in Table XVI. As noted in the table, the Chi-square test of independence was used to test the frequency occurence. The difference between the observed and expected frequencies produced a Chi-square of 3.75 (df=2), which was not statistically significant at the .05 level. This result indicated that the two groups of students, day students and the night students, were not significantly different in regard to observed and expected frequencies and marital status.

The analysis of data used in answering the research question is

TABLE XIV

RESULTS OF t-TEST ON THE AGE OF DAY STUDENTS AND NIGHT STUDENTS

Group No.	Group	Subjects N	$\bar{X}$	Diff. Bet. Means	df	t
1	Day	85	26.8			
				3.96	168	1.01
2	Night	85	30.8			

Critical value at .05 level of significance = 1.96

TABLE XV

CHI-SQUARE ANALYSIS OF THE FREQUENCY OF OCCURRENCE BY REGISTRATION STATUS AND SEX

		Registration Status				
		Day		Night		Total
Sex		Observed	Expected	Observed	Expected	Number
Male	N	44	42.5	54	42.5	98
	%	51.8	25.9	63.5	31.7	
Female	N	41	42.5	31	42.5	72
	%	48.2	24.1	36.5	18.2	
Total		85		85		170

Chi-square value=1.95

df=1, x^2 critical value .05 = 3.84

TABLE XVI

CHI-SQUARE ANALYSIS OF THE FREQUENCY OF OCCURRENCE BY REGISTRATION STATUS AND MARITAL STATUS

Marital Status		Registration Status: Day Observed	Day Expected	Night Observed	Night Expected	Total Number
Single	N	58	52	42	52	104
	%	68.3	34.1	54.1	27.1	
Married	N	27	32.5	38	32.5	65
	%	31.8	15.9	44.7	22.4	
Other	N	0	0.5	1	0.5	1
	%	0.0	0.0	1.2	0.6	
Total		85		85		170

Chi-Square value = 3.75

df=2, x^2 critical value .05 = 5.99

shown in Table XVII. As noted in the table, the Chi-square test of independence was used to test the frequency of occurrence. The difference between the observed and expected frequencies produced a Chi-square of .001 (df=1), which was not statistically significant at the .05 level. This result indicated that the two groups of students, day students and night students, were not significantly different in regard to observed and expected frequencies of registration status and race.

The analysis of data used in answering the research question is indicated in Table XVIII. As noted in the table, the Chi-square test of independence was used to test the frequency of occurrence. The difference between the observed and expected frequencies produced a Chi-square of 5.91 (df=3), which was not statistically significant at the .05 level. This result indicated that the two groups of students, day students and night students, were not significantly different in to observed and expected frequencies and geographic location.

Analaysis of Academic Variables

The analysis of data used in answering the research question is presented in Table XIX. As noted in the table, the Chi-square test of independence was used to test the frequency of occurrence. The difference between the observed and expected frequencies produced a Chi-square of 19.64 (df=5), which was statistically significant at the .05 level. These results indicate that the two groups of students, day students and night students, were significantly different in regard to observed and expected frequecies and school of enrollment.

The observed frequencies illustrate the difference between the

TABLE XVII

CHI-SQUARE ANALYSIS OF THE FREQUENCY OF OCCURRENCE BY REGISTRATION STATUS AND RACE

		Registration Status				
		Day		Night		Total
Race		Observed	Expected	Observed	Expected	Number
White	N	76	76	76	76	152
	%	89.4	44.7	89.4	44.7	
Non White	N	9	9	9	9	18
	%	10.6	5.3	10.6	5.3	
Total		85		85		170

Chi-square value = .001

df=1, x^2 critical value = 3.84

TABLE XVIII

CHI-SQUARE ANALYSIS OF THE FREQUENCY OF OCCURRENCE BY REGISTRATION STATUS AND GEOGRAPHIC LOCATION

Geographic Location		Registration Status: Day Observed	Day Expected	Night Observed	Night Expected	Number
Oklahoma County	N	62	67	72	67	134
	%	72.9	36.5	84.7	42.4	
Border Counties	N	14	12	10	12	24
	%	16.5	8.2	11.8	5.9	
Other Counties in Oklahoma	N	4	2	0	2	4
	%	4.7	2.4	0.0	0.0	
Out-of-State	N	5	4	3	4	8
	%	5.9	2.9	3.5	1.8	
Total		85		85		170

Chi-square value = 5.91

df = 3, x^2 critical value .05 = 7.81

TABLE XIX

CHI-SQUARE ANALYSIS OF THE FREQUENCY OF OCCURRENCE BY REGISTRATION STATUS AND SCHOOL OF ENROLLMENT

School of Enrollment		Registration Status: Day Observed	Day Expected	Night Observed	Night Expected	Number
Business Technology	N	24	24.0	24	24.0	48
	%	28.2	14.1	28.2	14.1	
Engineering Technology	N	29	34.5	40	34.5	69
	%	34.1	17.1	47.1	23.5	
Agriculture Technology	N	4	4.0	4	4.0	8
	%	4.7	2.4	4.7	2.4	
Nursing	N	19	10.5	2	10.5	21
	%	22.4	11.2	2.4	1.2	
Human Service	N	2	3.5	5	3.5	7
	%	2.4	1.2	5.9	2.9	
Pre-Tech-nology	N	7	8.5	10	8.5	17
	%	8.2	4.1	11.8	5.9	
Total		85		85		170

Chi-square value = 19.64

df = 5, x^2 critical value .05 = 11.07

number of day students and night students enrolled as related to school of enrollment. The majority of day students, 29 (34.1 percent), and the majority of the night students, 40 (47.1 percent), were both enrolled in Engineering Technology. More students were enrolled in engineering technologies at night than in the day. The least number of students enrolled in the day time, two (2.4 percent), were enrolled in the Human Services Technology and the least number of students enrolled in the night time, two (2.4 percent), were enrolled in the Nursing Technology.

The anslysis of data used in answering the research question is presented in Table XX. As noted in the table, the Chi-square test of independence was used to test the frequency of occurrence. The difference between the observed and expected frequencies produced a Chi-square of 0.261 (df=1), which was not statistically significant at the .05 level. This result indicated that the two groups of students, day and night, were not significantly different in regard to observed and expected frequencies and major classification.

The analysis of data used in answering the research question is shown in Table XXI. As noted in the table, the Chi-square test of independence was used to test the frequency of occurrence. The difference between the observed and expected frequencies produced a Chi-square of 1.93 (df=1), which was not statistically significant at the .05 level. The results indicated that the two groups of students, day and night, were not significantly different in regard to observed and expected frequencies and student admission status.

The analysis of data used in answering the research question is indicated in Table XXII. As noted in the table, the Chi-square test

TABLE XX

CHI-SQUARE ANALYSIS OF THE FREQUENCY OF OCCURRENCE BY REGISTRATION STATUS AND MAJOR CLASSIFICATION

Major Classification		Registration Status: Day Observed	Day Expected	Night Observed	Night Expected	Number
Declared Major	N	78	76.5	75	76.5	153
	%	91.8	45.9	88.2	44.1	
Undeclared Major	N	7	8.5	10	8.5	17
	%	8.2	4.1	11.8	5.9	
Total		85		85		170

Chi-Square Value = 0.261

df = 1, x^2 critical value .05 = 3.84

TABLE XXI

CHI-SQUARE ANALYSIS OF THE FREQUENCY OF OCCURRENCE BY REGISTRATION STATUS AND STUDENT ADMISSION STATUS

Student Admission Status		Registration Status: Day Observed	Day Expected	Night Observed	Night Expected	Number
Continuing Student	N	42	47.0	52	47.0	94
	%	49.4	24.7	61.2	30.6	
New Student	N	43	38.0	33	38.0	76
	%	50.6	25.3	38.8	19.4	
Total		85		85		170

Chi-square value = 1.93

df = 1, x^2 critical value .05 = 3.84

TABLE XXII

CHI-SQUARE ANALYSIS OF THE FREQUENCY OF OCCURRENCE BY REGISTRATION STATUS AND CLASSIFICATION

		Registration Status				
		Day		Night		
Classification		Observed	Expected	Observed	Expected	Number
Freshman	N	46	40.5	35	40.5	81
	%	54.1	27.1	41.2	20.6	
Sophomore	N	39	44.5	50	44.5	89
	%	45.9	22.9	58.8	29.4	
Total		85		85		170

Chi-square value = 2.36

df = 1, x^2 critical value .05 = 3.84

of independence was used to test the frequency of occurrence. The difference between the observed and expected frequencies produced a Chi-square of 2.36 (df=1), which was not statistically significant at the .05 level. This result indicated that the two groups of students, day and night, were not significantly different in regard to observed and expected frequencies and classification.

The analysis of data used in answering the research question is presented in Table XXIII. As noted in the table, the Chi-square test of independence was used to test the research question. The difference between the observed and expected frequencies produced a Chi-square of 4.40 (df=1), which is statistically significant at the .05 level. These results indicate that the two groups of students, day and night, were significantly different in regard to observed and expected frequencies and official withdrawal.

The observed frequencies illustrate the similarity between the number of day students and night students in conjunction with official withdrawals. Exactly 84.1 percent (143) of the combined group, day and night students, completed the semester, whereas precisely 15.9 percent (27) of both groups did withdraw officially. Therefore, the tendency to withdraw from school is affected by whether a student is a day student or a night student.

The analysis of data used in answering the research question is indicated in Table XXIV. As noted in the table, the average course load of the day students was 10.19 and the average course load of the night students was 6.72. The difference between these two means was 3.47. The independent t-test produced a t value of 2.97 (df=168), which is statistically significant at the.05 level. This finding

TABLE XXIII

CHI-SQUARE ANALYSIS OF THE FREQUENCY OF OCCURRENCE BY REGISTRATION STATUS AND OFFICIAL WITHDRAWALS

Official Withdrawals		Registration Status: Day Observed	Day Expected	Night Observed	Night Expected	Number
Not Withdrawn	N	77	71.5	66	71.5	143
	%	90.6	45.3	77.6	38.8	
Withdrawn	N	8	13.5	19	13.5	27
	%	9.4	4.7	22.4	11.2	
Total		85		85		170

Chi-square value = 4.40

df = 1, x^2 critical value .05 = 3.84

TABLE XXIV

RESULTS OF t TEST ON THE COURSE LOAD OF DAY STUDENTS AND NIGHT STUDENTS

Group No.	Group	N	$\overline{X}$	Diff. Bet. Means	df	t
1	Day	85	10.19			
				3.47	168	2.97*
2	Night	85	6.72			

Critical value at .05 level of significance t = 1.96
*Significant at .05 level

indicates that the two groups of students were significantly different with regard to course load.

Day students enrolled for almost twice as many hours as did night students. Thus, the findings that day students carried almost twice as many hours as did night students is too large a difference to be attributable to just chance sampling factors alone. Consequently, it must be concluded that there exists a strong tendency for night students to take well below the minimum number of hours required for being classified as a full-time student.

The analysis of data used in answering the research question is presented in Table XXV. As noted in the table, the average grade point average of the day students was 2.71, while the average grade point of the night students was 2.89. The difference between these two means was 0.18. The independent t-test produced a t value of .438 (df=139), which was not statistically significant at the .05 level. This finding indicates that the two groups of students were not different with regard to final grade point average.

The analysis of data used in answering the research question is presented in Table XXVI. As noted in the table, the average day student's score was 18.61 while the average score of the night student was 18.88. The difference between those two means was 0.27. The independent t-test produced a t value of .057 (df=58), which was not statistically significant at the .05 level. This finding indicates that the two groups of students were not significantly different with regard to the American College Test Composite Score.

TABLE XXV

RESULTS OF t TEST ON THE FINAL GRADE POINT AVERAGE OF DAY STUDENTS AND NIGHT STUDENTS

Group No.	Group	N[a]	$\overline{X}$	Diff. Bet. Means	df	t
1	Day	77	2.71			
				0.18	139	.438
2	Night	64	2.89			

Critical value at .05 level of significance t = 1.96

[a]The df is smaller because some students withdrew or dropped out of courses

TABLE XXVI

RESULTS OF t TEST ON THE AMERICAN COLLEGE TEST COMPOSITE SCORE OF DAY STUDENTS AND NIGHT STUDENTS

Group No.	Group	N[a]	$\overline{X}$	Diff. Bet. Means	df	t
1	Day	36	18.61			
				0.27	58	.057
2	Night	24	18.88			

Critical value at .05 level of significance t = 2.00

[a]ACT composite scores were available on only 60 students

Summary

The typical day student and the typical night student were characterized from statistics and parameters obtained in the descriptive data. A summary of the demographic characteristics of the day student group and the demographic characteristics of the night student group is presented below. A profile of the results between registration status and other variables is provided in Table XXVII.

Day Student

The typical day student was a White, non-Hispanic, single male, almost 27 years of age. He originated from within Oklahoma County. The school of enrollment most often chosen by this typical student was the school of Engineering Technology with Electronics Engineering as his academic subdivision. He carried 10.19 semester hours per semester, earned a spring grade point average of 2.71, and his ACT composite score was 18.61. He was a new student, classified as a freshman.

Night Student

The typical night student was a White, non-Hispanic, single male, 30.75 years of age from Oklahoma County. He most often selected the school of Engineering Technology with his academic subdivision being Electronics Engineering. He was a continuing sophomore carrying an average of 6.22 semester hours. He earned a GPA of 2.89 and had an ACT composite score of 18.88.

TABLE XXVII

PROFILE OF RESULTS OF STATISTICAL TESTS CONDUCTED
REGISTRATION STATUS AND OTHER VARIABLES

Name of the Variable	Variable Characteristic Name
Statistically Significant Variables	
School of Enrollment	Academic
Official Withdrawals	Academic
Course Load	Academic
Statistically Non-significant Variables/Characteristics	
Age	Personal
Sex	Personal
Marital Status	Personal
Race	Personal
Geographic Location	Personal
Major Classification	Academic
Student Admission Status	Academic
Classification	Academic
Spring Grade Point Average	Academic
American College Test Composite Score	Academic

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Discussion in this chapter is presented in three parts. The first section presents a summary of the study. The researcher's conclusions are presented in the second section. Implications for further research are presented in the third section of the paper.

Summary

The purpose of this study was to compare two-year students attending night classes at Oklahoma State University Technical Institute in Oklahoma City, Oklahoma during the spring semester of 1983 with students attending the Institute as day students regarding the registration/advisement procedures. Results of the study should assist in future decision making to improve registration/advisement procedures. The study sought to answer the following questions:

1. What are the personal characteristics of the two groups of students?

2. What are the academic variables of the two groups of students?

3. Is there a significant difference between the two groups of students in regard to personal characteristics?

4. Is there a significant difference between the two groups of students regarding academic variables?

5. What is the profile of the two groups based upon the characteristics found to be significantly different?

The subjects for this study were selected by a random sample of those students who were enrolled for the spring semester, 1983. This group of subjects were then divided into those who attended classes as day students and those who attended as night students. A total of 85 students were selected from each group. The demographic information used in this study was collected from the computer at Oklahoma State University Technical Institute.

The Chi-square test of independence was used to analyze the relationship between the nominal variables of sex, marital status, race, geographic location, college or school of enrollment, major classification, official withdrawals, and the registration status of the subjects.

The independent t-test was used to determine whether or not significant differences existed between the day and night students on the interval data for age, grade point average, course load and ACT composite score.

Conclusions

A basic research question was formulated for the study which resulted in the development of 13 research questions. The research questions were formulated from the personal characteristics and academic variables originally used in the study. Two major statistical techniques were used to test the research questions: The Chi-square test for nominal data and the independent t-test for interval data. The use of these tests resulted in the following three significant results.

1. There is a significant difference between students registered as day students and those registered as night students with regard to school of enrollment.

2. There is a significant difference between students registered as day students and those registered as night students with regard to official withdrawals.

3. There is a significant difference between students registered as day students and those registered as night students with regard to course load.

Use of these tests on the research questions resulted in the following ten non-significant results:

1. There are no significant differences between students registered as day students and those registered as night students with regard to age.

2. There are no significant differences between students registered as day students and those registered as night students with regard to sex.

3. There are no significant differences between students registered as day students and those registered as night students with regard to marital status.

4. There are no significant differences between students registered as day students and those registered as night students with regard to race.

5. There are no significant differences between students registered as day students and those registered as night students with regard to geographic location.

6. There are no significant differences between students registered as day students and those registered as night students with regard to major classification.

7. There are no significant differences between students registered as day students and those registered as night students with regard to admission status.

8. There are no significant differences between students registered as day students and those registered as night students with regard to classification.

9. There are no significant differences between students registered as day students and those registered as night students with regard to grade point average.

10. There are no significant differences between students registered as day students and those registered as night students with regard to American College Test Composite Score.

The descriptive and inferential findings of this study have justified certain general conclusions. The three statistically significant academic variables will be discussed below.

There was a statistically significant relationship between school of enrollment and registration status. Night students had a tendency to enroll in engineering technology. This may be partly due to the fact that OSUTI is located in a large metropolitian area and a large majority of the courses offered at OSUTI, especially at night, are engineering related courses.

The largest school of enrollment for day students was also the engineering technology. This also may be due to the fact that there are large numbers of engineering related courses offered during the day,

since OSUTI is a technical school most of the day student enrollment consisted of non-working full-time students and recent high school graduates.

Official withdrawals were evidenced more for the night student than they were for the day student. It can be concluded that withdrawing was not a problem at OSUTI during the spring semester of 1983 for day students or night students. The data relate to the fact that night students are primarily older and married and who probably have other responsibilities. Day students can be interpreted as being more free of other pressures and responsibilities and could, therefore, enroll for more course work. This is evidenced in the fact that the average course load for day students is almost twice as much as it is for night students.

As a result of these responses two conclusions can be drawn. The registration/advisement process, as it exists at the present time adequately serves the needs of both the day student and the night student. Also, it is important that careful consideration be given to night course scheduling in regard to course load.

Implications for Practice and Research

Recommendations for Practice

The results of this study suggest implications for future practice in Oklahoma State University Technical Institute:

1. Since a large number of night school students have declared engineerng technology, departments should provide a well-rounded degree curriculum within the Institute's night program.

2. The procedures for procuring registration materials and obtaining proper advisement should be made readily available after 5:00 p.m. at such periods as it is appropriate since these students are likely to be employed during the regular work day.

3. A follow-up study of those students that withdraw should be conducted so that this information can be used in the retention of students.

4. Attention should be given to the night class scheduling procedure in regard to course load. Since the night class group was substantial, it would be appropriate that two night classes should be offered back to back rather than just one class per night.

Suggestions for Future Research

Additional research in the area of registration/advisement methods for the day student and the night student may result in more ways than one to improve the process to better meet the needs of the enrolling students. Listed below are some possible topics.

1. A survey of the perceptions of day students about the registration/advisement process they use compared with the same perceptions of evening students might lead to recommendations to adjust the registration/advisement process for one group or the other.

2. A study that compares part-time and full-time students who use the same registration/advisement process would identify which method better meets their needs.

3. A study of registration/advisement procedures used by other institutions could provide information that would be helpful during the registration/advisement process.

4. Extensive up-to-date research about the personal characteristics and academic variables of the adult learner should be conducted.

5. Research should be conducted on the population that is the fastest growing segment of higher education-women and part-time students.

6. Studies are needed which clarify the characteristics, needs, and interests of night school populations on a comprehensive basis.

7. Additional research on dropout students would provide insight into the possible reasons for leaving college.

8. Research related to the reapplying student should be conducted to determine common problems associated with the process of re-entry.

Education for tomorrow is changing as well as the need for education. More and more persons in ever increasing numbers are turning to education as a way of improving the quality of their lives. This study is an attempt at improving that quality.

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