

THE SIGNIFICANCE OF ATTENDANCE IN
RELATION TO SUCCESS AT THE
OKLAHOMA STATE UNIVERSITY
SCHOOL OF TECHNICAL
TRAINING

By

CARY JOE FOX

||
Bachelor of Science

East Central Oklahoma State University

Ada, Oklahoma

1971

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
requirements for
the Degree of
MASTER OF SCIENCE
December, 1981

Thesis
1981
F791s
cop. 2



THE SIGNIFICANCE OF ATTENDANCE IN
RELATION TO SUCCESS AT THE
OKLAHOMA STATE UNIVERSITY
SCHOOL OF TECHNICAL
TRAINING

Thesis Approved:

R. W. Drinnell

Thesis Adviser

Jerry H. Davis

Leif W. Ruggen

Norman N. Durkin

Dean of the Graduate College

ACKNOWLEDGMENTS

The writer wishes to express his gratitude to Dr. Richard W. Tinnell and others for their assistance and cooperation. Special thanks to Dr. Edwin S. Darby for his guidance and persistence.

The writer also wishes to express his thanks to his wife, Ida Nell, for her understanding, sacrifices and encouragement.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.	1
Statement of the Problem	2
Need for the Study	3
Purpose of the Study	4
Assumptions and Variables.	4
Definition	4
Hypotheses	5
II. REVIEW OF LITERATURE.	6
Summary.	10
III. METHODOLOGY	12
Selection of Students for Whom to Gather Data.	12
Selection of Method of Data Gathering.	14
Selection of Method of Statistical Review and Analysis.	15
Statistical Procedures	15
IV. RESULTS	18
V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.	26
Discussion of Results.	27
Recommendations.	29
SELECTED BIBLIOGRAPHY.	30

LIST OF TABLES

Table	Page
I. Graduate Statistics - Spring 1979, 1980, 1981 Totals Attendance/GPA - By Trimester	19
II. Graduate Statistics - Spring 1979, 1980, 1981 Attendance/GPA - By Department Ranked by Correlation Coefficient	21
III. Graduate Statistics - Spring 1979 Attendance/GPA - By Department Ranked by Correlation Coefficient	23
IV. Graduate Statistics - Spring 1980 Attendance/GPA - By Department Ranked by Correlation Coefficient	24
V. Graduate Statistics - Spring 1981 Attendance/GPA - By Department Ranked by Correlation Coefficient	25

CHAPTER I

INTRODUCTION

At every level of formal education, educators have historically stressed class attendance as a major factor influencing learning. In an attempt to find more effective methods of stimulating class attendance and regulating absences, educators have instituted various types of programs. The public school systems have employed individuals called truant officers to investigate the continued absences of pupils. Legislators have passed laws requiring mandatory school attendance through certain ages.

Higher education has followed much the same pattern of concern. In higher education, educators have devised various attendance policies, ranging from no attendance requirements to strictly structured policies restricting absences and have even lowered grades of noncomplying students. Since grades are the most common method of assigning a measure of success in a course, this latter policy presents an interesting paradoxical question, "should grades be lowered in order to raise grades?" Stated differently, is there a conflict, at least in the student's eyes, between the concept of encouraging attendance in order to stimulate learning and thus benefit the student through higher grades and the concept of actually

lowering grades for non-attendance.

Vocational-technical education has, in turn, inherited many of the traditional attendance concepts. Vocational-Technical educators feel that the "hands-on" nature of occupational training increases the need for continued involvement and reinforcement of training and thus increases the importance of attendance. Industrial representatives serving in advisory capacities to vocational-technical programs have continually stressed the importance of training employees who will be exemplary in job attendance.

The administration at the Oklahoma State University School of Technical Training (Oklahoma State Tech) has introduced various attendance policies over the last several years as a means of responding to the suggestions of its own advisory boards and interviewing employers concerning employer needs for graduates with good attendance patterns.

Statement of the Problem

Oklahoma State Tech has always emphasized the importance of good attendance in obtaining a better academic record as well as a work ethic that is highly regarded in the world of work. It is clear from the number of changing policies at Oklahoma State Tech that none have been entirely successful in instilling concern for attendance in the student body as a whole. It is also evident that varying opinions exist as to the need for a strict attendance policy. Indeed, there is a wide range of occupational skills taught at Oklahoma State

Tech and one campus wide policy may not closely fit the needs of every instructional department area.

The problem this study dealt with was the lack of information regarding the correlation between a student's attendance and success at Oklahoma State Tech.

Need for the Study

Although no statistics were systematically compiled and evaluated, it was noticeable to several instructors and staff personnel at the end of the 1979 Fall Trimester at Oklahoma State Tech that there was a distinct increase in the percentage of class failures, specifically in the General Education Department. At the same time it appeared that the average attendance also dropped sharply in the same areas. It was a cause for concern since any increase in failures will subsequently effect not only enrollment counts but graduation levels, institution-industrial relations, etc.

It could be significant that this increase in failures occurred approximately one year after the implementation of a new attendance policy. This loosely structured policy directly follows a very rigorously structured policy with specific limits on absences, appeals procedures, three-phased absence reporting, etc.

It could be beneficial to the administration to obtain information concerning the relationship, if any, between attendance and success at Oklahoma State Tech. Also, it could be beneficial for academic counseling if some information was available as to the relationship between

attendance and success throughout the instructional departmental areas at Oklahoma State Tech. This information could then be reviewed and interpreted as new policies are formulated.

Purpose of the Study

The purpose of this study was to determine if a relationship exists between class attendance at Oklahoma State Tech and success at Oklahoma State Tech.

Assumptions and Variables

The following assumptions were used in this study:

1. The grading system used by each instructor was assumed to be fundamentally the same, so that success could be measured by the 0 to 4.0 course grade system.
2. The students involved in the study were assumed to be representative of future graduates.
3. Each graduating student's attendance percentage was chosen as the independent variable. The dependent variable then was the grade point average achieved at the time of graduation.

Definition

For the purpose of this study the following definition is used:

Success at Oklahoma State Tech was defined in terms of

grade point average of graduates. Grades are recorded on a 1.0 - 4.0 scale with all failures being 0.0, and grade point averages are based on the 0 to 4.0 scale.

Statement of the Hypotheses

The following hypotheses were formulated to achieve the purpose of the study:

1. There is no statistically significant correlation between grade point averages of graduates and attendance percentages of graduates of Oklahoma State Tech.
2. There is no statistically significant correlation between attendance percentages and grade point averages within academic departments at Oklahoma State Tech, namely (a) Air Conditioning and Refrigeration, (b) Automotive Body and Paint, (c) Automotive Mechanics, (d) Building Construction, (e) Business Education, (f) Commercial Art, (g) Diesel and Heavy Equipment Mechanics, (h) Drafting, (i) Electronics, (j) Food Services, (k) Machinist, (l) Printing, and (m) Small Business Trades.

CHAPTER II

REVIEW OF LITERATURE

There are publications, surveys, and studies to be found concerning the cause and affect of poor attendance. Studies also can be found concerning the factors influencing grade point averages. There are very few, however, that take even a superficial look at the relationship existing between class attendance patterns and associated grade point averages. Those studies that can be found typically deal with high school students. Very few deal with college students, especially in the technical fields. The studies that can be found, however, are very good.

In the area of class attendance, much information can be found, especially concerning students who have taken absenteeism to the extreme, namely school dropouts. Stroup and Robins (21), along with numerous other analysts, have identified lists of early predictors of future dropouts. They conclude that

. . . the signs of impending dropouts are visible in elementary school. These signs are early failure, excessive absences, delinquency, drinking, interschool mobility, and low family encouragement to succeed in elementary school (p. 221).

Stringer (20, p. 370) argues that ". . . high absences and poor achievement in the elementary school years are

significant predictors of dropouts in high school." Kaplan and Luck (10, p. 47) further state that "High rates of absenteeism and lack of academic success appear to be the best means of identifying potential dropouts." This gives us our first documented link between the two factors of focus in this study, namely attendance and grades.

This relationship was pursued at length in an article by Giomette (7) concerning the pass-fail grading system at Indiana University at Bloomington. The focus of this study was primarily a comparison of grades under the pass-fail grading system and the regular grading system. After five semesters in which data was collected, one enlightening statistic was revealed concerning absences and grades given in elementary Spanish courses under both systems. He observed a relationship between the number of absences and the grades achieved, i.e. the higher the absences, the lower the grades; the lower the absences, the higher the grades. The average number of absences for "A" students was 5; for "B" students 6; for "C" students 12; for "D" students 14; and for "F" students it was 30. Siciliano (18), in a follow-up article, expounded upon this latter observation and also concluded that there was a clear relation between absenteeism and performance.

In a well documented study by McClure (12) at Albermarle High School, Virginia, average student absences were compared for students doing average (C) or better work for the first year of a new, stricter attendance policy and for the

previous year. This study showed a definite correlation to exist between attendance and grades. Specifically, it showed that the better a student's grades are, the better his attendance is likely to be.

There have been many studies that have been made in an attempt to identify factors influencing success at the college level. One of the first such studies in the state of Oklahoma was made by Brown (2) in 1964. Brown, in a study of two year post-high school technical training programs at Oklahoma State University, Stillwater, Oklahoma, found that the American College Testing Program (ACT) tests could be used, with the exception of the social studies test, as predictors of success for students within these programs. The composite of the ACT tests had the highest correlation with grade point average and could be used as a predictor of success for technical institute students. Brown used the Spearman's Rho rank order correlation and the Fisher's t as statistical measurement tools.

Another study, by Spradley (19), was made in 1968 at three Oklahoma colleges. Students at Cameron University, Western Oklahoma State College and East Central Oklahoma State University were chosen for a study concerning the correlation between success in the business programs and the English, Mathematics, Social Sciences and Natural Sciences variable of the ACT. The previous mathematics level of students entering the program was also correlated with success in the business programs. Spradley found a high correlation

between all variables tested and success in the business programs of the three schools. Spradley used the Pearson Product (r) and Fisher t -test.

Other studies, such as Miller's (13) in 1966 and Chin's (3) study in 1974, sought to discover the relationships of certain intellectual as well as certain non-intellectual factors with success in technical areas. Chin's study concerned students at three Oklahoma Junior Colleges; Tulsa Junior College, Northeastern Oklahoma Agricultural and Mechanical College, and Northern Oklahoma College. All students were Electronics majors who started the program in 1972. Chin used the Pearson Moment (r) and Fisher t -test as measurement tools. While many of the studies concerning non-intellectual factors were inconclusive, Chin's study found a correlation of several academic factors, such as ACT, high school performance (grade point averages) and high school math scores. Only the Natural Sciences component of the ACT was found to be significant, however.

The only closely related study concerning Oklahoma State Tech was produced by Williams (24) in 1979. Williams' study attempted to test a method of early identification of beginning students with a high expectancy for leaving Oklahoma State University School of Technical Training during their first year. By adapting a questionnaire and validating a model used by Heiserman (8), he was able to develop four models with varying degrees of effectiveness in terms of categorizing groups of students as persistors or

nonpersistors. A multivariate approach was used to determine correlation among some 65 items designed to measure interest, values, personality and socio-economic positions. None of these items, however, related directly to attendance patterns since this model was administered very early in the student's first trimester.

While many studies are to be found considering many factors, both intellectual and non-intellectual, as predictors of success at the college level, none could be found that directly studied the relationship between grades and attendance at the college level. This study will consider this relationship.

Summary

It should be stated that the purpose of this study, as in the study by the Albermarle administrators, was not to attempt to prove whether better attendance results in better grades or whether students with good grades naturally miss fewer days. The purpose here was to determine if a definite relationship between grades and attendance does exist. If so, this should be an incentive for educators and others to look at this relationship more closely in future planning, or at least not to discount the relationship altogether. Hopefully, a clearer understanding of this relationship would allow for better counseling at Oklahoma State Tech and better predicting of student success.

The New Jersey Commissioner of Education, in a statement

ruling on the attendance policy of the Burlington, N.J., Board of Education, summarizes the relationship between the education process and attendance best as follows:

Frequent absences of pupils from regular classroom learning experiences disrupt the continuity of the instructional process. The benefit of regular class-room instruction is lost and cannot be entirely regained, even by extra after-school instruction. Consequently, many pupils who miss school frequently experience great difficulty in achieving the maximum benefits of schooling. Indeed, many pupils in these circumstances are able to achieve only mediocre success in the academic programs. The school cannot teach pupils who are not present. The entire process of education requires a regular continuity of instruction, classroom participation, learning experiences and study in order to reach the goal of maximum educational benefits for each individual child (22, p. 4).

CHAPTER III

METHODOLOGY

The purpose of this chapter is to describe the methods used in collecting data and the techniques used for analyzing the relationship between class attendance at Oklahoma State Tech and success at Oklahoma State Tech. In order to achieve this purpose, the following steps were taken; selection of students for whom to gather data, selection of the method of data gathering, and selection of the method of statistical review and analysis of gathered data. Following is a discussion of these steps.

Selection of Students for Whom to Gather Data

Since success, for the purpose of this study, has been defined in terms of grade point averages, the successful students can be readily identified, for the most part, as those students obtaining sufficient grade point averages to graduate from their chosen programs of study. This group, graduates of Oklahoma State Tech, was also the group for which statistical information for both grades and attendance was available in summary form. For these reasons, it was decided that graduates of Oklahoma State Tech would be

chosen as the subject group for the study. Since programs at Oklahoma State Tech vary in credit hour requirements, it was assumed for the purpose of this study that very little difference exists.

In order to include as large a group as possible, the 1981 spring trimester was chosen to provide sample data since historically the spring trimesters contain the largest numbers of graduating students. Once preliminary statistics were gathered, it seemed necessary to gather supporting information, namely the 1980 spring trimester and the 1979 spring trimester was gathered. This should provide a broad base for the study in terms of the number of students studied and the time period covered. The study, then, consists of data gathered for the entire group of graduating students for the 1979, 1980 and the 1981 spring trimesters. During the three trimesters chosen, it should be noted that no general school policy existed governing the levels of attendance necessary for specific grades, i.e. success in a course. Exemplary attendance was stressed by the administration at every level, but no structured policy with specific limits on absences and inherent penalties existed. Attendance reporting was required, however, and was reported to the Registrar's Office as a part of school policy concerning grade reporting procedures. For the purpose of this study it was assumed, therefore, that all reporting by instructional staff was both complete and accurate in accordance with

school policy.

In order to present the data in a systematic and meaningful manner, several options as to grouping of students were reviewed. Grouping of data by existing academic departments at Oklahoma State Tech was chosen for the following reasons.

First, the commonality of course work required, instructional equipment, personnel and staff and purpose is highest in the departmental unit. Any larger grouping would dilute this feature and any smaller grouping would jeopardize analysis. The groups were already small in a few cases, even at the departmental level.

Second, the existing data was, to some degree, already summarized along departmental lines.

Finally, most statistical analysis presently available has been done by departmental breakdowns. For consistency in review of reports it seemed best for data to be in a directly comparable form.

Selection of Method of Data Gathering

Data on both grades and attendance exist at Oklahoma State Tech in various forms and states. Computer files exist containing both grades and attendance on all students. These grades are used for some departmental reports, student grade reports, etc. However, the computerized grades are not used for transcribing or for computation of graduation averages. Upon pending graduation, each potential

graduate's official files are scrutinized by the Registrar's Office staff and a complete graduation check is made by comparison to official records. Relevant grade point averages and an attendance percentage, as well as other pertinent graduation information, are computed and placed on a Graduate Data Card. Since the Graduate Data Card contained the required information and had previously been checked for validity and accuracy, the data for this study was taken from this card. These cards were cross-referenced with the official graduate lists to be sure only bonified graduates were included and all graduates were accounted for in the study.

Selection of Method of Statistical Review and Analysis

There are a variety of ways in which the statistical significance of the null hypotheses could have been tested. Since the Pearson Product-Moment method of correlation coupled with Fisher's Distribution (t-test) has been widely used in studies of this type, these two statistical measurement tests were selected to allow comparison of results of one hypothesis with those of others. For the purpose of this study, it was assumed that the data, grade point averages and attendance averages, approximate interval scales.

Statistical Procedures

The two null hypotheses were tested by using the

product-moment method of correlation (r) along with Fisher's Distribution (t -test).

Table I through Table V were constructed from the data gathered from official individual student records.

The product-moment formula used for the linear correlation coefficient was:

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{(N\sum X^2 - (\sum X)^2)(N\sum Y^2 - (\sum Y)^2)}}$$

where N = number of students (graduates),

X = student's grade point average upon graduation,

Y = student's attendance percentage upon graduation.

The Fisher's Distribution (t) used to test each hypothesis was:

$$t = \frac{r \sqrt{N-2}}{\sqrt{1-r^2}}$$

where r = computed correlation coefficient,

N = number of students (graduates).

The r and t statistics were computed for the total population of graduates for the three trimesters, for the population of graduates for each individual trimester, and by academic department at Oklahoma State Tech within each given trimester (for comparison/counseling purposes).

If a correlation in this study was statistically significant at the one percent level, then that null hypothesis was rejected.

If the correlation coefficient was significant at the

five percent level but not at the one percent level, then that null hypothesis was or was not rejected depending on the value of the correlation and the significance level.

If the correlation was not significant at the five percent level, then that null hypothesis was not rejected.

CHAPTER IV

RESULTS

A total of 1,019 students graduated from Oklahoma State Tech during the three trimesters included in this study. A summary by trimester of the results of the calculations is shown in Table I. The disposition of Hypothesis #1 is also given. The null hypothesis was rejected if the significance level was equal to or less than 0.01 ($t > 2.326$, since the number of graduates was large enough each of the three trimesters to use the infinity listing on the table). If the significance level was over 0.05 ($t < 1.645$) for the null hypothesis, it was not rejected. Between the significance levels of 0.01 and 0.05 (including 0.05) the null hypothesis was either rejected or not rejected depending on the strength of the correlation coefficient (r) and on the significance level (t).

Table I shows that 356 students graduating in the 1979 spring trimester were studied. The attendance percentage was 93.91 percent and the grade point average was 2.90. The result was a correlation coefficient of 0.55 between the attendance and grades of the graduating students. Using the Fisher t -test, this was found to be significant at the 0.0005 level, the highest level on the table used.

TABLE I

GRADUATE STATISTICS - SPRING 79, 80, 81 TOTALS
ATTENDANCE/GPA - BY TRIMESTER

Trimester	Number of Diplomas	Attendance Average	GPA	r	t	Degrees of Freedom	Significance Level	Hypothesis Disposition
Spring 1979	356	93.91	2.90	0.55	12.2556	354	<0.0005	----
Spring 1980	331	94.44	3.01	0.47	9.5819	329	<0.0005	----
Spring 1981	331	94.37	3.01	0.49	10.2800	329	<0.0005	----
Totals	1,019	94.21	2.97	0.50	18.3839	1,017	<0.0005	Rejected

The 1980 spring trimester contained 331 graduating students. Upon calculation of the attendance percentage and grade point average, these were found to be 94.44 and 3.01 respectively. A correlation between grades and attendance of 0.47 was found. The Fisher t-test showed this to be significant at the 0.0005 level also.

During the 1981 spring trimester, 331 students graduated also. The attendance percentage was found to be 94.37 percent and grade point average was found to be 3.01. A correlation between attendance and grades was determined to be 0.49. This was also significant at the 0.0005 level by use of the Fisher t-test.

Finally, the totals of these three trimesters were calculated in order to test the first hypothesis. A total of 1,019 graduates were studied. The combined attendance percentage was found to be 94.21 percent and the grade point average to be 2.97. A correlation of 0.50 between grades and attendance was found for all students tested. This was significant at the 0.0005 level on the Fisher t-test table.

Table II gives the results of the calculations by academic departments at Oklahoma State Tech. The dispositions of Hypothesis 2(a) through Hypothesis 2(m) are also given. A given null hypothesis was rejected or not in the same manner as was Hypothesis I.

The results are given in order of correlation statistic, from high to low correlation. The Auto Mechanics department had the high correlation (0.76), followed by Food Trades (0.71),

TABLE II

GRADUATE STATISTICS SPRING 79, 80, 81 ATTENDANCE/GPA-
BY DEPARTMENT RANKED BY CORRELATION COEFFICIENT

Department	Number of Diplomas	Attendance Percentage	GPA	r	t	Degrees of Freedom	Significance Level	Hypothesis Disposition
Auto Mechanics	104	95.51	2.91	0.76	11.9745	102	<0.0005	rejected
Food Services	47	92.38	3.01	0.71	6.8065	45	<0.0005	rejected
Machinist	52	94.70	3.08	0.71	7.0331	50	<0.0005	rejected
Auto Body	70	94.32	2.91	0.63	6.7274	68	<0.0005	rejected
A/C & Refrigeration	54	95.00	3.02	0.59	5.2203	52	<0.0005	rejected
Building Trades	78	93.31	3.01	0.57	6.0814	76	<0.0005	rejected
Printing	33	90.11	3.00	0.54	3.5276	31	<0.005	rejected
Small Business	40	93.11	3.06	0.52	3.7468	38	<0.0005	rejected
Drafting	77	94.84	2.90	0.48	4.7081	75	<0.0005	rejected
Business Education	156	93.73	3.11	0.47	6.6661	154	<0.0005	rejected
Electronics	127	94.20	2.85	0.46	5.7763	125	<0.0005	rejected
Diesel	153	95.64	2.93	0.44	6.0570	151	<0.0005	rejected
Commercial Art	28	92.18	3.01	0.33	1.8019	26	<0.05	not rejected
Totals	1,019	94.21	2.97	0.50	18.3839	1017	<0.0005	rejected

Machinist (0.71), Auto Body (0.63), Air Conditioning and Refrigeration (0.59), Building Trades (0.57), Printing (0.54), Small Business (0.52), Drafting (0.48), Business Education (0.47), Electronics (0.46), Diesel and Heavy Equipment Mechanics (0.44) and finally Commercial Art (0.33). The number of graduates ranged from a high of 156 in the Business Education department to a low of 28 in the Commercial Art department. All correlations of grades and attendance were found to be significant except in one department, namely Commercial Art. Commercial Art had a significance level of 0.05 and the null hypothesis was not rejected. All other departments had a significance level of 0.0005 and the null hypothesis was rejected.

Table III and Table IV show a summary of this data collected by trimester and calculated for each academic department at Oklahoma State Tech.

These tables show a fairly high correlation for most departments and a fairly consistent significant level of 0.01 to 0.0005 even though the number of graduates tested are low in some departments when viewed by individual trimester. The Commercial Arts tests at a "not significant" level for all three trimesters.

TABLE III
 GRADUATE STATISTICS - SPRING 1979 ATTENDANCE/GPA -
 BY DEPARTMENT RANKED BY CORRELATION
 COEFFICIENT

Department	Number of Diplomas	Attendance Average	GPA	r	Significance Level
Auto Mechanics	36	95.63	2.81	0.85	<0.0005
Machinists	19	95.39	3.04	0.76	<0.0005
Printing	17	90.24	2.91	0.71	<0.005
Commercial Art	9	92.92	3.10	0.66	<0.05
Food Services	14	90.72	2.84	0.65	<0.01
Auto Body	29	93.83	2.69	0.59	<0.0005
Electronics	48	93.55	2.78	0.56	<0.0005
Building Trades	34	94.83	3.16	0.55	<0.0005
Diesel	41	95.04	2.94	0.54	<0.0005
A/C & Refrigeration	15	94.54	2.92	0.48	<0.05
Drafting	28	94.64	2.91	0.47	<0.005
Business Education	54	93.01	2.87	0.44	<0.005
Small Business	12	92.74	3.03	0.24	not significant
Totals	356	93.91	2.90	0.55	<0.0005

TABLE IV
 GRADUATE STATISTICS - SPRING 1980 ATTENDANCE/GPA -
 BY DEPARTMENT RANKED BY CORRELATION
 COEFFICIENT

Department	Number of Diplomas	Attendance Percentage	GPA	r	Significance Level
Auto Body	20	95.36	3.12	0.84	<0.0005
Food Services	16	92.92	2.93	0.74	<0.0005
Business Education	49	93.98	3.25	0.64	<0.0005
Machinist	16	94.13	3.13	0.64	<0.005
A/C & Refrigeration	19	94.72	2.98	0.60	<0.005
Auto Mechanics	37	95.60	2.97	0.57	<0.0005
Drafting	16	94.65	2.87	0.57	<0.05
Small Business	15	94.03	3.14	0.46	<0.05
Building Trades	19	93.54	2.95	0.44	<0.05
Diesel	55	96.02	2.96	0.41	<0.005
Printing	9	89.84	3.12	.36	not significant
Electronics	49	94.75	2.89	0.25	<0.05
Commercial Art	11	89.42	2.85	.05	not significant
Totals	331	94.44	3.01	0.47	<0.0005

TABLE V
 GRADUATE STATISTICS - SPRING 1981 ATTENDANCE/GPA -
 BY DEPARTMENT RANKED BY CORRELATION
 COEFFICIENT

Department	Number of Diplomas	Attendance Percentage	GPA	r	Significance Level
Auto Mechanics	31	95.26	2.96	0.83	<0.0005
Small Business	13	92.40	3.00	0.81	<0.0005
Machinist	17	94.47	3.09	0.79	<0.0005
Food Services	17	93.25	3.22	0.72	<0.0005
A/C & Refrigeration	20	95.62	3.14	0.68	<0.0005
Auto Body	21	94.01	3.02	0.60	<0.005
Building Trades	25	91.07	2.83	0.59	<0.005
Electronics	30	94.36	2.90	0.53	<0.005
Commercial Art	8	95.14	3.13	0.52	not significant
Printing	7	90.13	3.09	0.44	not significant
Drafting	33	95.11	2.90	0.44	<0.01
Diesel	57	95.71	2.89	0.41	<0.005
Business Education	53	94.24	3.22	0.33	<0.005
Totals	331	94.37	3.01	0.49	<0.0005

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A total of 1,019 students graduated from Oklahoma State Tech during the Spring trimesters of 1979, 1980, and 1981. The attendance percentage was determined for each student and used as the independent variables and the grade point averages were calculated and used as the dependent variables in this study.

The statistics used in examining correlations between the independent variable and dependent variable was the Pearson Correlation Coefficient.

The significance levels of the various coefficients of correlation were determined using Fisher's Distribution (t-test) table.

In abbreviated form the results of the study were:

1. Attendance and success were found to be significantly correlated for graduates of Oklahoma State Tech.
2. Attendance and success were found to be significantly correlated in twelve of the thirteen academic departments at Oklahoma State Tech. Only in the Commercial Art Department was attendance and

success not significantly correlated.

On the basis of these results one could conclude that attendance at Oklahoma State Tech could be used as a tool in predicting success at Oklahoma State Tech.

Discussion of Results

The high correlation (0.50) between attendance and success at Oklahoma State Tech is consistent with other studies done at other schools of varying types and age groups.

The high correlation between attendance and success at Oklahoma State Tech among the various departments may be an even greater testimony to their relationship. Certainly, although overall administrative guidelines are strong, the wide disparity among technical programs as to technical content, the varied education backgrounds of both students and faculty, the differences between the amount of motor versus cognitive skills required among the programs in the departments, etc. would suggest varying levels of correlation, or no correlation. This study shows that on the most part, regardless of the differences existing, a high correlation exists in spite of the differences.

Only in one department, Commercial Art was the null hypothesis not rejected. It could be that due to the very high creative nature of this department, that no correlation exists between attendance and success. Another factor may simply have been the low number of graduates in this department in comparison with the number of graduates in

other departments.

This high correlation between attendance and grades at Oklahoma State Tech, simply stated, suggests that the two variables are connected in such a way that as one decreases or increases, so does the other by a corresponding amount. It does not suggest which variable, grades or attendance, motivates a similar change in the other variable. As a counseling tool, one does not have to know which factor is the catalyst for other factors, in every case. It is often enough to know that the relationship exists. The assumption that if one variable remains high that the other variable generally will also remain high is enough to confidently encourage that the student strive to keep both high. Since attendance is sometimes valued by employers as highly as academic success (high grades), this would seem to be double incentive for students to keep both variables as high as possible.

Although the correlations between attendance and grades were relatively high in all other departments except Commercial Art, one department, Printing, produced a significance level much lower than the remaining departments. This could be due to the relatively small number of graduates for the period tested or, possibly, due to the fact that the same Coordinator existed for this department and the Commercial Art department. Since these two departments were combined by Oklahoma State Tech administration because of their similarities, it is not surprising that the correlations were similar.

Recommendations

Two recommendations would seem to be in order based upon this study:

1. The correlation between grades and attendance has consistently been found to be high. It is therefore recommended that no further study be made in this area.
2. The correlations between grades and attendance in the areas of Printing and Commercial Art were smaller than in other areas. It is therefore recommended that further research in these two departments is needed.

SELECTED BIBLIOGRAPHY

- (1) Bachman, Jerald, Swayzer Green and Ilona Wirtanen. "Dropping Out is a Symptom." Institute of Social Research, Vol. III (September-October, 1971), pp. 169-183.
- (2) Brown, Donald W. "The Relationship of Academic Enrolled in the Oklahoma State University Technical Institute to Reading Ability and Mechanical Ability." (Unpublished M.S. thesis, Oklahoma State University, 1964.)
- (3) Chin, Alexander Foster. "The Relationship of Academic Success to American College Test Scores and High School Performance of Students Enrolled in Electronics Technology at Three Oklahoma Junior Colleges." (Unpublished M.S. thesis, Oklahoma State University, 1974.)
- (4) Egermeier, J.C. "Construction and Validation of a College Dropout Predictor Scale for the Minnesota Counseling Inventory." (Unpublished doctoral dissertation, Oklahoma State University, 1963.)
- (5) Feist, Ronald L. "Development and Implementation of a New Attendance Policy at Napa High School." (Unpublished research document, Nova University, 1976.)
- (6) Gailford, J.P. Fundamental Statistics in Psychology and Education. New York, N.Y.: McGraw-Hill Book Company, Inc., 1950.
- (7) Giometti, T. "One Experience With the Pass-Fail Grading System." Hispania, Vol. 59 (May, 1976), pp. 302-307.
- (8) Heiserman, Russell Lee. "The Development and Testing of a Method for Early Identification of Nonpersisting Beginning Students in the School of Technology at Oklahoma State." (Unpublished Ed. D. dissertation, Oklahoma State University, 1978.)
- (9) Hoyt, Donald R. "Predicting Grades in Two-Year Terminal Programs." Junior College Journal, Vol. 36 (February, 1966), pp. 20-22.

- (10) Kaplan, Jay L., and Edward C. Luck. "The Dropout Phenomenon as a Social Problem." Educational Forum, Vol. 42 (November, 1977), pp. 41-56.
- (11) Kerlinger, Fred N. Foundations of Behavioral Research, Second Edition. New York: Holt, Rinehart and Winston, Inc., 1973.
- (12) McClure, Clarence S. "Developing and Improving a Policy for Improving Attendance at the Secondary School Level." U.S. Department of Health, Education and Welfare National Institute of Education, Washington, D.C., August, 1977.
- (13) Miller, Aaron J. "A Study of Engineering and Technical Institute Freshman Enrollees and Dropouts in Terms of Selected Intellectual Factors." (Unpublished doctoral dissertation, Oklahoma State University, 1966.)
- (14) Phillips, Donald S. "A Follow-Up Study of the Graduates of a Two-Year Program of Drafting and Design Technology." (Unpublished M.S. Thesis, Oklahoma State University, 1964.)
- (15) Popham, James W. and Kenneth A. Sirot nip. Educational Statistics. New York: Harper and Row, 1973.
- (16) Roberts, Charles R. "Student Achievement in Electromechanical Technology." (Unpublished M.S. Thesis, Oklahoma State University, 1975.)
- (17) Schroeder, Wayne L., and George W. Sledge. "Factors Related to Collegiate Academic Success." The Journal of College Student Personnel, Vol. 7 (March, 1966), pp. 97-104.
- (18) Sicilians', Ernest A. "Absenteeism and Language Learning." Hispania, Vol. 61 (March, 1978), pp. 102-104.
- (19) Spradley, Terry P. "The Relationship of Academic Success of Student Enrolled in Business Data Processing at Three Oklahoma Junior Colleges to American College Test Scores (ACT) and Level of Mathematics." (Unpublished M.S. Thesis, Oklahoma State University, 1969.)
- (20) Stinger, Lorene A. "Children at Risk, 1. The Unready for School." The Elementary School Journal, Vol. 73, (April, 1973), pp. 367-370.

- (21) Stroup, Atlee L. and Lee N. Robins. "Elementary School Predictors of High School Dropout Among Black Males." Sociology of Education, Vol. 45, The American Sociological Association, Washington, D.C. (Spring, 1972), pp. 219-222.
- (22) Thomson, Scott and David Stanard. "Student Attendance and Absenteeism." The Practitioner, Vol. 1, No. 1 (March, 1975), pp. 1-13.
- (23) Tinnell, Richard W. "An Examination of Relationships Between Selected Student Entry Parameters and Achievement in Electromechanical Technology Programs." (Unpublished M.S. Thesis, Oklahoma State University, 1969.)
- (24) Williams, Larry N. "A Study of Persisting and Nonpersisting Students in Selected Vocational-Technical Programs at Oklahoma State Tech." (Unpublished Ed. D. dissertation, Oklahoma State University, 1979.)

VITA

Cary Joe Fox

Candidate for the Degree of
Master of Science

Thesis: THE SIGNIFICANCE OF ATTENDANCE IN RELATION TO
SUCCESS AT THE OKLAHOMA STATE UNIVERSITY SCHOOL OF
TECHNICAL TRAINING

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Sulphur, Oklahoma, February 19,
1949, the son of Mr. and Mrs. Acie C. Fox.

Education: Graduated from high school in Sulphur,
Oklahoma in 1967; graduated from East Central
Oklahoma State University in 1971 with a Bachelor
of Science with a major of Mathematics; completed
requirements for the Master of Science degree at
Oklahoma State University in December, 1981.

Professional Experience: Employed by East Central State
College part-time from 1969 to 1971; employed at
Oklahoma State University School of Technical
Training, Okmulgee, Oklahoma in 1971 teaching math-
ematics; Assistant Registrar at Oklahoma State
University School of Technical Training, 1972 to
1978; Registrar at Oklahoma State University School
of Technical Training, 1978 to the present.