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A STUDY OF THE RELATIONSHIP BETWEEN PARTICIPATION
IN STUDENT ACTIVITIES AND SCHOLASTIC
ACHIEVEMENT IN SELECTED
OKLAHOMA HIGH SCHOOLS

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Norman, Oklahoma

1970

A STUDY OF THE RELATIONSHIP BETWEEN PARTICIPATION
IN STUDENT ACTIVITIES AND SCHOLASTIC
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OKLAHOMA HIGH SCHOOLS

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CHAPTER I

A STUDY OF THE RELATIONSHIP BETWEEN PARTICIPATION IN STUDENT ACTIVITIES AND SCHOLASTIC ACHIEVEMENT IN SELECTED OKLAHOMA HIGH SCHOOLS

Introduction

Student activities provide a mechanism whereby pupils may identify with their schools. Coleman pointed to this when he stated that " . . . schools are peculiar institutions. They have no collective goals that the students share, except those related to student activities . . ."¹ Thus, student activities could be described as providing the glue that holds the school together.

In a study of student activity programs in Oklahoma, Mullins found that teachers and administrators considered the failure of many students to participate in student activities as a major problem area.² Tompkins, in a survey of all schools

¹James S. Coleman, Adolescents and the Schools (New York: Basic Books, Inc., 1965), p. 45.

²Dale J. Mullins, "Activity Programs in Oklahoma: A Report to the Profession," School Activities, March, 1962, pp. 197-199.

within a 100 mile radius of San Francisco, found that 38 per cent of the students did not participate in any student activity.³ Dement, in a study of student activities involving 20 schools in California, found that only 32 per cent of the pupils participated in any student activity.⁴ Kleinert, in a study of high school size and participation in student activities, found that 68 per cent of the students from large high schools (an enrollment of 2000 or more) and 24 per cent of the students from small high schools (an enrollment of 600 or less) did not participate in student activities.⁵

According to the studies examined, it seems appropriate to conclude that approximately one-third of the high school students do not participate in student activities. If student activities are basic to the achievement of the collective goals of the schools, then a substantial number of students do not share in these goals.

Van Pool, Director of Student Activities for the National Association of Secondary School Principals, stated that ". . . those who do not participate in student activities

³Ellsworth Tompkins, "A Survey of Extraclass Activities," School Activities, December, 1952, pp. 115-117.

⁴Alice L. Dement, "Values in Extra-Curricular Organizations in the High School," School Review, January, 1924, pp. 20-48.

⁵John Kleinert, "Effects of High School Size on Student Activity Participation," The National Association of Secondary School Principals Bulletin, March, 1969, pp. 34-46.

are the ones who need it most."⁶ He is, therefore, assuming that the non-participant does not fully share in the collective goals of the school. This study, designed to investigate the relationship between participation in student activities and scholastic achievement, should provide evidence to support or reject Van Pool's assumption.

Background and Need for the Study

Student activities, often referred to as extracurricular activities, are as old as organized education. McKown pointed out that:

. . . Many of them, (student activities) even in quite modern form were to be found in ancient schools. For example, athletics, music, oratorical competitions, student participation in government, clubs, debating, dramatics, special day celebrations, public programs, and honor awards and societies were well established in Athens and Sparta.⁷

Student participation in sports and games continued through the period of Renaissance. In the court schools of that period activities formed the bulk of the curriculum. It was not until the Reformation period that student activities were de-emphasized.⁸

Several authors in the field of student activities

⁶Gerald M. Van Pool, "Delinquency and the Activities Program," School Activities, March, 1968, p. 2.

⁷Harry C. McKown, Extra-Curricular Activities (New York: The Macmillan Company, 1952), p. 1.

⁸Henry C. Porter, "The Origin and Development of Extra-Curricular Activities," School Activities, February, 1965, pp. 5-9.

present a brief history of the development of student activities in American Schools. Frederick's material is consistent with that of the other writers and was used as the basic source in providing historical perspective.

Frederick divided the history and development of student activities in the schools of America into four stages: period of suppression, period of toleration, period of capitalization, and the period of exploitation.⁹ He did not attach specific dates to the periods because, as he stated, " . . . they developed at different periods of time in different parts of the country."¹⁰

1. Period of Suppression: Schools in the early days of the nation and on the frontier of the West were as grim and serious as the life outside the school. The schools tolerated no nonsense and student activities were classified as nonsense.

2. Period of Toleration: As the country became older and more settled, particularly along the Eastern Seaboard, organized activities began to receive public recognition. School authorities began to permit membership in student activities, such as literary and debating societies, with no penalties attached, so long as they did not interfere with the regular curriculum. The Euclidia Debating Club at Worchester

⁹Robert W. Frederick, The Third Curriculum (New York: Appleton Century-Crofts, Inc., 1959), p. 21.

¹⁰Ibid. p. 22.

High School, organized about 1857, and a dramatic society known as Sigma Phi Society at the Hartford Public High School, organized in 1859, were among the first known student activities in the United States.

3. Period of Capitalization: By the end of the first quarter of the twentieth century, the idea that informal activities had educative value and should be the direct concern of teachers and administrators was general throughout the country. Student activities were made easily available, encouraged, urged, publicized and supported.

4. Period of Exploitation: This period began in the late 1940's and continues to the present. The wide present-day approval and encouragement of publically attended school affairs make athletics, dramatics and music events particularly vulnerable to exploitation. Frederick illustrated the type of exploitation to which he was referring by stating two often heard criticisms: (1) "Interscholastic athletic teams are fostered and developed not primarily for the fun and benefits students derive from the sport, but to advertise the institution or the coach. (2) Coaches require their groups to practice so long and hard that the students are hindered from doing their regular school work."¹¹

Does this exploitation have an adverse effect on a student's academic record? Parish and Weldy stated that:

¹¹Robert W. Frederick, The Third Curriculum (New York: Appleton Century-Crofts, Inc., 1959), p. 22.

. . . The scholar is seldom honored for his scholastic accomplishments alone, but he frequently excels in athletics, or shines socially or gains leadership status as well. Seldom does excellence in scholarship occur in isolation from other areas of school achievement.¹²

McKown stated that opposition to student activities is based on an unproved assumption that participation is detrimental to a student's academic record. He continued that further investigations are needed to help settle this matter.¹³ By implication, he agreed with the position that active participation in student activities and academic achievement tend to be positively related.

In a study of eleventh and twelfth grade boys, Coleman found that boys from upper-middle class families were members of many more young people's groups than were the boys from lower class families.¹⁴ They also received more encouragement from their families to join these groups and take part in student activities. Coleman also found that upper-middle class boys were one grade equivalent ahead of the lower class boys in over-all achievement. Although Coleman's study was designed to determine differences in achievement of high school boys

¹²Karen Parrish and Gilbert R. Weldy, "Good Scholarship: Do Students Really Care," The Clearing House, January, 1969, pp. 275-279.

¹³Harry C. McKown, Extra-Curricular Activities (New York: The Macmillan Company, 1952), p. 602.

¹⁴Alwin B. Coleman, "Why the Difference in Achievement Between Children in Different Social Classes?" Peabody Journal of Education, September, 1968, pp. 66-70.

from different socio-economic classes, his study indicated that perhaps there was a positive relationship between student achievement and participation in student activities.

I. B. Bryant conducted a recent study designed to determine if cultural enrichment provided to culturally deprived children could improve their academic achievement. A program was developed to expose these children, all ninth graders, to various cultural experiences. They attended the opera, the symphony, and the ballet. The results of the experiment indicated that academic achievement appears to have been increased because of the out-of-school experiences.¹⁵

Many writers in the field have given their support to the value of the student activities program. This would seem to imply that these writers do not feel that participating in student activities has an adverse effect on scholastic achievement. Homer Hamilton contended that the student activities program possesses above average value for teaching rationality and academic information.¹⁶ Bucher stated that the value of student activities may be greater for educationally subnormal students than for the average student. He goes so far as to say that " . . . the real hope of education is in the activity program."¹⁷

¹⁵I. B. Bryant, "A Cultural Enrichment Project Pays Off," Educational Leadership, November, 1968, pp. 135-138.

¹⁶Homer Hamilton, "Use the Extracurriculum Too!" Science Education, October, 1966, pp. 394-396.

¹⁷Charles Bucher, "Health, Physical Education, and Academic Achievement," National Education Association Journal May, 1965, pp. 38-40.

The purpose of this study was to investigate the relationship between participation in student activities and scholastic achievement for selected high school students. The investigation should provide officials of the schools studied with information that would be helpful in determining the role of student activities in the total curriculum of their schools.

Although research data to support their assumption is limited, many writers in secondary education have indicated that low achievers can be helped through participation in student activities. This investigation should provide educators with some additional research data for verifying the assumption. The study should also provide some basis for determining what further investigations are needed.

Statement of the Problem

This study was designed to determine whether or not a relationship exists between student activities and scholastic achievement in selected high schools of Oklahoma and to determine whether or not there was a difference in the kinds of activities in which low achievers and high achievers, boys and girls (tenth graders and twelfth graders), participated in the selected schools.

Hypotheses

The null hypotheses tested in this study were:

HQ₁ There is no statistically significant difference in the types of activity participation between low achievers and high achievers.

H0₂ There is no statistically significant difference in the type of activity participation between tenth grade students and twelfth grade students.

H0₃ There is no statistically significant difference in the types of activity participation between boys and girls.

H0₄ There is no statistically significant difference in the types of student activities in which the students participate among the three schools.

H0₅ There is no statistically significant difference in the median number of student activities participated in by low achievers and high achievers.

H0₆ There is no statistically significant difference in the median number of student activities participated in by tenth grade students and twelfth grade students.

H0₇ There is no statistically significant difference in the median number of activities participated in by boys and girls.

H0₈ There is no statistically significant difference in the median number of student activities participated in among the three schools.

Limitations of the Study

A limitation inherent to the study was the ex post facto design which made impossible the manipulation of independent variables and the exercise of control over the subjects. Generalizations of the findings cannot be defended

beyond the bounds of the students in the three schools studied. No evidence was available to indicate that this population is typical of any larger group of students.

This investigation was confined to low and high achieving tenth and twelfth grade students from three high schools ranging from 1500 to 1800 in enrollment.

Definition of Terms

The following definitions were used for purposes of this study:

1. Student Activities were those school sponsored activities which have no prescribed course of study, and for which no academic credit toward graduation is received.

2. Athletic Related Activities were archery, athletic club, badminton, baseball, basketball, booster club, bowling, cross-country, football, golf, lettermen's club, pep club, swimming, tennis, track, volleyball, weight lifting club, and wrestling.

3. Subject Related Activities were those student activities related to a particular academic subject including: anthropology club, art club, band, chorus, distributive education club, debate club, drama club, future business leaders of America, future farmers of America, German club, industrial arts club, Latin club, library club, literary club, mathematics club, office club, psychology club, science club, Spanish club, and vocational and industrial clubs of America.

4. Non-Subject Related Activities were those student activities that were neither athletic related nor directly related to an academic subject including: chess club, city activities council, drill team, future teachers of America, Hi Y, interact, junior red cross, key club, medical careers club, national honor society, photography club, school paper staff, school play, student council Tri Hi Y, yearbook staff, and youth for Christ.

5. Scholastic Achievement was the student's accumulated high school grade point average, including ninth grade scores.

6. Low Achiever was the term applied to any student whose grade point average was below 2.0, using a four-point scale (A=4, B=3, C=2, D=1, F=0), and who was placed in English classes designed for low achievers.

7. High Achiever was the term applied to any student whose grade point average was above 3.0, using a four-point scale (A=4, B=3, C=2, D=1, F=0), and who was placed in the honors English class of his school.

Procedure Used in the Study

Three high schools, Lawton High School, Lawton, Oklahoma; Moore High School, Moore, Oklahoma; and Midwest City High School, Midwest City, Oklahoma, were selected for this study. The three schools were in the same interscholastic athletic classification (AAA) as determined by the Oklahoma Secondary School Activities Association. The AAA classification

was defined as the thirty largest high schools (grades ten to twelve) in the State of Oklahoma, based on the enrollment as of October 1, 1968.¹⁸

Each high school had three levels of English for grades ten, eleven, and twelve. The levels were designated basic, regular, and honors. The basic group consisted of students with an accumulated GPA of less than 2.0. The honors group consisted of students with an accumulated GPA of greater than 3.0. Because the criteria for membership in the basic and honors English groups were identical to the definitions of high and low achiever for purposes of this study, membership in these groups was the sample base for students in the high and low achiever groups.

Eight representative classes were selected by the principal of each school. Four were tenth grade, two each of the basic English and honors English, and four were twelfth grade, also two each of basic English and honors English. From each of the groups, (two classes) a random sample of thirty students, fifteen boys and fifteen girls, was selected. The sample consisted of fifteen low achieving tenth grade boys; fifteen low achieving tenth grade girls; fifteen high achieving tenth grade boys; fifteen high achieving tenth grade girls; fifteen low achieving twelfth grade boys; fifteen low achieving twelfth grade girls; fifteen high achieving twelfth

¹⁸Oklahoma Secondary School Activities Association Bulletin (Oklahoma: Oklahoma Secondary School Activities Association) March, 1969, p. 3.

grade boys; and, fifteen high achieving twelfth grade girls from each school. The sample number for each school was 120 or a total sample for the study of 360 students.

A student activities check list was prepared following a review of the student handbook of each school and an interview with each principal. The check list included all activities available in the three schools. It was administered to a group of students at Carl Albert High School, Midwest City, Oklahoma, to determine whether or not the directions were clearly stated.¹⁹

Instructions indicated students should mark with an "X" those activities in which they participated during the 1968-69 school year, and with a "D" those activities that were dropped prior to completion of the activity. The analysis of the data did not involve the "D" group.

A student's score on the check sheet was the total number of student activities marked with an "X." Categories of students were also established in terms of their degree of participation in athletic related, subject related, or non-subject related activities. More specifically, he was placed in the athletic category if he participated more in those activities than the other types, the subject related category if he participated more in those activities than the other types, or the non-subject related category if he participated more in those activities than the other types.

¹⁹See Appendix A.

Since the data were independent, the chi square test of significance was used in the treatment of data concerning hypotheses one through four. The chi square median test was used to test hypotheses five through eight since these hypotheses were concerned with the median number of activities for the various groups of students.

Organization of the Study

In Chapter I, the background and need, the problem statement, the hypotheses, and related information pertinent to the study are presented. Chapter II consists of a review of literature related to the study. A description of the instrument, accompanied by a detailed account of the procedure and collection of data are presented in Chapter III. Chapter III also contains a detailed description of the student activities program of each school. Presentation and analysis of the data and related findings are given in Chapter IV. Chapter V includes a summary of the study, conclusions based on the findings of the study, and recommendations and suggestions for further research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Purposes and Objectives of Student Activities

A brief review of the professional literature pertaining to the purposes and objectives of student activities was included in this chapter to provide the reader with some knowledge of the goals of student activities and the contribution they make to the broader goals of education. Support for student activities was based on the premise that education is for the development of the total person. This concept, originating with the philosophy of John Dewey, implies that education is most productive when there is activity on the part of the learner.

Practice in life-like situations is advocated as a better method of learning about life than reading about or discussing life. Many life activities are not found in the formal curriculum where the goals are primarily intellectual in character. Thus, according to Shippy, participation in student activities provides a means whereby the adolescent has the opportunity for important supplementary learning, particularly in the social, ethical, and civic areas of

development.²⁰

The idea of preparation for life through the student activity program can be defended, according to Morrill, when it is realized that for a large number of youth, secondary education, whether completed or not, is the last formal educational experience prior to their rendezvous with adult responsibilities. He further contends that the appeal of the student activity program to the individual contributes to retention in school and a reduction in the number of drop-outs.²¹

All human beings need to feel that they belong and have a respected status among their fellows. According to Bennett, belongingness and status depend on opportunities to share experiences and the willingness and ability to give and take. Participants receive a sense of status through student activities which serve as a yardstick to measure the relationship between the individual and the group.²²

Strang stated that student activity programs often give students a chance to use talents and abilities not normally provided in the formal curriculum. Through the student

²⁰Lina M. Shippy, "Extracurricular Activities Afford Golden Developmental Opportunities," School Activities, May, 1959, pp. 273-276.

²¹Charles L. Morrill, "Student Activities Prepare Youth for Life," School Activities, September, 1957, pp. 29-30.

²²M. E. Bennett, College and Life: Problems of Self-Discovery and Self-Direction, (New York: McGraw-Hill Book Company, Inc., 1952), p. 57.

activity program, a sense of belonging can be furthered, while self-esteem, self-confidence, and a sense of personal worth can be encouraged. Strang continued that the opportunity to feel a measure of competency and a sense of satisfaction, and to gain recognition from peers and adults, is a powerful value in voluntary student activity programs.²³

Vredovoe contends that properly guided groups will seek to give service to the school and will feel some responsibility toward school improvement. Thus, according to Vredovoe, student activities make a valuable contribution to the school as well as the individual.²⁴

Miller, Moyer, and Patrick stated that the ultimate objective of student activities should be that of "aiding each and every boy and girl to develop into a well adjusted individual as well as one who can and will be a contributing member to the democratic society in which he lives."²⁵

Concerning the objectives of student activities, Stroup stated that any survey of the benefits said to accrue from participating in student activities will indicate that these activities have value. Through participation the student will

²³Ruth Strang, Group Work in Education (New York: Harper and Brothers, 1958), p. 14.

²⁴Lawrence E. Vredovoe, "What Extraclass Activities Should Be Included in the Program for Senior High School Students," Bulletin of the National Association of Secondary School Principals, April, 1958, pp. 208-209.

²⁵Franklin A. Miller, James H. Moyer, and Robert B. Patrick, Planning Student Activities (New Jersey: Prentice-Hall, Inc., 1956), p. 12.

gain a greater sense of democracy, the social graces, experience in leadership, and knowledge of practical human affairs. He further contended that those who participate are more likely to do well academically, to win scholarships, and to succeed in later life.²⁶

Frederick agreed that student activities have value for those participating when he stated that a comparison of lists of student activity objectives with those proposed for the whole school by the several national organizations shows much similarity. Today many educators consider the objectives of student activities to be identical with those of the general education program.²⁷

Numerous educators have made statements concerning the purposes of student activities, similar to those cited previously. Other writers have compiled lists of purposes and objectives of student activities. A widely accepted list of objectives is one suggested by McKown:

1. To capitalize, for educational profit, important fundamental drives.
2. To prepare the pupil for active life in a democracy.
3. To make the pupil increasingly self-directive.
4. To teach social cooperation.
5. To increase the interest of the pupil in the school.
6. To develop school morale.

²⁶Herbert Stroup, Toward a Philosophy of Organized Student Activities, (Minnesota: The University of Michigan Press, 1964), p. 35.

²⁷Robert W. Frederick, The Third Curriculum (New York: Appleton-Century-Crofts, Inc., 1959), p. 54.

7. To foster sentiments of law and order.
8. To discover and develop special qualities and abilities.²⁸

Another widely accepted list of objectives of student activities was compiled by Koos. He surveyed forty articles and chapters in education books by thirty-eight different writers analyzing the values ascribed to student activities. The following list contains the items stated most often by the thirty-eight writers.

1. Training in some civic-social-moral relationship
2. Recognition of adolescent nature
3. Socialization
4. Training for leadership
5. Improved discipline and school spirit
6. Training in social cooperation
7. Actual experience in group life
8. Training for citizenship in a democracy
9. Training for recreational and esthetic participation.²⁹

Probably the only educational value not ascribed to student activities is improvement in academic achievement. Strang stated that no investigation has proved that participation is the cause of superior academic achievement even though participation is assumed to be associated with superior scholarship rather than low scholarship.³⁰

²⁸Harry C. McKown, Extracurricular Activities (New York: The Macmillan Company, 1952), pp. 13-16.

²⁹Leonard V. Koos, "Analysis of the General Literature on Extracurricular Activities," Twenty-Fifth Yearbook of the National Association of Secondary School Principals, February, 1952, pp. 13-14.

³⁰Ruth Strang, Group Work in Education (New York: Harper and Brothers, 1958), p. 86.

If student activities truly have value to the individual, and many educators stated that they do have value, then a characteristic of a good program would be a level of participation involving a large share of the student body. As pointed out in a previous section, several studies indicated that one-third or more of the students do not participate and, therefore, do not receive the benefits of student activities. The remainder of this chapter contains reports of research efforts in the area of student activities that have attempted to identify some distinguishing characteristics of participants and nonparticipants.

Studies Related to Participation and Scholastic Achievement

Some research indicated that participation in student activities and scholastic achievement was related for a special group of students in special areas of student activities, especially athletics. The following studies indicated that participants tend to make higher grades than nonparticipants.

Remmlein conducted a study to determine the possible reasons for the fact that some pupils with high IQ scores earn low grades. She found that students receiving high grades were more active in student activities. Although she did not reach a conclusion concerning the relationship between participation in student activities and scholastic achievement, nor was it her intention, the study implied that the relationship between participation in student activities and scholastic

achievement for the more intelligent students was positive.³¹

Monroe conducted a study of student activities in the senior high school of Kenosha, Wisconsin, using 529 students from the eleventh and twelfth grades. He found that the pupils who participated in student activities were superior in general intelligence to those who did not participate. The pupils who participated in student activities made higher grades than the nonparticipants. Monroe also found that when students did not participate for a semester their grades did not improve. He stated " . . . the data suggest a participating pupil is stimulated so that his achievement is more nearly commensurate with his intelligence than is the achievement of the nonparticipating pupil with his intelligence."³²

Pierce conducted a study to determine differences in motivational patterns and scholastic achievement of talented students. He found that high achieving talented students are more active in student activities than talented students who were classified as low achievers.³³

A study comparing the fifty students with the largest

³¹Madaline K. Remmlein, "Scholastic Accomplishment as Affected by Intelligence and Participation in Extra-Curricular Activities," Journal of Applied Psychology, October, 1939, pp. 602-607.

³²Walter S. Monroe, "The Effect of Participation in Extra-Curricular Activities on Scholarship in the High School," The School Review, December, 1929, pp. 747-752.

³³James V. Pierce, "The Educational Motivational Patterns of Superior Students Who Do and Do Not Achieve in High School," (Unpublished Doctoral Dissertation, University of Chicago, 1959).

amount of time spent in activities with the fifty students indicating the least amount of time spent in student activities in a Philadelphia high school was conducted by Twinning. He found that participants received higher grades than non-participants. Boys who participated only in athletics were lower than boys participating in other activities, but were still higher than nonparticipants.³⁴

Welty conducted a student activities study in a California high school to determine if extensive participation in student activities affected academic performance. The number of activities in which the students were involved ranged from six to fourteen different activities and the actual number of hours spent per week in activities ranged from eight to thirty-seven. Statistical findings showed that extensive amounts of time spent in student activities did not affect the scholastic achievement of the group studied. Nonparticipants were not included in the study.³⁵

In a study of participation in student activities in the Everett and Seattle, Washington, high schools, Ayer found that only twenty-nine students participated in eight or more student activities. He found that the grades of these twenty-nine students were slightly above the average of the entire

³⁴Charles W. Twinning, "The Relationship of Extra-Curricular Activity to School Marks," School Activities, February, 1957, pp. 181-184.

³⁵Mary L. Welty, "Does Activity Participation Impair Academic Achievement in High School," California Journal of Secondary Education, May, 1959, pp. 305-308.

group of high school students. Thus extensive participation was associated with above average scholastic achievement for the group of students investigated.³⁶

Thornton and Amble conducted a study to determine if students of limited potential would demonstrate substantial development in nonacademic areas. The study was confined to ninth and tenth grade students, one group of low achievers and another group of average achievers. The results indicated that low achievers were not as well informed in sports and games as average students and were more often nonparticipants in student activities than average students.³⁷

Werts investigated the relationship between high school grade average and various types of student activity achievements displayed during high school. Using a sample of 127,125 college freshmen in the study, it was found that the percentage of achievers was greater among students with high grades than among students with low grades in high school. Students with high grades won recognition in several areas of student activities, whereas the majority of students with low grades did not show any student activity achievement.³⁸

³⁶Fred C. Ayer, "Pupil Participation in Extra-Curricular Activities in the High Schools of Everett and Seattle, Washington," The Twenty-Fifth Yearbook of the National Society for the Study of Education, Part II, Bloomington, Illinois, Public School Publishing Company, 1926, pp. 67-80.

³⁷Sam M. Thornton and Bruce R. Amble, "Achievement of Disadvantaged Children in Critical Nonacademic Areas," The Journal of Educational Research, November, 1967, pp. 124-125.

³⁸Charles E. Werts, "The Many Faces of Intelligence," Journal of Educational Psychology, August, 1967, pp. 198-204.

Swanson conducted a study to determine the effects of participation in student activities on scholastic achievement using the freshman class at Kansas State Teachers College, Kansas City, Kansas. In a selected sample of 398 students, 155 were classified as nonparticipants and 243 were classified as participants. Grades were checked before participation and during participation. It was found that participants have higher median grades than nonparticipants. The participants had higher median grades during participation than before participation while nonparticipants suffered a slight decrease in median grades for corresponding periods.³⁹

Chapin, in a study of 250 senior students at Smith College, sought to determine relationships between student activities, academic grades, and physical condition. He found that, in general, the more active students were also the better students. The upper 50 students in participation were also the highest in average academic achievement.⁴⁰

Dropout Related Studies

A review of the literature revealed that a lack of participation in student activities and low scholastic achievement were both characteristic of the high school dropout and

³⁹A. M. Swanson, "The Effect on High School Scholarship of Pupil Participation in Extra-Curricular Activities," The School Review, October, 1934, pp. 613-626.

⁴⁰Stuart F. Chapin, "Extra-Curricular Activities of College Students: A Study in College Leadership," School and Society, February, 1926, pp. 212-216.

many pupils from the lower socio-economic classes. The following six studies provide support for the above statements.

Grinder conducted a study to determine influences on adolescence in an effort to predict potential dropouts. He used 2,200 eleventh and twelfth grade boys from seven Wisconsin high schools. An activity inventory was administered to a random sample of 676 boys. It was found that involvement in student activities was least among boys who were judged as potential dropouts. The potential dropout also had a low academic standing.⁴¹

Cannaday conducted an extensive study of dropouts in Arkansas public elementary and secondary schools beginning with the 1940-41 school year through the 1960-61 school year. He found that low scholastic aptitude was the major reason for dropouts. He also found that dropouts did not take part in student activities. Thus, low scholastic aptitude and lack of participation were both characteristic of the dropouts of Cannaday's study.⁴²

Pruett conducted a questionnaire study of guidance directors and administrators of over 600 junior and senior high schools to determine their opinions as to why boys and girls drop out of school. The two factors that were singled

⁴¹Robert E. Grinder, "A Study of the Influences of the Father's Job and Social Status on the Occupational and Social Goals of Youth," (University of Wisconsin: United States Office of Education Grant Number E-5-85-061), August, 1967.

⁴²Frank W. Cannaday, "Dropouts--A Major Educational Concern," (Arkansas State Department of Education), 1962.

out in this study were that (1) 59 per cent of the dropouts were from homes evaluated as below average in socio-economic status, and (2) 76 per cent of the dropouts did not participate in student activities. Pruett stated that lack of participation in student activities is one of several symptoms that may indicate the student is a potential dropout.⁴³

Bell investigated the relationship between participation in student activities and dropouts in Kansas high schools. He surveyed 71 high schools, selected at random, and obtained information on students that had dropped out of school. He then paired each dropout with a randomly selected student of the same sex and grade level who had remained in school. Bell concluded that lack of participation in school activities was a significant characteristic of the dropouts in his study.⁴⁴

Brough and Reeves investigated the differences in participation in student activities between suburban and inner-city youth. An activities inventory was administered to 238 inner-city ninth grade students and 382 ninth graders from a high socio-economic suburb. It was found that three times as many inner-city youth as suburban students participated in no student activity.⁴⁵

⁴³Rolla F. Pruett, "Plight of the Dropout," School Review, December, 1963, pp. 19-23.

⁴⁴James W. Bell, "A Comparison of Dropouts and Non-dropouts on Participation in School Activities," The Journal of Educational Research, February, 1967, pp. 248-251.

⁴⁵James R. Brough and Martha L. Reeves, "Activities of Suburban and Inner-City Youth," Personnel and Guidance Journal, November, 1968, pp. 209-212.

In a study of eleventh and twelfth grade boys, Alwin Coleman found that the upper-middle class boys were one grade equivalent ahead of lower class boys in scholastic achievement. He also found that the upper-class boys were much more active in student activities.⁴⁶

Athletic Related Studies

The following studies indicated that boys participating in athletics usually achieve at a higher level than non-athletes.

Schafer and Armer conducted a study to determine whether or not high school athletes earned lower grades than non-athletes. An athlete was paired with a non-athlete of equal intellectual ability. They reported that:

The more active an athlete is the more his grades topped those of the student with whom he was paired. The boys who would usually have the most trouble in school are precisely the ones who seem to benefit most from taking part in sports. And the data suggests that, at least as far as participants are concerned, athletics fosters rather than interferes with the educational goals of sending a maximum number of youth to college.⁴⁷

Yewell reported a study using 619 students from three high schools in Alabama to determine differences in school marks of participants and nonparticipants in competitive athletics. It was found that the mental abilities of participants were not significantly different from nonparticipants as measured

⁴⁶Alwin B. Coleman, "Why the Differences in Achievement Between Children in Different Social Classes?" Peabody Journal of Education, September, 1968, pp. 66-70.

⁴⁷Walter E. Shafer and Michael J. Armer, "Research Clues," Today's Education, May, 1969, p. 10.

by the Terman Group Test of Mental Ability. However, the average participant in competitive athletics had fewer failing grades than the average nonparticipant.⁴⁸

Eidsmoe conducted a study of high school football athletes in the State of Iowa to determine the effect of participation in athletics on scholastic achievement. The selection of schools to be surveyed was based on the final ranking of the season given to the football teams by the Iowa Associated Press. The top thirty teams were chosen and each school was asked to submit the academic grades of the twenty-four players on the squad who were the most active participants in football during the 1962 season.

The results of the survey indicated that those who were capable of playing football on a modern high school team were superior to the average of their classroom colleagues in academic performance. The total grade average of the 592 players in all subjects was 2.523, whereas the grade point average of their non-participating classmates was 2.085.⁴⁹

In a similar study, Hancock attempted to determine the relative effects of levels of athletic participation upon academic achievement in high school boys. Intensity of participation was ranked by a specially designed instrument administered to each athlete in six Colorado high schools. He found

⁴⁸Gladstone H. Yewell, "A Study of School Marks of Participants and of Non-Participants in Interschool Athletics," School Activities, November, 1936, p. 104.

⁴⁹Russel M. Eidsmoe, "High School Athletes Are Brighter Than Average," Midland Schools, October, 1963, pp. 25-26.

that the lower (academically) one-third of the athletes did not show as high a level of participation as the upper (academically) two-thirds of the athletes.⁵⁰

Pangle conducted a study concerning scholastic attainment of high school athletes. A statistical study of male athletes versus male non-athletes in Mehlville School District, St. Louis County, Missouri, was made which centered around the hard core athlete who, at a minimum of four years of high school, had participated in at least two varsity sports for at least one complete season.

Fifty athletes out of 165 male senior students were found to be hard core athletes. From the permanent records, 50 male non-athletes were paired with the fifty male athletes. Accumulated grade point averages were compiled for each student's four scholastic years.

The athletic group's overall accumulated grade point mean was 6 per cent higher than the non-athlete group's overall accumulated grade point mean. The grade point average of the senior athlete group (2.35) compared favorably with the entire senior class grade point mean (2.36) but the non-athlete group grade point mean (2.21) was 6 per cent lower than the mean of the entire senior class.⁵¹

⁵⁰Thomas Clarke Hancock, "The Effect of Various Levels of Intensity of Athletic Participation Upon Academic Achievement in High School," (Unpublished Doctoral Dissertation, Colorado State College), 1968.

⁵¹Roy Pangle, "Scholastic Attainment and the High School Athlete," Peabody Journal of Education, May, 1956, pp. 360-364.

Purdy conducted a study of scholastic achievement of high school athletes in the high school at Franklin, New York, for the ten year period 1939-1948. The data in the Franklin study were gathered by establishing a scholastic index, a figure which represented all the scholastic grades received by a boy for two and one-half years: tenth grade, eleventh grade, and for the first semester of the twelfth grade. The term "athlete" was defined as any male pupil in grades ten, eleven, and twelve who was a regular participant in practice with the varsity football, basketball, or baseball squads. The "non-athlete" was defined as any boy who had never been a member of any varsity squad.

Purdy concluded that: (1) since the grades of the athletes averaged 1.7 percentage points above the non-athletes, participation in athletics was not scholastically harmful and that sports may actually serve as a stimulant to many who otherwise would neglect their studies. (2) The boy who participated in all three sports was more likely to be a better student than the boy who only participated in one or two. (3) The athlete was more likely to enter college than the non-athlete.⁵²

Summary

A review of the professional literature indicated that students who did not participate in student activities tended

⁵²Reginald Purdy, "Athletes Vs. Scholars," Scholastic Coach, October, 1949, pp. 54-56.

to make lower grades than participants. This did not imply a cause and effect relationship; rather, the implication was that the student earning lower grades also failed to achieve in non-academic areas. The literature indicated that a lack of participation in student activities and low scholastic achievement are characteristic of the high school dropout. It was also found that students participating in athletics were apt to do slightly better academically than non-participants, but not as well as those who participated in all areas of the student activity program.

Based on the research cited, it would appear that student activities are an important part of the educational program. It was the purpose of this study to investigate the question of whether or not there is a relationship between participation in student activities and scholastic achievement in the three schools studied. This information would then provide school administrators with additional evidence on which to base decisions concerning the development of student activities programs for students that have not been participating in the present program.

CHAPTER III

DESIGN AND METHODOLOGY OF THE STUDY

The purpose of this chapter was to present: (1) the basic plan of the dissertation; (2) a description of the student activities program of the three schools studied; (3) a description of the instrument; and (4) a discussion of the statistical procedure.

Basic Plan

The basic plan was to obtain data on low achieving boys and girls and on high achieving boys and girls from different grade levels in order to investigate and attempt to determine whether or not there was a relationship between participation in the student activities program and scholastic achievement. Three of the larger high schools in Oklahoma were selected for the study. The principal of each school assisted by selecting the low and high achieving students from which a sample was drawn at random. The criterion for determining high and low achievers was the student's accumulated high school grade point average, beginning with grade nine.

The survey method was used in this study. Kerlinger stated that the survey is useful in social science investiga-

tions to discover the relative interrelations of sociological variables.⁵³ No attempt was made to determine a cause and effect relationship in this study. Rather, the purpose was to determine whether or not a relationship existed between participation in student activities and scholastic achievement in the selected schools.

A Description of the Student Activities Programs Studied

A description of the student activities program of each school was included in this chapter. The information was obtained from interviews with the principal and vice-principal and from the student handbook of each school.

Midwest City High School

Midwest City High School reported thirty-four student organizations and an extensive intramural program. There were no membership restrictions placed on the organizations with the exception of the National Honor Society. The National Honor Society had a minimum grade point requirement of 3.0. There were no fees assessed by the organizations with the exception of the Pep Club. The membership fee of \$10.00 included a season ticket to all home varsity contests and a uniform which became the student's property. All organizations, with the exception of the Student Council, were required to conduct their meetings either before or after school hours.

⁵³Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart, and Winston, Inc., 1964), p. 393.

Each of the organizations was required to have a constitution on file in the principal's office. The constitution specified the purposes, goals, and functions of the organization. The constitution also contained rules of conduct, internal organization, and selection of sponsor. Each organization was subject to the governing policies of the Student Council. Faculty members were required to serve as sponsors for the various groups, yet, were not paid for their services in these areas.

Midwest City High Schools sponsored an intramural athletic program for both boys and girls separate from the physical education program. Boys and girls could compete in the following activities: volleyball, basketball, tennis, golf, swimming, bowling, archery, and badminton. In addition to the above, boys could compete in wrestling, track, cross-country, and weight lifting program. Since two gymnasiums were available, activities for boys and girls were conducted simultaneously.

Midwest City High School employed two full-time intramural instructors and six part-time assistants. All intramural activities were conducted after school hours and on a voluntary basis. No physical education credit was given for intramural participation.

All intramural participants were divided into teams and a tournament was conducted as the terminating event for the short season of various sports. The school provided small

inexpensive trophies for the winning teams in each tournament conducted.

Varsity athletics for the boys included football, baseball, basketball, tennis, swimming, track, golf, and wrestling. Tennis and swimming were available for girls. Varsity athletes were not allowed to participate in intramural activities.

Lawton High School

Lawton High School sponsored twenty-seven organizations and a limited intramural program. There were no restrictions placed on membership in the organizations, with the single exception of the National Honor Society. There were no fees assessed by any of the organizations. A student who joined the Pep Club purchased a uniform and his own ticket for the games. All organizations, with the exception of the Student Council, were required to conduct their meetings after school hours.

There were no restrictions placed on membership in organizations, but there were limitations placed on officers of the various organizations. Student Council officers were to be a member of the senior class and have a "B" average (3.0). Class presidents were required to have an academic average of "C" (2.0). Lawton High School used a point system to limit the number of elected offices a student could hold during the school year. A student could earn no more than ten points during the school year. The point system was as follows: Each elected office was given a specified number of points. The office of Student Council president was given 8

points; Student Council vice-president and secretary, 7 points; Student Council treasurer, 6 points; class president, 7 points; editor of yearbook or student newspaper, 6 points; club president, 6 points; class officer other than president, 4 points; head cheerleader, 5 points; and, all other officers, 2 points.

Each organization was required to obtain a charter from the Lawton Board of Education. A constitution, similar to that of Midwest City High School, and a recommendation by the principal was to accompany the application for a charter. Each organization was required to have a faculty sponsor which was appointed by the principal.

Basketball was the only intramural sport sponsored for boys. Sponsors for intramural basketball were physical education instructors. Each boy participating in the program was a member of a team. The teams competed against one another in a type of conference or league play with the culminating event being a tournament for the several teams. The school provided a trophy for the winning team. Lawton High School did not sponsor an intramural program for girls.

Varsity athletics for boys included football, basketball, baseball, track, tennis, golf, and cross-country. Tennis was the only varsity athletic sponsored for girls.

Moore High School

Moore High School sponsored twenty-four organizations and eight sports for interschool competition, but had no intramural program for either boys or girls. The only organization

having a membership restriction was the National Honor Society. Moore High School attempted to allow all students to participate in the organization of their choice by eliminating all membership fees with the exception of a \$2.00 Pep Club fee. Pep Club members were required to purchase their own uniforms and tickets to the various games.

Each organization was required to have a constitution on file in the principal's office. The constitution was similar to the constitutions required by the other two schools. The Student Council was called a Student Congress at Moore High School. There were two governing bodies, a house of representatives and a senate. Each home room had an elected representative in each body, with officers elected at large. The design was similar to the United States Congress and its purpose was to help educate the students in the operations of government.

Moore High School used a point system to limit the number of elected offices a student could hold at any one time. The point system was as follows: The office of Student Congress president carried 8 points; Student Congress vice-president or secretary, 6 points; class president, 6 points; club president, 6 points; class officer or cheerleader, 4 points; club or class vice-president or secretary, 2 points; and, other officers, 1 point. A student could earn no more than 10 points in any one school year.

Intramural athletics were not sponsored by Moore High School. The Student Congress sponsored a boys basketball

tournament in which all boys, except varsity basketball players, could participate. This was the only athletic activity in which all boys could participate. Girls had no opportunity to participate in intramural athletics. Physical education classes offered a limited amount of athletic competition.

Varsity athletics for boys included football, basketball, baseball, track, tennis, cross-country, wrestling, and golf. Girls could participate in basketball and tennis.

Comparison of Student Activity Programs

The organizations and clubs of the three schools were similar in type, but varied in number from 34 reported by Midwest City High School as compared to 27 at Lawton High School and 24 at Moore High School. Varsity athletics were comparable in type and number. Intramural offerings, however, were quite different. Midwest City High School had an extensive intramural program, Lawton High School sponsored only one intramural activity, and Moore High School had no intramural program. Based on the above information, it would appear that the student activities program in Midwest City High School was designed to serve a wider range of students than the student activities program at either Lawton High School or Moore High School. It would also appear that the student activities program at Lawton High School was designed to serve a wider range of students than the student activities program at Moore High School. From the previously stated information a possible prediction might be that participation will be more extensive

in Midwest City High School than either Moore High School or Lawton High School.

Development of the Instrument

Following interviews with the principal and vice-principal of each school and a review of the student handbook of each school, a list was compiled that included all school sponsored clubs, organizations, and athletics available in all three schools. These were placed in alphabetical order on a single check sheet. There were 58 student activities sponsored by the three schools.

Students were instructed to mark each activity in which they participated with an "X." The students were asked to mark activities which they had joined but dropped with a "D." The "D" markings were not analyzed in this study.

The check list was administered to a group of thirty students at the Carl Albert High School, Midwest City, Oklahoma, to determine whether or not the instructions were clearly stated and to solicit suggestions from students for improving the instrument. This procedure produced no evidence to suggest changes were needed.

A Description of the Data Collection

Each of the three schools used ability grouping for all English classes. Students with a grade point average of 2.0 or below were placed in a basic (remedial) English class; those with a grade point average of 3.0 or above were placed

in an honors English class. All others were placed in regular English classes. This procedure was used for each grade (tenth, eleventh, and twelfth).

The purpose of this study was to compare low achievers and high achievers. The basis on which all three schools sectioned English classes was accepted as a valid internal criterion for identifying low achievers and high achievers as defined for purposes of this study. Since students whose GPA was between 2.0 and 3.0 were not included in the sample of either low achievers or high achievers, significant separation was achieved.

The principal was asked to identify two English classes from each designated group. The membership of the classes was determined at the time of enrollment with the only internal controls being the previously described GPA criteria. The activities check list was administered to all the students in each class designated by the principal. From the group of check sheets, 15 low achieving tenth grade boys, 15 low achieving tenth grade girls, 15 low achieving twelfth grade boys, 15 low achieving twelfth grade girls, 15 high achieving tenth grade boys, 15 high achieving tenth grade girls, 15 high achieving twelfth grade girls were selected at random using the table of random numbers listed by Wert, Neidt, and Ahmann.⁵⁴ This resulted in a sample of 120 students from each school, and

⁵⁴James E. Wert, Charles O. Neidt, and Stanley J. Ahmann, Statistical Methods in Educational and Psychological Research (New York: Appleton-Century-Crofts, Inc., 1954), p. 416.

a total sample of 360.

The sample from Midwest City High School consisted of 15 low achieving and 15 high achieving tenth grade boys; 15 low achieving and 15 high achieving tenth grade girls; 15 low achieving and 15 high achieving twelfth grade boys; and 15 low achieving and 15 high achieving twelfth grade girls.

The sample from Lawton High School consisted of 15 low achieving and 15 high achieving tenth grade boys; 15 low achieving and 15 high achieving tenth grade girls; 15 low achieving and 15 high achieving twelfth grade boys; and, 15 low achieving and 15 high achieving twelfth grade girls.

The sample from Moore High School consisted of 15 low achieving and 15 high achieving tenth grade boys; 15 low achieving and 15 high achieving tenth grade girls; 15 low achieving and 15 high achieving twelfth grade boys; and, 15 low achieving and 15 high achieving twelfth grade girls.

A Description of the Statistical Procedure

The student activities check sheets were individually scored. Each student received a score for each of the three types of student activities: subject related activity; non-subject related activity; and athletic related activity. The score was determined by counting the number of activities marked with an "X" by the student in each of the categories.

To test hypotheses one, two, three, and four, each student was classified according to the activity category receiving the larger score. For example, if a student had

scores of 3 for subject related activities, 2 for non-subject related activities, and 1 for athletic related activities, he would be classified in the subject related activities category. In case of ties, scores were omitted. The total number of students were then placed in a 3x2 contingency table for statistical analysis.

Since the data were independent, the Chi Square test of significance was used. A 3x2 contingency table was constructed as follows for hypotheses one, two, and three (a 3x3 contingency table was used for hypothesis four).

Type of Activity	Group 1	Group 2	Total
Athletic Related			
Subject Related			
Non-Subject Related			
Total			

The formula used was as follows:

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^k \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

where O_{ij} = observed number of cases categorized in the i^{th} row of the j^{th} column.

E_{ij} = number of cases expected under H_0 to be categorized in the i^{th} row of j^{th} column.

$\sum_{i=1}^r \sum_{j=1}^k$ directs one to sum over all cells.⁵⁵

⁵⁵Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Company, Inc., 1956), p. 175.

The Chi Square Median test was used to test hypotheses five, six, seven, and eight. Those students falling above or below the common median were placed in a 2x2 contingency table.

	Group 1	Group 2	Total
Above Median			
Not Above Median			
Total			

The formula used was as follows:

$$x^2 = \frac{N \left(\frac{|AD-BC| - \frac{N}{2}}{2} \right)^2}{(A+B)(C+D)(A+C)(B+D)}$$

The Chi Square Median test will determine whether or not there are significant differences in the median number of activities participated in by the groups specified in the hypotheses.

Statistical procedures used in this study were directed toward answering two primary questions: (1) What, if any, was the statistical significance of differences in the type of student activities in which low achievers and high achievers participated, and (2) What, if any, was the statistical significance of difference in the number of student activities in which low achievers and high achievers participated?

Summary

The nature of the problem indicated that use of the survey method as the means of investigation. The investigation involved four steps: one, the selection of a sample of low

achievers and high achievers; two, the development of the instrument; three, the administration of the instrument; and four, the statistical treatment of the data.

Three large high schools in Oklahoma were selected for the investigation. A sample of 60 low achieving and 60 high achieving students were selected from each school.

A comprehensive student activities check list was developed combining the official school sponsored student activities of the three schools. The instrument was constructed to obtain the types and number of student activities in which the students participated.

The Chi Square test was used to determine whether or not there was a significant difference in the type of activity participation between low achievers and high achievers. The Chi Square Median test was used to determine whether or not there was a significant difference in the number of student activities in which low achievers and high achievers participated.

CHAPTER IV

ANALYSIS OF THE DATA

The student activity check sheets were scored by counting the number of activities marked by the student in each of the three categories: athletic related activities; subject related activities; and non-subject related activities. A student was classified according to the type of activity receiving the higher frequency. In case of ties, the student was not classified. The total number of activities marked by each student was also recorded. The total was used to determine the various group medians.

A three-by-two chi square test of significance was used to test null hypotheses one, two, and three concerning the type of activity participation. Chi square was computed from a three-by-three contingency table to test null hypothesis number four concerning school differences. In cases where significant chi square values were found, combinations of two-by-two chi squares were computed to ascertain where the differences actually lay.

A two-by-two chi square median test was used to test null hypotheses five, six, and seven concerning the median

number of activities in which the various groups participated. A two-by-three chi square median test was used to test null hypothesis number eight, concerning differences between the median number of activities participated in by students of the three schools.

Chi square was computed from the data contained in Table 1. The chi square value of 28.1 was significant at the .01 level of confidence and H_{01} was rejected.

Since H_{01} was rejected showing significant differences between the high achievers and low achievers in the type of student activities in which they participated, the three combinations of two-by-two chi square values were computed. Table two contains these data.

The difference between participation in athletic related activities and subject related activities for high achievers and low achievers was not statistically significant. The low achievers received a higher score in subject related activities than did the high achievers, but the difference was not statistically significant. The chi square values indicated differences beyond the .01 level of significance between athletic related activities and non-subject related activities and beyond the .01 level of significance between subject and non-subject related activities. This indicated that the differences between high achievers and low achievers in type of activity participation was in the non-subject related area with no differences indicated for athletic related activities or subject related activities.

TABLE 1

**CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVERS--LOW ACHIEVERS**

Type of Activity	High Achiever	Low Achiever	Total
Athletic	44	40	84
Subject	36	42	78
Non-Subject	47	5	52
Total	127	87	214

TABLE 2

**CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR HIGH ACHIEVERS--LOW ACHIEVERS**

Type of Activity	High Achiever	Low Achiever	Total	Computed Chi Square
Athletic	44	40	84	$\chi^2 = .40$
Subject	36	42	78	
Total	80	82	162	
Athletic	44	40	84	$\chi^2 = 19.27^{**}$
Non-Subject	47	5	52	
Total	91	45	136	
Subject	36	42	78	$\chi^2 = 24.56^{**}$
Non-Subject	47	5	52	
Total	83	47	130	

*Significant beyond the .05 level 3.84

**Significant beyond the .01 level 6.64

The computed chi square for Table 3 is 16.14 which was significant beyond the .01 level of 9.21. Thus, H_0 was rejected. The two-by-two chi square contingency sub-tables are contained in Table 4. The chi square values suggested that tenth graders participated more in athletic related activities than twelfth graders, but the differences for subject and non-subject related activities were not statistically significant for the sample of participants used in this study.

TABLE 3

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR TWELFTH GRADE--TENTH GRADE

Type of Activity	12th Grade	10th Grade	Total
Athletic	34	50	84
Subject	55	23	78
Non-Subject	33	19	52
Total	122	92	214

The data were further divided into high achieving and low achieving groups by grade level. This subdivision was to determine more accurately where the differences in activity participation could be found. The first subdivision was to compare high achieving twelfth graders with high achieving tenth graders. These data are contained in Table 5.

The computed chi square for Table 5 is 6.87 which was significant beyond the .05 level of 5.99. Table 6 contains the two-by-two contingency sub-tables which suggested that

high achieving tenth grade students participated more in athletic related activities than high achieving twelfth grade students. No significant differences were found between participation in subject related activities and non-subject related activities.

TABLE 4
CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR TWELFTH GRADE--TENTH GRADE

Type of Activity	12th Grade	10th Grade	Total	Computed Chi Square
Athletic	34	50	84	$\chi^2 = 13.54^{**}$
Subject	55	23	78	
Total	89	73	162	
Athletic	34	50	84	$\chi^2 = 5.90^*$
Non-Subject	33	19	52	
Total	67	69	136	
Subject	55	23	78	$\chi^2 = .42$
Non-Subject	33	19	52	
Total	88	42	130	

*Significant beyond the .05 level of 3.84

**Significant beyond the .01 level of 6.64

The second subdivision of the data was to compare low achieving twelfth graders with low achieving tenth graders. Table 7 contains these data. The computed chi square for Table 7 is 9.65 which was significant beyond the .01 level of

9.21. The two-by-two chi square contingency sub-tables are presented in Table 8 which suggested that low achieving tenth graders participated more in athletic related activities than low achieving twelfth grade students. Differences in participation between low achieving twelfth grade students and low achieving tenth grade students in subject and non-subject related activities were not statistically significant.

TABLE 5

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TWELFTH GRADERS--
HIGH ACHIEVING TENTH GRADERS

Type of Activity	High Achieving 12th Graders	High Achieving 10th Graders	Total
Athletic	18	26	44
Subject	24	12	36
Non-Subject	30	17	47
Total	72	55	127

The third subdivision of the data concerning differences between grades was to test for differences between high achieving twelfth grade students and low achieving twelfth grade students. Table 9 contains these data. The computed chi square for Table 9 is 19.77 which was significant beyond .01 level of 9.21. The two-by-two contingency subtables are contained in Table 10 whose data suggested that high achieving twelfth grade students participated significantly more than low achieving twelfth grade students in non-subject

related activities. The data also suggested that differences between participation in athletic related activities and subject related activities were not statistically significant.

TABLE 6

CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR HIGH ACHIEVING TWELFTH GRADERS--
HIGH ACHIEVING TENTH GRADERS

Type of Activity	High Achieving 12th Graders	High Achieving 10th Graders	Total	Computed Chi Square
Athletic	18	26	44	$\chi^2 = 4.28^*$
Subject	24	12	36	
Total	42	38	80	
Athletic	18	26	44	$\chi^2 = 3.91^*$
Non-Subject	30	17	47	
Total	48	43	91	
Subject	24	12	36	$\chi^2 = .001$
Non-Subject	30	17	47	
Total	54	29	83	

*Significant beyond the .05 level of 3.84

**Significant beyond the .01 level of 6.64

The fourth subdivision of the data concerning differences between twelfth and tenth grade students was to compare high achieving tenth graders with low achieving tenth graders. Table 11 contains these data. The computed chi square for Table 11 is 8.69 which was significant beyond the 0.5 level of 5.99. The two-by-two contingency subtables are contained in

participation for the athletic related activities and for the subject related activities were not statistically significant.

TABLE 7

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR LOW ACHIEVING TWELFTH GRADERS--
LOW ACHIEVING TENTH GRADERS

Type of Activity	Low Achieving 12th Graders	Low Achieving 10th Graders	Total
Athletic	16	24	40
Subject	31	11	42
Non-Subject	3	2	5
Total	50	37	87

TABLE 8

CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR LOW ACHIEVING TWELFTH GRADERS--
LOW ACHIEVING TENTH GRADERS

Type of Activity	Low Achieving 12th Graders	Low Achieving 10th Graders	Total	Computed Chi Square
Athletic	16	24	40	$\chi^2 = 8.24^{**}$
Subject	31	11	42	
Total	47	35	82	
Athletic	16	24	40	$\chi^2 = .14$
Non-Subject	3	2	5	
Total	19	26	45	
Subject	31	11	42	$\chi^2 = .02$
Non-Subject	3	2	5	
Total	34	13	47	

*Significant beyond the .05 level of 3.84
**Significant beyond the .01 level of 6.64

TABLE 9

**CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TWELFTH GRADERS--
LOW ACHIEVING TWELFTH GRADERS**

Type of Activity	High Achieving 12th Graders	Low Achieving 12th Graders	Total
Athletic	18	16	34
Subject	24	31	55
Non-Subject	30	3	33
Total	72	50	122

TABLE 10

**CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR HIGH ACHIEVING TWELFTH GRADERS--
LOW ACHIEVING TWELFTH GRADERS**

Type of Activity	High Achieving 12th Graders	Low Achieving 12th Graders	Total	Computed Chi Square
Athletic	18	16	34	$\chi^2 = .40$
Subject	24	31	55	
Total	42	47	89	
Athletic	18	16	34	$\chi^2 = 10.09^{**}$
Non-Subject	30	3	33	
Total	48	19	67	
Subject	24	31	55	$\chi^2 = 17.50^{**}$
Non-Subject	30	3	33	
Total	54	34	88	

*Significant beyond the .05 level of 3.84
 **Significant beyond the .01 level of 6.64

TABLE 11

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TENTH GRADERS--
LOW ACHIEVING TENTH GRADERS

Type of Activity	High Achieving 10th Graders	Low Achieving 10th Graders	Total
Athletic	26	24	50
Subject	12	11	23
Non-Subject	17	2	19
Total	55	37	92

TABLE 12

CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR HIGH ACHIEVING TENTH GRADERS--
LOW ACHIEVING TENTH GRADER

Type of Activity	High Achieving 10th Graders	Low Achieving 10th Graders	Total	Computed Chi Square
Athletic	26	24	50	$\chi^2 = .06$
Subject	12	11	23	
Total	38	35	73	
Athletic	26	24	50	$\chi^2 = 6.76^{**}$
Non-Subject	17	2	19	
Total	43	26	69	
Subject	12	11	23	$\chi^2 = 5.15^*$
Non-Subject	17	2	19	
Total	29	13	42	

*Significant beyond the .05 level of 3.84

**Significant beyond the .01 level of 6.64

Differences in participation between male and female students were the concern of H_{03} . Table 13 contains these data. The computed chi square for Table 13 was 11.60 which was significant beyond the .01 level of 9.21: thus, H_{03} was rejected.

Table 14 contains the three combinations of two-by-two contingency subtables for determining where the differences lay. These data suggested that male students participated more in athletic related activities than female students. No significant differences were found between male and female students in either subject related or non-subject related activities.

TABLE 13
CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR BOYS--GIRLS

Type of Activity	Boys	Girls	Total
Athletic	60	24	84
Subject	40	38	78
Non-Subject	23	29	52
Total	123	91	214

In order to more accurately locate differences in participation in student activities between male and female students, the data were further divided into various subgroups. The first subdivision was to compare twelfth grade boys and twelfth grade girls in activity participation. Table 15

contains these data. The computed chi square for Table 15 was 10.37 which was significant beyond the .01 level of 9.21. The two-by-two contingency subtables are contained in Table 16 which suggested that twelfth grade boys participated in significantly more athletic related activities than twelfth grade girls. The data suggested that differences between twelfth grade boys and twelfth grade girls in participation in both subject related activities and non-subject related activities were not statistically significant.

TABLE 14
CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR BOYS--GIRLS

Type of Activity	Boys	Girls	Total	Computed Chi Square
Athletic	60	24	84	$\chi^2 = 6.12^*$
Subject	40	38	78	
Total	100	62	162	
Athletic	60	24	84	$\chi^2 = 8.88^{**}$
Non-Subject	23	29	52	
Total	83	53	136	
Subject	40	38	78	$\chi^2 = .37$
Non-Subject	23	29	52	
Total	63	67	130	

*Significant beyond the .05 level of 3.84
**Significant beyond the .01 level of 6.64

TABLE 15

**CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR TWELFTH GRADE BOYS--
TWELFTH GRADE GIRLS**

Type of Activity	12th Grade Boys	12th Grade Girls	Total
Athletic	26	8	34
Subject	27	28	55
Non-Subject	13	20	33
Total	66	56	122

TABLE 16

**CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR TWELFTH GRADE BOYS--
TWELFTH GRADE GIRLS**

Type of Activity	12th Grade Boys	12th Grade Girls	Total	Computed Chi Square
Athletic	26	8	34	$\chi^2 = 5.45^*$
Subject	27	28	55	
Total	53	36	89	
Athletic	26	8	34	$\chi^2 = 8.00^{**}$
Non-Subject	13	20	33	
Total	39	28	67	
Subject	27	28	55	$\chi^2 = .44$
Non-Subject	13	20	33	
Total	40	48	88	

*Significant beyond the .05 level of 3.84
 **Significant beyond the .01 level of 6.34

The second subdivision was to determine differences between tenth grade boys and tenth grade girls. Table 17 contains these data. The computed chi square for Table 17 was 1.76 which was not significant at the .05 level of 5.99. These data suggested that differences in participation in student activities between tenth grade boys and tenth grade girls are not statistically significant.

TABLE 17

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR TENTH GRADE BOYS--TENTH GRADE GIRLS

Type of Activity	10th Grade Boys	10th Grade Girls	Total
Athletic	34	16	50
Subject	13	10	23
Non-Subject	10	9	19
Total	57	35	92

The third and fourth subdivisions were to compare high achieving boys to low achieving boys and to compare high achieving girls to low achieving girls. Table 18 contains the data concerning high achieving boys and low achieving boys. The computed chi square for Table 18 was 6.92 which was significant beyond the .05 level of 5.99. Table 19 contains the two-by-two contingency subtables which suggested that high achieving boys participated more in non-subject related activities than low achieving boys. No significant differences were found between participation in athletic related activities and

subject related activities for this group of students.

TABLE 18

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLES FOR
HIGH ACHIEVING BOYS--LOW ACHIEVING BOYS

Type of Activity	High Achieving Boys	High Achieving Girls	Total
Athletic	33	27	60
Subject	20	20	40
Non-Subject	19	4	23
Total	72	51	123

TABLE 19

CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR HIGH ACHIEVING BOYS--LOW ACHIEVING BOYS

Type of Activity	High Achieving Boys	High Achieving Girls	Total	Computed Chi Square
Athletic	33	27	60	$\chi^2 = .08$
Subject	20	20	40	
Total	53	47	100	
Athletic	33	27	60	$\chi^2 = 4.30^*$
Non-Subject	19	4	23	
Total	52	31	83	
Subject	20	20	40	$\chi^2 = 5.27^*$
Non-Subject	19	4	23	
Total	39	24	63	

*Significant beyond the .05 level of 3.84

**Significant beyond the .01 level of 6.64

Table 20 contains the data for comparing high achieving girls and low achieving girls in participation in student activities. The computed chi square for Table 20 was 23.85 which was significant beyond the .01 level of 9.21. Table 21 contains the two-by-two contingency subtables for determining where the differences lay. The data suggested that high achieving girls participated more in non-subject related activities than low achieving girls. No significant differences were found between participation in athletic related activities and subject related activities for the two groups.

TABLE 20

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING GIRLS--
LOW ACHIEVING GIRLS

Type of Activity	High Achieving Girls	Low Achieving Girls	Total
Athletic	11	14	25
Subject	16	22	38
Non-Subject	28	1	29
Total	55	37	92

Following these four subdivisions, the data were further subdivided. They were divided by sex, grade level and by achievement. The first of these subdivisions was to compare high achieving twelfth grade boys with low achieving twelfth grade boys. Table 22 contains these data. The computed chi square is 2.91 which was not significant at the .05 level of 5.99. The data suggested that there are no significant

differences concerning the types of student activities participated in by high achieving twelfth grade boys and low achieving twelfth grade boys.

TABLE 21

CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR HIGH ACHIEVING GIRLS--
LOW ACHIEVING GIRLS

Type of Activity	High Achieving Girls	Low Achieving Girls	Total	Computed Chi Square
Athletic	11	14	25	$\chi^2 = .012$
Subject	16	22	38	
Total	27	36	63	
Athletic	11	14	25	$\chi^2 = 13.37^{**}$
Non-Subject	28	1	29	
Total	39	15	44	
Subject	16	22	38	$\chi^2 = 19.28^{**}$
Non-Subject	28	1	29	
Total	44	23	67	

*Significant beyond the .05 level of 3.84

**Significant beyond the .01 level of 6.64

The second subdivision was to compare data concerning high achieving twelfth grade girls and low achieving twelfth grade girls. Table 23 contains these data. The computed chi square for Table 23 is 21.90 which was significant beyond the .01 level of 9.21. The two-by-two contingency subtables are contained in Table 24. These data suggested that high

achieving twelfth grade girls participated considerably more than low achieving twelfth grade girls in non-subject related activities; the low achieving girls indicated no participation in this category. Both groups participated very little in athletic related activities, and the differences between the groups were not statistically significant. The low achieving girls indicated more participation in subject related activities but the difference was not statistically significant.

TABLE 22

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TWELFTH GRADE BOYS--
LOW ACHIEVING TWELFTH GRADE BOYS

Type of Activity	High Achieving Boys	Low Achieving Boys	Total
Athletic	15	11	26
Subject	13	14	27
Non-Subject	10	3	13
Total	38	28	66

TABLE 23

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TWELFTH GRADE GIRLS--
LOW ACHIEVING TWELFTH GRADE GIRLS

Type of Activity	High Achieving Girls	Low Achieving Girls	Total
Athletic	2	5	7
Subject	11	17	28
Non-Subject	21	0	21
Total	34	22	56

TABLE 24

**CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR HIGH ACHIEVING TWELFTH GRADE GIRLS--
LOW ACHIEVING TWELFTH GRADE GIRLS**

Type of Activity	High Achieving Girls	Low Achieving Girls	Total	Computed Chi Square
Athletic	2	5	7	$\chi^2 = .007$
Subject	11	17	28	
Total	13	22	35	
Athletic	2	5	7	$\chi^2 = 13.72^{**}$
Non-Subject	21	0	21	
Total	23	5	28	
Subject	11	17	28	$\chi^2 = 16.93^{**}$
Non-Subject	21	0	21	
Total	32	17	49	

*Significant beyond the .05 level of 3.84

**Significant beyond the .01 level of 6.64

The third and fourth subgroups in this subdivision were to compare differences in participation in student activities between high achieving tenth grade boys and low achieving tenth grade boys and between high achieving tenth grade girls and low achieving tenth grade girls. Tables 25 and 26 contain these data, respectively. The computed chi square for Table 25 was 4.57 which was not significant at the .05 level of 5.99. The computed chi square for Table 26 was 4.22 which was not significant at the .05 level of 5.99. These data

suggested that no statistically significant differences existed between high achieving tenth grade boys and low achieving tenth grade boys and between high achieving tenth grade girls and low achieving tenth grade girls in the type of student activity participation.

TABLE 25

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLES
FOR HIGH ACHIEVING TENTH GRADE BOYS--
LOW ACHIEVING TENTH GRADE BOYS

Type of Activity	High Achieving Boys	Low Achieving Boys	Total
Athletic	18	16	34
Subject	7	6	13
Non-Subject	9	1	10
Total	34	23	57

TABLE 26

CHI SQUARE THREE-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TENTH GRADE GIRLS--
LOW ACHIEVING TENTH GRADE GIRLS

Type of Activity	High Achieving Girls	Low Achieving Girls	Total
Athletic	8	8	16
Subject	5	5	10
Non-Subject	8	1	9
Total	21	14	35

Table 27 contains the data for determining differences in the type of participation in student activities as reported by the three schools. The computed chi square for Table 27 was 19.63 which was significant beyond the .01 level of 13.28. Thus, H_{04} was rejected. Since Table 27 is a three-by-three contingency table it was necessary to test the three combinations of three-by-two contingency tables for significance. Differences between Moore and Midwest City and between Lawton and Midwest City were significant beyond the .01 level of 9.21. Differences between Lawton and Moore were not statistically significant.

Since significant differences were found in two of the three-by-two tables it was necessary to test the various combinations of two-by-two contingency tables to determine where the differences lay. Table 29 presents these data. The data of Table 29 suggested that Midwest City students participated significantly more in athletic related activities than students from Lawton High School and Moore High School, while no differences were found for participation in subject or non-subject related activities. Lawton High School students showed no significant differences from Moore High School in student activity participation.

The chi square median test was used to determine whether or not there were statistically significant differences in the amount of participation in student activities by the various groups. Siegel stated that "if many scores fall at common

median, split the scores into two categories: those which exceed the median and those which do not."⁵⁶ The two-by-two contingency tables used to present data concerning null hypotheses five, six, seven, and eight are divided as Siegel suggests.

TABLE 27

CHI SQUARE THREE-BY-THREE CONTINGENCY TABLE
FOR MOORE HIGH SCHOOL--MIDWEST CITY HIGH
SCHOOL--LAWTON HIGH SCHOOL

Type of Activity	Moore	Midwest City	Lawton	Total
Athletic	21	45	19	85
Subject	29	23	26	78
Non-Subject	21	9	21	51
Total	71	77	66	214

Table 30 contains the data concerning the differences in the number of activities participated in by high achievers and low achievers. The computed chi square median value for Table 30 was 86.67 which was significant beyond the .01 level of 6.64. Therefore, H_0 was rejected. The data suggested that high achievers participated in considerably more student activities than low achievers.

Table 31 contains the data comparing the amount of participation in student activities by tenth grade students and twelfth grade students. The computed chi square value for

⁵⁶Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Company, 1956), p. 115.

TABLE 28

CHI SQUARE THREE-BY-TWO CONTINGENCY SUB-TABLES
FOR MOORE HIGH SCHOOL--MIDWEST CITY HIGH
SCHOOL--LAWTON HIGH SCHOOL

Type of Activity	Moore	Lawton	Total	Moore	Midwest City	Total	Lawton	Midwest City	Total
Activity	21	19	40	21	45	66	19	45	64
Subject	29	26	55	29	23	52	26	23	49
Non-Subject	21	21	42	21	9	30	21	9	30
Total	71	66	137	71	77	148	66	77	143
Computed Chi Square	$\chi^2 = .09$			$\chi^2 = 14.07^{**}$			$\chi^2 = 14.85^{**}$		

*Significant beyond the .05 level of 3.84

**Significant beyond the .01 level of 6.64

Table 31 is 3.43 which was not significant beyond the .05 level of 3.84. Thus H_0 was not rejected.

TABLE 29

CHI SQUARE TWO-BY-TWO CONTINGENCY SUB-TABLES
FOR MOORE HIGH SCHOOL--MIDWEST CITY HIGH
SCHOOL--LAWTON HIGH SCHOOL

Type of Activity	Midwest City	Lawton	Total	Midwest City	Moore	Total
Athletic	45	19	64	45	21	66
Subject	23	26	49	23	29	52
Total	68	45	113	68	50	118
Computed Chi Square $\chi^2 = 5.39^*$ $\chi^2 = 5.89^*$						
Athletic	45	19	64	45	21	66
Non-Subject	9	21	30	9	21	30
Total	54	40	94	54	42	96
Computed Chi Square $\chi^2 = 11.98^{**}$ $\chi^2 = 10.72^{**}$						
Subject	23	26	49	23	29	52
Non-Subject	9	21	30	9	21	30
Total	32	47	79	32	50	82
Computed Chi Square $\chi^2 = 1.57$ $\chi^2 = 1.08$						

*Significant beyond the .05 level of 3.84
**Significant beyond the .01 level of 6.64

Table 32 contains the data comparing the amount of participation in student activities by male and female students. The computed chi square for Table 32 was 4.80 which was

significant beyond the .05 level of 3.84. Thus, H_{07} was rejected. The data indicated that boys participated in a greater number of student activities than girls.

TABLE 30

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVERS--LOW ACHIEVERS

	High Achievers	Low Achievers	Total
Above Median	113	26	139
Not Above Median	67	154	221
Total	180	180	360

TABLE 31

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
FOR TWELFTH GRADE STUDENTS--
TENTH GRADE STUDENTS

	12th Graders	10th Graders	Total
Above Median	76	58	134
Not Above Median	104	122	226
Total	180	180	360

TABLE 32

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
FOR ALL BOYS--ALL GIRLS

	Boys	Girls	Total
Above Median	75	59	134
Not Above Median	105	121	226
Total	180	180	360

To determine more accurately where the differences in amount of participation lay the data were further subdivided. The first of these subdivisions was to compare high achieving boys with low achieving boys. Table 33 contains these data. The computed chi square for Table 33 was 29.60 which was significant beyond the .01 level of 6.64. The data suggested that high achieving boys participated in considerable more student activities than low achieving boys.

TABLE 33

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING BOYS--
LOW ACHIEVING BOYS

	High Achieving Boys	Low Achieving Boys	Total
Above Median	56	19	75
Not Above Median	34	71	105
Total	90	90	180

The second subdivision compared high achieving girls with low achieving girls. Table 34 contains these data. The computed chi square value of 48.80 was significant beyond the .01 level of 6.64. The data suggested that high achieving girls participated in considerable more student activities than low achieving girls.

The high achieving boys and girls participated in significantly more student activities than low achieving boys and girls. These groups were divided into four subgroups for further

analysis. The first subgroup consisted of comparing high achieving twelfth grade boys and low achieving twelfth grade boys. Table 35 contains these data. The computed chi square for Table 35 was 63.97 which was significant beyond the .01 level of 6.64. These data suggested that high achieving twelfth grade boys participated in considerably more student activities than low achieving twelfth grade boys.

TABLE 34

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING GIRLS--
LOW ACHIEVING GIRLS

	High Achieving Girls	Low Achieving Girls	Total
Above Median	52	7	59
Not Above Median	38	83	121
Total	90	90	180

TABLE 35

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TWELFTH GRADE BOYS--
LOW ACHIEVING TWELFTH GRADE BOYS

	High Achieving 12th Boys	Low Achieving 12 Boys	Total
Above Median	31	10	41
Not Above Median	14	35	49
Total	45	45	90

The second subgroup data is contained in Table 36. The computed chi square for Table 36 was 47.90 which was significant

beyond the .01 level of 6.64. The data suggested that high achieving twelfth grade girls participated in considerably more student activities than did low achieving twelfth grade girls.

TABLE 36

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TWELFTH GRADE GIRLS--
LOW ACHIEVING TWELFTH GRADE GIRLS

	High Achieving 12th Girls	Low Achieving 12th Girls	Total
Above Median	34	1	35
Not Above Median	11	44	55
Total	45	45	90

The third subgroup consisted of data comparing the extent of participation between high achieving tenth grade boys and low achieving tenth grade boys. Table 37 contains these data. The computed chi square value of 17.92 was significant beyond the .01 level of 6.64. The data suggested that high achieving tenth grade boys participated in considerably more student activities than low achieving tenth grade boys.

The fourth subgroup consisted of comparing the amount of participation between high achieving tenth grade girls and low achieving tenth grade girls. The computed chi square value of 8.78 was significant beyond the .01 level of 6.64. These data, contained in Table 38, suggested that high achieving tenth grade girls participated in significantly more student activities than low achieving tenth grade girls.

TABLE 37

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TENTH GRADE BOYS--
LOW ACHIEVING TENTH GRADE BOYS

	High Achieving 10th Boys	Low Achieving 10th Boys	Total
Above Median	31	14	45
Not Above Median	14	31	45
Total	45	45	90

TABLE 38

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
FOR HIGH ACHIEVING TENTH GRADE GIRLS--
LOW ACHIEVING TENTH GRADE GIRLS

	High Achieving 10th Girls	Low Achieving 10th Girls	Total
Above Median	28	13	41
Not Above Median	17	32	49
Total	45	45	90

Table 39 contains data for determining whether or not there were differences in the amount of participation in student activities among the three schools. The computed chi square value of 4.15 was not significant beyond the .05 level of 5.99. Thus H_0 was not rejected. The data suggested that the students in the three high schools tended to participate in approximately the same median number of student activities.

Table 40 contains a summary of the chi square values and common medians for the data analyzed in connection with

null hypotheses five, six, seven, and eight.

Only 18 (10 per cent) of the high achieving students indicated no participation in the student activity program as compared to 74 (41 per cent) of the low achieving students. Table 41 contains the amount of nonparticipation as reported by the various groups.

TABLE 39

CHI SQUARE TWO-BY-TWO CONTINGENCY TABLE
MIDWEST CITY HIGH SCHOOL--MOORE HIGH
SCHOOL--LAWTON HIGH SCHOOL

	Lawton	Moore	Midwest City	Total
Above Median	38	43	53	134
Not Above Median	82	77	67	226
Total	120	120	120	360

TABLE 40

SUMMARY

Group	Common Median	Computed Chi Square
High Achievers--Low Achievers	2	86.67**
Twelfth Grade--Tenth Grade	2	3.43
Boys--Girls	2	4.80*
High Achieving--Low Achieving Boys Boys	2	29.60**
High Achieving--Low Achieving Girls Girls	2	48.80**
High Achieving--Low Achieving 12th Boys 12th Boys	2	17.92**
High Achieving--Low Achieving 12th Girls 12th Girls	2	47.90**
High Achieving--Low Achieving 10th Boys 10th Boys	1	11.38**
High Achieving--Low Achieving 10th Girls 10th Girls	1	8.78**
Lawton--Midwest City--Moore	2	4.15

*Significant beyond the .05 level of 3.84

**Significant beyond the .01 level of 6.64

TABLE 41

PERCENTAGE OF NONPARTICIPANTS BY GROUPS

Group	Number of Nonparticipants	Number in Sample	Per- centage
High Achievers	18	180	10
Low Achievers	74	180	41
Twelfth Grade	35	180	19
Tenth Grade	57	180	32
Boys	37	180	21
Girls	55	180	31
High Achieving Boys	3	90	3
Low Achieving Boys	34	90	38
High Achieving Girls	15	90	17
Low Achieving Girls	40	90	44
High Achieving 12th Boys	2	45	4
Low Achieving 12th Boys	14	45	31
High Achieving 12th Girls	3	45	7
Low Achieving 12th Girls	16	45	36
High Achieving 10th Boys	1	45	2
Low Achieving 10th Boys	20	45	44
High Achieving 10th Girls	12	45	27
Low Achieving 10th Girls	24	45	53
Lawton Students	41	120	34
Moore Students	28	120	23
Midwest City Students	23	120	19

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to determine the relationship between scholastic achievement and participation in the student activities program. A review of the professional literature indicated that many students did not participate in student activities. A characteristic of the nonparticipant was low scholastic achievement. Nonparticipation in the student activities program and low scholastic achievement were also cited as characteristics of high school dropouts. Another group of studies indicated that athletes made slightly better grades than the average student in their schools. The research provided some support for the position that a positive relationship existed between participation in the student activities program and scholastic achievement.

Three high schools of comparable size were selected for this study. The schools were Lawton High School, Lawton, Oklahoma; Moore High School, Moore, Oklahoma; and Midwest City High School, Midwest City, Oklahoma. For this research, two classes

of tenth grade basic English, two classes of tenth grade honors English, two classes of twelfth grade basic English, and two classes of twelfth grade honors English were selected by the principal from each of the three schools. Criteria for the basic English classes was a GPA of 2.0 or below and for the honors English classes a GPA of 3.0 or above. A sample of 15 boys and 15 girls were selected at random from each of the above groups. The sample included 120 students from each school or 360 students; 60 from each school being classified as low achievers and 60 as high achievers.

A student activities check sheet was constructed which included all the student activities sponsored by the three schools. The check sheet was administered to each of the designated English classes. The random sample was then drawn from the completed check sheets.

The student activities were classified into three categories; athletic related, subject related, and non-subject related. The student activities check sheets were scored by counting the number of activities marked by the individual in each category. The student was then placed in the category receiving the larger score. The total number of activities participated in by each student was also recorded.

Eight null hypotheses were developed and tested by the information obtained from the data collected. Four of the null hypotheses were concerned with the type of participation in the student activities program and four were concerned with

the number of student activities in which the various groups participated.

Findings

The students were grouped into various categories for purposes of analysis, with all students being placed in more than one category. Comparable categories were paired to determine differences in both type and amount of participation in the three student activities programs. The paired groups were as follows: high achievers--low achievers; boys--girls; twelfth grade students--tenth grade students-- and, Lawton students--Moore students--Midwest City students.

HO₁ There is no statistically significant difference in the types of activity participation between low achievers and high achievers.

HO₁ was rejected at the .01 level of confidence. The data indicated that high achievers participated in significantly more non-subject related activities than low achievers. The differences for athletic related activities and subject related activities were not statistically significant.

HO₂ There is not statistically significant difference in the type of activity participation between tenth grade students and twelfth grade students.

HO₂ was rejected at the .01 level of confidence. The data indicated that tenth graders

participated in significantly more athletic related activities than twelfth graders. High and low achieving tenth graders participated in more athletic related activities than high and low achieving twelfth graders. Other differences between tenth and twelfth grade students were not statistically significant.

HO₃ There is no statistically significant difference in the types of activity participation between boys and girls.

HO₃ was rejected at the .01 level of confidence. The data indicated that boys participated more in athletic related activities than girls. The differences between subject related and nonsubject related activities were not significant.

HO₄ There is no statistically significant difference in the types of student activities in which the students participate among the three schools.

HO₄ was rejected at the .01 level of confidence. The data indicated that students at Midwest City High School participated in more athletic related activities than either Lawton High School or Moore High School students. Other differences were not statistically significant.

H0₅ There is no statistically significant difference in the median number of student activities participate in by low achievers and high achievers.

H0₅ was rejected at the .01 level of confidence. The data indicated that high achievers participated in significantly more student activities than low achievers.

H0₆ There is no statistically significant difference in the median number of student activities participated in by tenth grade students and twelfth grade students.

H0₆ could not be rejected. The data indicated that the differences in the amount of participation between tenth and twelfth grade students was not significant.

H0₇ There is no statistically significant difference in the median number of activities participated in by boys and girls.

H0₇ was rejected at the .05 level of confidence. Boys participated in significantly more student activities than girls.

H0₈ There is no statistically significant difference in the median number of activities participated in among the three schools.

H0₈ could not be rejected. The data indicated no significant differences in the amount of participation in student activities

among the three schools.

The number of nonparticipants was greater for low achievers than high achievers for all groups compared. Of the group of high achievers, 18 (10 per cent) indicated no participation in the student activities program as compared to 74 (41 per cent) for the low achieving students. The data suggested that 44 per cent of the low achieving girls as opposed to 17 per cent of the high achieving girls did not participate in a single student activity. Other low achieving groups compared, indicated similar percentages: Low achieving boys, 38 per cent; low achieving twelfth grade boys, 31 per cent; low achieving twelfth grade girls, 36 per cent; low achieving tenth grade boys, 44 per cent; low achieving tenth grade girls, 53 per cent. High achieving groups indicated considerably less nonparticipation: high achieving boys, 3 per cent; high achieving girls, 17 per cent; high achieving twelfth grade boys, 4 per cent; high achieving twelfth grade girls, 7 per cent; high achieving tenth grade boys, 2 per cent; high achieving tenth grade girls, 27 per cent. The number of nonparticipants for the total sample was 92 (26 per cent).

Conclusions.

The findings of the study supported the following conclusions:

1. High achieving students participated in a greater number of student activities than low achieving students.

2. Low achieving students participated in athletic related activities more than subject related or non-subject related activities.

3. A greater percentage of low achievers than high achievers did not participate in any student activity.

4. The amount of participation does not appear to be different in the three schools. However, the type of participation was different. Midwest City students participated more in athletic related activities than either Moore students or Lawton students.

5. Boys are more active participants in the student activities program than girls, especially in the athletic related areas. Boys also had fewer nonparticipants than girls; 37 (21 per cent) as compared to 55 (31 per cent) for girls.

6. Tenth grade students participated in the student activities program in about the same amount as twelfth grade students. However, the type of participation in student activities tended to change from the tenth grade to the twelfth grade. The tenth graders participated in athletic related activities more than twelfth graders, while twelfth graders tended to participate more in the subject related areas.

Recommendations

Since a positive relationship was found between participation in the student activity program and scholastic achievement, the following recommendations for future research seem warranted:

1. This study should be duplicated in other schools to verify the findings of the study.

2. Research should be conducted to determine if participation in student activities contribute toward improved grades in school.

3. Research should be conducted to determine whether or not there is an economic factor related to participation in student activities.

4. Research should be conducted to determine whether or not participation in student activities makes a contribution toward improvement of attitudes and a development of a sense of belonging toward the school in the students.

5. Research should be conducted to determine whether or not participation in student activities makes a contribution toward retaining some students in school.

6. Research should be conducted in the junior high school concerning each of the previously mentioned recommendations.

7. The data on percentage of nonparticipants by groups (Table 41) suggest that a study incorporating a more searching investigation of the significance of nonparticipation ought to be undertaken.

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APPENDIX A

Student Activities Check List

Name _____ Sex; M, F

School _____ Grade _____

Please check all the student activities (including intramurals) listed below that you participated in during the 1968-69 school year. Mark each activity in which you were a participant with an "X." If you were a participant for a period of time but dropped the activity, mark this activity with a "D"; leave all others blank.

Anthropology Club.....	_____	Junior Red Cross.....	_____
Archery.....	_____	Key Club.....	_____
Art Club.....	_____	Latin Club.....	_____
Athletic Club.....	_____	Lettermen's Club.....	_____
Badminton.....	_____	Library Club.....	_____
Band.....	_____	Literary Club.....	_____
Baseball.....	_____	Mathematics Club.....	_____
Basketball.....	_____	Medical Careers Club.....	_____
Booster Club.....	_____	National Honor Society.....	_____
Bowling.....	_____	Office Club.....	_____
Chess Club.....	_____	O. I. O.	_____
Chorus.....	_____	Pep Club.....	_____
City Activities Council.....	_____	Photography Club.....	_____
Cross-Country.....	_____	Psychology Club.....	_____
D. E. Club.....	_____	Science Club.....	_____
Debate Club.....	_____	School Paper Staff.....	_____
Drama Club.....	_____	School Play.....	_____
Drill Team.....	_____	Spanish Club.....	_____
F. B. L. A.	_____	Student Council.....	_____
F. F. A.	_____	Swimming.....	_____
F. H. A.	_____	Tennis.....	_____
Football.....	_____	Track.....	_____
French Club.....	_____	Tri Hi Y	_____
F. T. A.	_____	V. I. C. A.	_____
German Club.....	_____	Volleyball.....	_____
Golf.....	_____	Weight Lifting Club.....	_____
Hi Y	_____	Wrestling.....	_____
Industrial Arts Club.....	_____	Yearbook Staff.....	_____
Interact.....	_____	Youth for Christ.....	_____