A STUDY OF THE RELATIONSHIP OF EXTRA-CURRICULAR ACTIVITIES TO CURRICULAR SUBJECTS IN THE SAYRE, OKLAHOMA, SENIOR HIGH SCHOOL

A STUDY OF THE RELATIONSHIP OF EXTRA-CURRICULAR ACTIVITIES TO CURRICULAR SUBJECTS IN THE SAYRE, OKLAHOMA, SENIOR HIGH SCHOOL

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O.M.

PREFACE

Extra-curricular activities and its ramification have always, to a certain extent, haunted the minds of the administrators and the teachers of the public schools.

Some administrators in the past have attempted to abolish those activities that we now call extra-curricular. Others have tried to ignore them. When these procedures failed there were those brave individuals who first ventured to make a place for the out of school activities in the school program.

This latter group has attempted to harness the energy of these activities and by furnishing direction to them cause them to become a dynamic force in the school program. The value of extra-curricular activities to the school program is still a matter of conjecture among many people.

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CHAPTER I

INTRODUCTION

THE PROBLEM

A question is often raised by administrators, teachers, and the patrons of the school as to the worthwhileness of extra-curricular activities. Many are uncertain as to what the relationship of the extra-curricular to the curricular should be in regard to time spent on each. It is thought by some teachers and administrators and, I might say, some patrons that participation in the extra-curricular causes a decrease in the scholarship of the participant. A. M. Swanson made a study of the grades attained by students in Kansas City High School during the period of participation in extra-curricular activities in contrast with their grades in periods of non-participation. Participation proved to have no harmful effect upon scholarship.[1] At Smith College, Professor Chapin made a study of the influence of extra-curricular activities upon physical conditions and upon scholarship, and found that extra-curricular participation had no harmful effect upon either physical condition or scholarship. More recently Professor Chapin has studied this problem at the University of Minnesota with similar results.[2] Just how much a pupil can participate in activities other than curricular and yet make the achievement demanded of him in curricular subjects may yet be considered problematic.

Likewise, it is thought by some persons that an already busy

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1 Swanson, A. M., "Effect on High School Scholarship of Pupil Participation in Extra-Curricular Activities." School Review. Vol. 32, pp. 613-626

2 Chapin, Frances S., "Extra-Curricular Activities of College Students." School and Society. Vol. 23, pp. 212-216.

teacher should not be required to sponsor extra-curricular activities. Also, some contend that too much of the time and money allotted to extra-curricular activities is consumed by athletics. However, this should be considered a weakness in administering the program and not an indictment against it. Yet these and many other questions arise when extra-curricular activities are brought into a discussion.

> In national and state educational meetings, in sectional and in local conferences, in college and university classes, and in book and magazine publications, there has been, and is continuing to be, discussion of the theories and plans of extra-curricular activities. Fortunately there is still a spirit of pioneering. Likewise, there is still much healthy disagreement.[3]

The problem of this thesis is to determine within the limits of this study whether or not participation in extra-curricular activities influences achievement in curricular subjects.

THE PURPOSE OF THIS STUDY

The consideration of the above-mentioned problem prompted the writer of this thesis to make an investigation in his own high school. The question of the influence of extra-curricular activities participation upon scholarship of students was raised in his own school, and it is his intention to answer it, to some degree, by taking the findings in his own high school and comparing them with what has been found elsewhere. The few conclusions that have been reached by school authorities, pertaining to values and acceptable practices in extra-curricular activities, have come about by experimental procedure and not by armchair thinking processes.[4]

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3 Fretwell, Elbert K. Extra-Curricular Activities in Secondary Schools. P. 2.

4 Ibid., p.6.

This thesis is an attempt to show the results of a study in one small high school in western Oklahoma.

Perhaps this study will partially answer the questions of the teachers, administrators, pupils, and patrons as to the status of extra-curricular activities in their own school.

It is with some reluctance that the writer mentions that he harbors a thought that perhaps this study may add a very meager contribution to the small amount of information now available relative to small high schools and their extra-curricular programs.

CHAPTER II

THE CURRICULAR PROGRAM

This chapter is written for the purpose of furnishing a brief background for the chapters that are to follow.

The Sayre school system serves a community that is primarily agricultural. The City of Sayre, the county seat of Beckham County, has a population of 3,157.[5] The school district operates two busses in transporting into town the pupils of outlying districts that have consolidated with Sayre. The scholastic enumeration for 1935-36 of the entire school district was 1,197.[6]

The Sayre school system operated in 1936-37 on a 5-4-3 plan. The grades one to five are housed in one building with a separate corps of teachers. The grades six to nine, inclusive, are known as the junior high school. These grades are housed in the junior high school building with some classes meeting in the senior high school with high school instructors.

The Sayre Senior High School as it is used in this thesis is comprised of the grades ten, eleven, and twelve. During the school year 1936-37 the senior high school had an average daily attendance of 176. The high school is accredited by the North Central Association of Secondary Schools and Colleges.

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5 Fifteenth Census of the United States, Vol. I, Population. p. 898.

6 Oklahoma Educational Directory, 1935-36. Bulletin No. 108L.

The Curriculum of Studies of the Sayre Senior High School for 1936-37

Tenth Grade

*English II	Home Economics I
*Geometry	Home Economics II
Modern History	Agriculture I
Typewriting I	Agriculture III
Science II	Science I

Eleventh Grade

*American Literature	Home Economics I
*American History	Home Economics II
Biology	Agriculture I
Typewriting I	Agriculture II
Shorthand I	Advanced Algebra
Bookkeeping I	Trigonometry

Twelfth Grade

**English Literature	Home Economics I
**Public Speaking and Business English	Home Economics II
Problems of American Democracy	Agriculture II
Biology	Typewriting I
Physics	Shorthand I
Advanced Algebra	Bookkeeping I
Trigenometry	

*Required subjects.

**English Literature or public speaking and business English are required.

The Marking System

The letter system of A, B, C, D, and F is used in the high school.

Grade	Interpretation of Grades in Terms of Per Cent	Explanation of Grades
A	93 - 100	Superior
B	87 - 92	Above average
C	81 - 86	Average
D	75 - 80	Below average
F	Below 75	Failure

Grades or teachers marks are given out each six weeks.

A valedictorian and a salutatorian are selected at the end of each school year from the senior class. The selection is based on grades made each semester for the three years of high school.

Pupils are compensated for good attendance and scholarship at the close of each semester. Semester examinations are given to all students unless they are exempted by reasons of attendance and scholarship.

Qualifications For Exemption

Number of Absences	*Grade Required in Each Subject
0	C
1	B
2	A
3 or more	Cannot be exempted

*Student must be exempt in all subjects.

REQUIREMENT FOR GRADUATION

A pupil in order to be eligible to graduate must meet the following requirements:

A pupil must have completed twelve units of regular classroom work. These units shall include three units in English, one in American History, one in laboratory science, and one in methematics. In case the pupil has had general science in an approved junior high school, the science requirement is fulfilled and no other science is required. One year of mathematics is required beyond algebra of the ninth grade.

CHAPTER III

THE EXTRA-CURRICULAR PROGRAM

From 1908 until 1926 the extra-curricular program in the Sayre High School consisted chiefly of music, athletics and dramatics.

The music included the glee clubs, quartets, and soloist. These organizations competed in their county and conference meets.

The athletics, in the beginning, was under control of a group outside of school that managed, coached, and at times played with the team. As time went on coaches were hired, or at least men teachers coached the team. Nothing much was said as to eligibility of players until about 1924.

In 1926 the first student council was organized, which marked the beginning of organized activities. From this time until 1935 much progress was made in student participation.

In the fall of 1935 the school turned its attention to extra-curricular activities and their development. The establishment of a greater activity program was the goal of 1935-37 with an idea of experimentation.

THE STUDENT COUNCIL

The student council in the Sayre High School, which is composed of nine members, is the "hub" or center of the entire activity program.

This organization is headed by a president, vice-president, and secretary-treasurer. These three officers are nominated from the junior and senior classes and are elected by the entire student body at a spring election. They hold office for one year.

The other six representatives to the student council are elected from the three home-rooms. Two are elected from each home-room and

they hold office for one semester only. These six representatives report to their home-rooms the activities of the council.

This council charters all activities, handles all athletics and activity revenues, schedules all activity events, arranges the schedule of chapel programs, sponsors Junior Police, student publications, and many other things of importance. They do not handle cases of discipline.

Likewise, the student council has a definite time of meeting which is each Monday at activity period. The officers of the student council maintain a room as an office. They have their own stationery and other office supplies that are necessary in performing the duties attached to their office.

THE HOME-ROOM

The home-room meets each morning before school for ten minutes and on each Tuesday at activity period. The composition of the home-room is determined by classes. Therefore, there are three home-rooms, one for the sophomore class, one for the junior class, and one for the senior class.

The officers are elected by the members of the home-rooms. The number and names of officers are decided by the group. Usually the officers consist of president, vice-president, secretary, treasurer, song leader, and yell leader.

The function of each home-room is to be a Home Room.[7] The function of the home-room is summed up by Doctor Fretwell.

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7 Fretwell, Elbert K., op. cit., p. 21.

Purpose
a. Guidance, ethical, educational, and vocational.
b. Opportunity for practicing self-direction, democratic citizenship.
c. Enrichment of classroom activity.
d. Means for the formation of desirable public opinion.
e. Administrative unit for routine matter.[8]

CLUBS

The clubs are not set up arbitrarily by the school administration but are instituted and chartered by the student council upon the demand of the student body. However, the principal of the school is given the power of veto under the constitution of the student council.

Membership in the clubs is voluntary and open to all persons. These clubs have a regular time for meeting. They meet once each week either on Mondays, Thursdays or Fridays for thirty minutes from 10:30 until 11:00 o'clock.

Officers are elected each semester from the membership. The officers preside at all meetings. The adviser or sponsor, who is appointed by the principal, acts only in an advisory capacity. Committees arrange programs and furnish projects.

Below is listed the clubs in the Sayre Senior High School during 1936-37:

Club	Nature-Purpose[9]	Number Enrolled
Girls Reserve	Civic-Social-Moral	34
Science	Scientific	14
Home Economics	Home Economics	16
Dramatic	Dramatic	30
F. F. A.	Industrial and Agricultural	29

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8 Bretwell, Elbert K., op. cit., p. 47.

9 Koos, L. V., "Analysis of the General Literature on Extra-Curricular Activities." The Twenty-Fifth Yearbook of the National Society for the Study of Education, Part II. Pp.9-22

Clubs (continued)	Nature-Purpose	Number Enrolled
Model Aeroplane	Industry-Arts and Crafts	6
World	Geographical	11
Music	Musical	16
Home Economics (Boys)	Home Economics	30
Football	Physical and Athletic	23
Law	Civic-Social-Moral	12
Debate	Forensic and Declamatory	14
Junior Police	Civic-Social-Moral	6
Leather Working	Arts and Crafts	12
Athletic	Physical and Athletic	17
Pep	Physical and Athletic	28

The clubs listed above have grown out of felt needs and desires of the pupils.

The glee clubs and the band have not been listed as clubs, due to the fact that they are semi-curricular. The directors are members of the faculty and they plan the procedures of these organizations.

The music club has grown out of the interest of pupils in the band, the glee clubs, and the curricular music class.

PUBLICATIONS

The only school publication is the school newspaper which is edited each week and published as a part of the local daily newspaper. A separate sheet is given the school paper. Advertising is not sold for the paper.

The high school paper, "The Eagle Scream," is under the control of the student council. The editor is appointed by the council and is subject to removal at any time. The editor appoints his staff

which must be confirmed by the council. This staff is given an adviser that acts in an advisory manner only. This adviser does not write articles for the paper or edit those articles that have been written.

ATHLETICS

There is no physical education in the school's curriculum. Athletics consists of football, basketball and track. All three of these sports are under the direction of one coach. The practice period is usually two hours in length and comes immediately after school. Girls do not participate. No intra-mural program is maintained.

An average schedule for football is ten games. The basketball schedule is twenty-five games. In track three or four meets are usually attended.

Good equipment is furnished the participants. Each article is systematically checked out to each individual and that individual is responsible until it is checked into the proper persons.

Athletics is not subsidized by the school board. The school board pays the coach's salary for teaching a full schedule and coaching football, basketball and track. The cost of equipment, lights, gas, water, advertising,and all other expense is of necessity borne by the student activities through the gate receipts which chiefly come from football. Basketball and track are not self supporting, so it is necessary for football to bear the brunt of financing them.

The Sayre High School is a member of a fourteen-team conference known as the Southwestern Conference. Six games must be played with the member teams each year in each sport such as football and basketball. In track, a meet is held in which the various teams of the conference engage.

Wrestling and tennis are two conference sports in which Sayre does not engage.

MUSIC

The band, girls' glee club, mixed chorus, boys' quartet, girls' quartet, mixed quartet and solos of various kinds, which are basically semi-curricular, constitute the extra-curricular music.

While the directors constitute the guiding force in the success of these groups, some student leadership is used in the band and the glee club. These two organizations have officers who relieve the directors of much necessary detail. The assumption of these responsibilities on the part of the elected officers furnishes an excellent opportunity for individual initiative and leadership.

Membership in these organizations is voluntary and any pupil may be a member. A definite place on the daily schedule is given these activities. The musical organizations participate in the county, conference, and district music contests. In addition, they make many appearances before civic bodies, church groups, school assemblies, home-rooms, clubs, and groups assembled for special occasions.

DEBATE AND SPEECH

These activities which consist of debate, extemporaneous speaking, standard and original orations, and declamations, have no regularly scheduled time to meet. They are an outgrowth of the speech class and also the competitive interest of the school in the county, conference, and state meets.

The debate coach arouses interest in these activities through the debate club, which does have a regular place on the schedule. The debate team meets at night and on week-ends for most of their

debate preparation. The pupils prepare their own speeches. The coach or sponsor only advises.

The expenses of the debate team are borne chiefly by the student activities, since debate is not self supporting.

THE ASSEMBLY

Assembly is held once each week on Wednesday from 10:30 until 11:00 o'clock. If longer time is needed to finish a program the period is lengthened.

> The more interesting and worth while school assemblies and in accomplishing certain definite and desirable objectives, among which are the following: (1) The assembly can serve as one means of integrating the whole school by making available in an interesting form a common body of knowledge about the school and its problems; (2) the discussion of the problems of the school by representative pupils and teachers in the assembly, when wisely guided tends to develop intelligent public opinion; and (3) the presentation in the assembly programs, of the successful achievements of the school-curricular and extra-curricular -tends to encourage these activities and to promote others like them.[10]

The above quotation from Doctor Fretwell amply expresses the value of the assembly in the extra-curricular program.

The Sayre High School assembly is not dominated by the faculty. It is distinctly a pupil assembly. The assembly is extra-curricular in the fullest sense. Every one is required to attend the assembly which is presided over by the president of the student council, who has complete authority.

The assembly opens with a ritual which includes, the flag ceremony, the school prayer and the school creed.

Below is the school creed and prayer which was written by a committee of the student council and which was adopted by the council as the official creed and prayer.

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10 Fretwell, Elbert K., "Special Types of Activities: Assemblies, Athletics, Music, Dramatics, Debating, and Clubs." The Twenty-Fifth Yearbook of the National Society for the Study of Education, Part II, p. 165.

School Creed

In Sayre High School, I pledge my better self, to attainment that shall raise the standards of my school; to seek knowledge, peace and harmony, kindled by a respect for all those with whom I am associated.

I shall endeavor to attain that quality of womanhood or manhood that arises from conduct that is noble; and a tranquil mind reverent always of death, age, and innocence of God; to foster a spirit of democracy and humanity, seeking to be of service to others rather than myself; I shall daily strive to be a better student in Sayre High School.

School Prayer

Oh, God, our Heavenly Father, in the courage of faith we bow before Thee. We thank Thee for Thy kindly care over us. We ask Thy blessing, and Thy peace, upon our school, upon our nation, and upon all the nations of the earth.

We pray that we may be ever guided by the example of Christ as we daily build our temple of life. Quicken our minds to choose fearlessly the greater tasks. Unite us as one in service, even as each prays. Let the words of my mouth and the meditations of my heart be acceptable in Thy sight, oh Lord, my strength and my Redeemer. Amen.

The program for the assembly is furnished by some home-room, club or other organization within the school. Each program has a theme. A committee of the student council arranges a program schedule for each semester. Special days or special occasions are used in building the assembly program.

AWARDS OF ATTAINMENT

Letter awards are given by the student council to pupils who make certain achievement in activities other than clubs. These awards are given for attainment in athletics, debate, glee clubs, quartets, solos, band, oratory, declamatory and stock judging.

The coaches and sponsors of the various groups set up the standards that the pupil must attain in order to receive a letter.

No distinction is made between letters. The athlete receives the same type of award as a judge of livestock.

These letter awards are engraved certificates costing approximately fifteen cents. The awarding of these certificates takes place at a special assembly, called by the president of the student council near the end of the school year. One hundred and twenty-five letters were awarded during the school year 1936-37.

In addition to these awards, the student council gives four medals: one for scholarship, one for athletic attainment, one for activity achievement, and one to the honor student of the year. Each of these medals is given at the commencement exercises by the president of the student council.

The honor student medal is by far the most outstanding of them all. In addition to being a costlier medal, it is given for all round achievement. A person receiving such a medal is truly a versatile individual. In the Sayre High School more honor is attached to it than to the valedictorian.

Below is a score sheet for selecting such an individual. This score sheet was fashioned to an extent, by the student council, from the score card used by the Blue Key Organization of Oklahoma Agricultural and Mechanical College.

HONOR STUDENT AWARD

ATHLETICS

1. Football
2. Basketball
3. Track
4. Tennis
5. Others

5 points for each letter earned
2 points for being member ofsquad

SCHOLARSHIP

A average	Receives 30 points
B average	Receives 20 points
C average	Receives 10 points
D average	Receives 0 points
F average	Deducts 10 points

Average will be taken from semester grades

OTHER ACTIVITIES

1. Glee Club
2. Quartette
3. Debate Team
4. Oratory and Reading (Those who participated in meets)
5. Publication

5 points for any above activity
3 points for winning district, county, or conference meets
Editor in Chief recs. 10 points--other Editors, 8--reporters, 5.

CLASS OFFICES

President of class	Receives 5 points
Vice-president of class	Receives 3 points
Sec-Treas. of class	Receives 3 points
Other offices of class	Receives 2 points

CLUBS AND ACTIVITIES

President	Receives 4 points
Vice-president	Receives 3 points
Sec-Treas.	Receives 3 points
Member	Receives 2 points

SCHOOL OFFICES

Pres. of student body	Receives 10 points
Vice-Pres. student body	Receives 88 points
Sec-Treas. student body	Receives 8 points
Representative	Receives 6 points
Yell and Song leaders--Pianist	Receives 5 points

CHARACTER TRAITS

Honesty	Receives 10 points
Courtesy	Receives 10 points
Sincerity	Receives 10 points
Stick-to-it-ive-ness	Receives 10 points

TRAND TOTAL _____

Student's Name _____ Grade _____ Age _____

Score _____ Recommended by _____ Principal

STIMULATION AND LIMITATION OF PARTICIPATION

Pupils are not limited in the number of activities in which they may participate. They may engage in as many as they like. The writer has followed this procedure for four years, and especially the past two years, and has allowed the pupils utmost freedom of participation. However, most authorities do not agree with this procedure.

The point system of evaluating activities is used, but no specified number of points is required of each student as a minimum; nor, is there a maximum number to limit participation.

The only stimulation given the activities, outside of interest in them, is the award and medal system.

Attendance at home-rooms and assemblies is required. All other activities are participated in voluntarily. All the students participated in some form of voluntary extra-curricular activity during the school year 1936-37.

THE METHOD OF FINANCING OF EXTRA-CURRICULAR ACTIVITIES

The activity program is entirely self-supporting. It receives no support, financially, from the Board of Education.

The sources of revenue are:

1. Gate receipts of athletic contests.
2. Plays, operettas, and minstrels.
3. Carnivals.
4. All high school programs.
5. Lecture programs and lyceum numbers.
6. Football queen race.
7. Special programs.
8. Debates.

All revenues are handled through the student council except those raised by the classes. In the future all revenues will be handled through the student council. The secretary-treasurer of the student council keeps the accounts of separate organizations, as to amount of money they paid in and the amount of their various expenditures. The bookkeeping is done under the supervision of the teacher of commerce.

All of the activity money is kept in one bank and is paid out by check signed by the secretary of the council and countersigned by the principal of the high school. The secretary and the principal are not bonded. A monthly financial report is made to the school board and to the superintendent of schools by the student council secretary and the principal of the high school.

The total revenues from all sources for extra-curricular activities during 1936-37 was $2,395.55. The per capita cost of extra-curricular activities on the basis of average daily attendance is $13.60.

THE DAILY SCHEDULE OF CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES

Time	Monday	Tuesday	Wednesday	Thursday	Friday
7:45 to 8:20	Band	Band	Band	Band	Band
8:20 to 8:30	Home-room	Home-room	Home-room	Home-room	Home-room
8:30 to 10:30	Classes	Classes	Classes	Classes	Classes
10:30 to 11:00	Clubs, etc.	Home-room	Assembly	Clubs, etc.	Clubs, etc.
1:00 to 4:00	Classes	Classes	Classes	Classes	Classes
4:00 to 6:00	Athletics	Athletics	Athletics	Athletics	Athletics

SCHEDULE OF CLUBS AND ORGANIZATIONS DURING THE ACTIVITY

PERIOD 10:30 - 11:00 BY TEACHERS AND DAYS OF WEEK

Teacher	Monday	Tuesday	Wednesday	Thursday	Friday
A		Home-room	Assembly	Girl Reserve	
B		Home-room	Assembly	Home Ec. Club	Home Ec. Club (Boys)
C			Assembly		Athletic Club
D	Girls' Glee Club			Mixed Chorus	Girls' Glee Club
E	Newspaper	Home-room	Assembly	Dramatic Club	Newspaper
F					
G	Music Club	Home-room	Assembly	Law Club	
H		Home-room	Assembly	Science Club	
I	Student Council		Assembly	Model Aeroplane	Junior Police
J	P.T.A.		Assembly	Leather Craft Club	
K	Debate Club	Home-room	Assembly	World Club	

CHAPTER IV

METHODS AND OBSERVATIONS OF STUDY

STUDY OF NUMBER OF PUPILS AFFECTED BY EXTRA-CURRICULAR PROGRAM

The problem of this thesis has been simplified considerably because all of the pupils of the high school participated in some type of activity. This participation was in addition to the required activities, such as the home-room and the assembly. Had this not been true, this study must have necessarily been made of non-participants and participants.

In the statistical study of this chapter one hundred forty pupils were used. This was the number that started and finished the school year. Those pupils who attended less than that time were not used.

TABLE NO. I

THE NUMBER OF PUPILS RECEIVING POINTS IN EACH OF THE ACTIVITIES FOR 1936-1937

Activity	Number Receiving Points
1. Girls' Glee Club	28
2. Music Club	16
3. Newspaper	16
4. F. F. A.	29
5. Debate Club	14
6. Student Council	15
7. Home Economics Club	16
8. Mixed Chorus	23
9. Law Club	12
10. Dramatic Club	30
11. Science Club	14
12. Model Aeroplane Club	6
13. World Club	11
14. Leather Working	12
15. Athletic Club (Second Semester)	17
16. Football Club (First Semester)	23
17. Etiquette Club (Boys)	30
18. Home Room Officers	18
19. Band	30
20. Athletics--All Types	51
21. Senior Play	13
22. Junior Play	12
23. Judging Team	4
24. Junior Police	6
25. Debate	4
26. Library	14
27. All High School Program	125
28. Quartets	8
29. Soloist	7
30. Office Help	2
31. Speech Events	5
32. Pep Club	28
T O T A L	672

Table No. I shows that a total of six hundred seventy-two pupils received points of participation in extra-curricular activities. On h the basis of an average daily attendance of one hundred forty-six, each student averaged participating in more than four activities during the school year.

STUDY OF THE RELATION OF THE TEACHER TIME SPENT ON

CURRICULAR SUBJECTS TO TIME SPENT ON EXTRA-CURRICULAR ACTIVITIES

TABLE NO. II

TIME SPENT ON CURRICULAR SUBJECTS AND EXTRA-CURRICULAR ACTIVITIES BY TEACHERS

	Extra-Curricular Activities				Curricular Subjects	
	Minutes Per Week			Total	Classes	Minutes
Teacher	Scheduled Activities	Home Room	Assembly	Minutes Per Week	Per Week	Per Week
A	30	80	30	140	25	1500
B*	60	80	30	170	20	1200
C*	630	0	30	660	15	900
D*	210	0	0	210	0	0
E	90	80	30	200	25	1500
F	0	0	0	0	5	300
G*	285	30	30	345	5	300
H*	30	80	30	140	10	600
I	60	0	30	90	15	900
J*	360	0	30	390	15	900
K*	60	80	30	170	15	900
TOTAL	1815	430	270	2515	150	9000

*Part time teachers in high school.

The high school teachers spent nine thousand minutes per week upon curricular subjects. Two thousand five hundred fifteen minutes per week were given to extra-curricular activities. The ratio of the time spent on extra-curricular activities to curricular subjects is one to three and fifty-seven hundredths. Twenty-one per cent of all the teachers time is given to extra-curricular activities.

STUDY OF THE DISTRIBUTION OF TEACHERS MARKS AND EXTRA-CURRICULAR ACTIVITY POINTS

The teachers marks used in this study are the six six-weeks grades for the year 1936-37. Values or honor points were assigned each mark received by the student. The following values were attached to each mark:

Teachers Mark	Honor Points
A	5
B	3
C	1
D	0
F	-1

Participation in extra-curricular activities was evaluated by a system of points worked out by the student council. A member of an activity does not receive the same number of points as does an officer of the organization. An officer, by virtue of being a leader, should participate more or give more time to the group than would a member. Therefore, in this system of points officers and leaders receive additional points.

The writer does not claim perfection for this point system. However, he feels it does fit his own high school situation. This system perhaps would not be applicable elsewhere.

TABLE NO. III

EXTRA-CURRICULAR ACTIVITY POINTS

Student Government

President of Council	15 points
Vice-President	10 points
Secretary and Treasurer	10 points
Representative (Junior and Senior)	8 points
Representative (Sophomore)	5 points
School Song Leader	5 points
School Cheer Leader	5 points
School Pianist	5 points
Junior Police	5 points
Chief of Police	8 points

Social

Junior and Senior Classes

President	10 points
Vice-President	8 points
Secretary and Treasurer	8 points
Song Leader	3 points
Cheer Leader	3 points

Sophomore Class

President	7 points
Vice-President	5 points
Secretary and Treasurer	5 points
Song Leader	2 points
Cheer Leader	2 points

Publications

Editor-in-Chief	10 points
Editors	8 points
Reporters	5 points

Athletics

Football, Basketball and Track

Members of Team	5 points
Members of Squad	3 points
Winners of Conference	5 points extra

Tennis

Try out	2 points
Winner of local contest	2 points extra
Winner of conference	5 points extra

Clubs (Glee Clubs not included)

Home Economics Club, Speech Club, Science Club, F. F. A., Girls Reserve, Pep Club, World Club, Football Club, etc.

President	10 points
Vice-President	8 points
Secretary and Treasurer	8 points
Members	3 points
Song Leader	5 points
Sergeant at Arms	5 points

Debate and Speech

Class	2 points
Squad	3 points
Team	5 points
Winner of Conference	5 points extra

Readings, Declamations and Orations

Member (Try out)	3 points
Winner of local contest	2 points
Winner of Conference	5 points extra
Each public appearance (exclusive of contests)	1 point extra

Glee Clubs, Quartets and Vocal Solos

Members	5 points
Winner of local contests	2 points
Winner of Conference	5 points extra
Each public appearance (exclusive of contests)	1 point extra
Solos	3 points

Band

Member	5 points
Winner of local contests	2 points
Winner of Conference	5 points extra
Instrumental solos	3 points
Each public appearance (exclusive of contests)	1 point extra

Agriculture Judging Team

Member of team	2 points
Letter	5 points

Miscellaneous

Librarian	5 points
Office help	5 points
Boy Scouts and Campfire Girls	3 points
Leaders in Scouts and Campfire	5 points
Class Plays	3-10 points
Assembly Programs	1- 3 points
Sunday School (Eighty per cent attendance)	5 points

TABLE NO. IV

FREQUENCY DISTRIBUTION OF HONOR POINTS

Honor Points	f	Cumulative f
113-120	1	140
105-112	2	139
97-104	3	137
89- 96	6	134
81- 88	4	128
73- 80	11	124
65- 72	9	113
57- 64	10	104
49- 56	17	94
41- 48	11	77
33- 40	16	66
25- 32	16	50
17- 24	18	34
9- 16	9	16
1- 8	6	7
-7- 0	1	1
	N = 140	

i = Interval

M = G.A.+Cxi

M = 44.3568

$C = \frac{\Sigma fd}{N}$

C = .2571

$S.D. = i\sqrt{\frac{\Sigma fd^2}{N} - C^2}$

S.D. = 26.608

TABLE NO. V

FREQUENCY DISTRIBUTION OF EXTRA-CURRICULAR POINTS

Extra-Curricular Points	f	Cumulative f
89-96	1	140
81-88	1	139
73-80	0	138
65-72	3	138
57-64	4	135
49-56	9	131
41-48	5	122
33-40	12	117
25-32	26	105
17-24	28	79
9-16	44	51
1- 8	6	7
-7- 0	1	1
	N =140	

i = Interval

$M = G.A. + C \times i$ $\qquad C = \frac{Sfd}{N}$

M = 26.432 $\qquad C = .3071$

$S.D. = i\sqrt{\frac{Sfd^2}{N} - C^2}$

S.D. = 16.9136

FIGURE 1

DISTRIBUTION OF HONOR POINTS*

* APPENDIX I

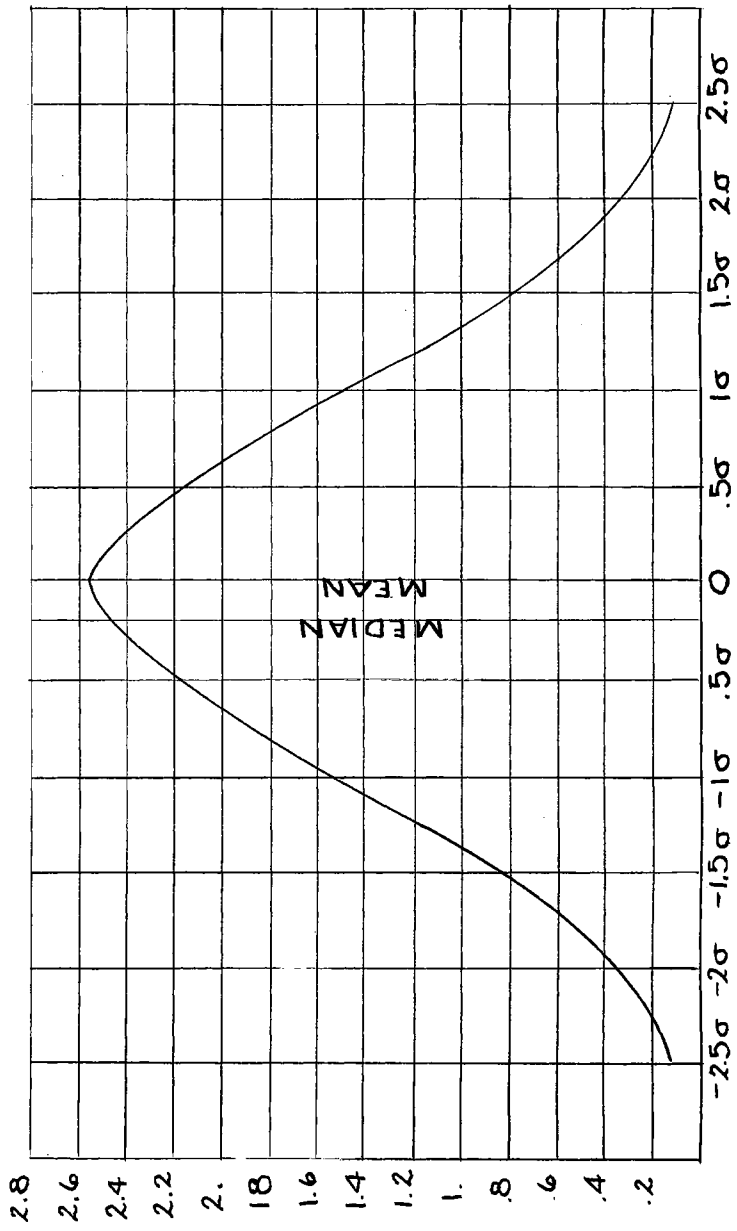
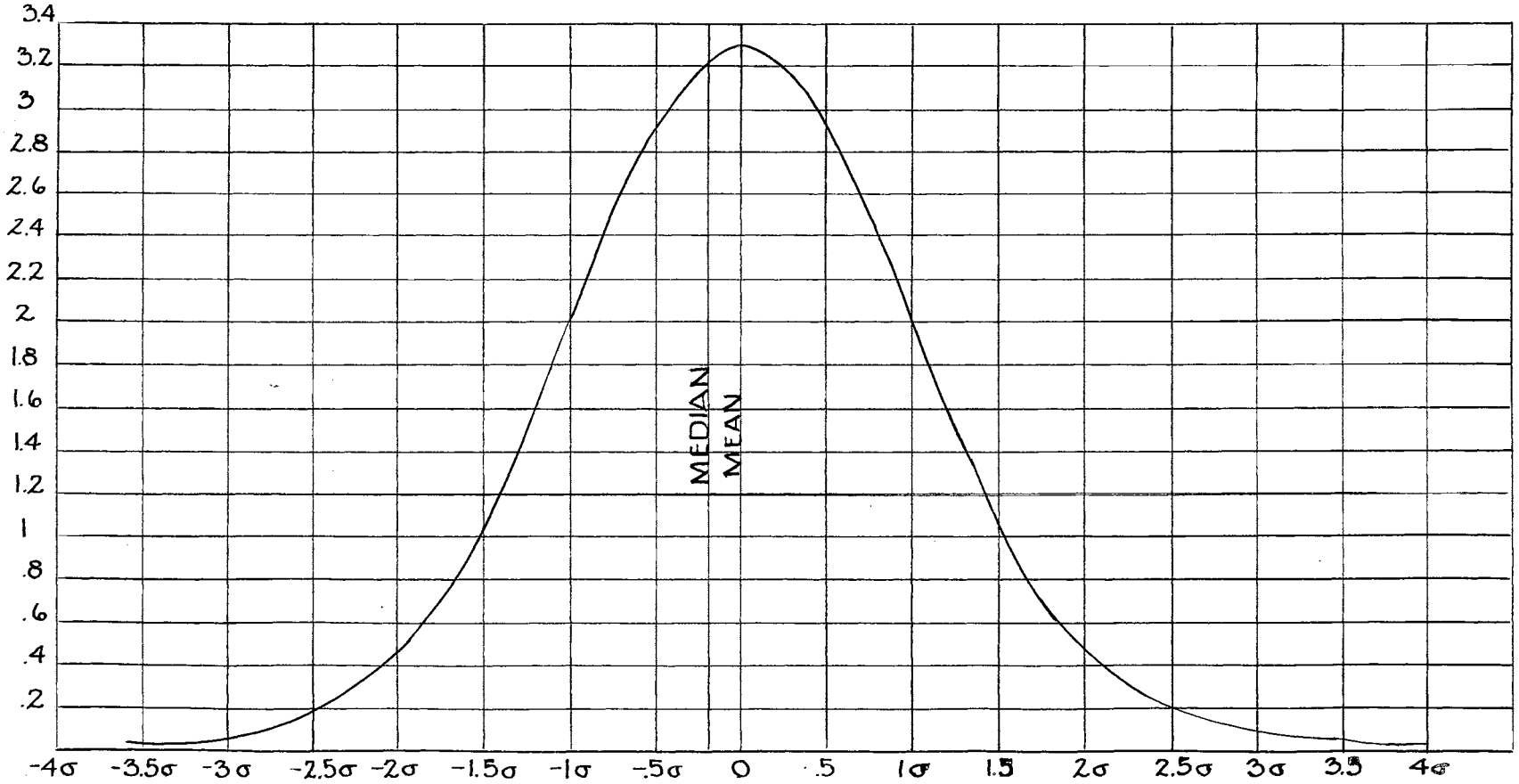


FIGURE II

DISTRIBUTION OF EXTRA-CURRICULAR POINTS*

* APPENDIX I



A COMPARATIVE STUDY OF HONOR POINTS AND EXTRA-CURRICULAR ACTIVITY POINTS

TABLE NO. VI

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. STEP = 8

Honor Points	f	d	fd	fd^2
113-120	1	+9	9	81
105-112	2	+8	16	128
97-104	3	+7	21	147
89- 96	6	+6	36	216
81- 88	4	+5	20	100
73- 80	11	+4	44	176
65- 72	9	+3	27	81
57- 64	10	+2	20	40
49- 56	17	+1	17	17
41- 48	11		(+210)	
33- 40	16	-1	-16	16
25- 32	16	-2	-32	64
17- 24	18	-3	-54	162
9- 16	9	-4	-36	144
1- 8	6	-5	-30	150
-7- 0	1	-6	-6	36
	N = 140		(-174)	$1558 = \Sigma fd^2$

i = Interval

M = G.A.+ C x i

M = 46.5568

$S.D. = i\sqrt{\frac{\Sigma fd^2}{N} - c^2}$

S.D. = 26.608

Md = 43.909

$36 = \Sigma fd$

$C = \frac{\Sigma fd}{N}$

$Q = \frac{Q3-Q1}{2}$

Q = 20.194

$V = \frac{100\ S.D.}{M}$

V = 57.16

TABLE NO. VII

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S. D. STEP = 8

Extra-Curricular Points	f	d	fd	fd^2
89-96	1	+8	8	64
81-88	1	+7	7	49
73-80	0	+6	0	0
65-72	3	+5	15	75
57-64	4	+4	16	64
49-56	9	+3	27	81
41-48	5	+2	10	20
33-40	12	+1	12	12
25-32	26		(+95)	
17-24	28	-1	-28	28
9-16	44	-2	-88	176
1- 8	6	-3	-18	54
-7- 0	1	-4	-4	16
	N = 140		(-133)	$639 = \Sigma fd^2$

i = Interval

$-43 = \Sigma fd$

M = G.A.+ C x i

M = 26.94

$C = \frac{\Sigma fd}{N}$

$Q = \frac{Q3-Q1}{2}$

$S.D. = i\sqrt{\frac{\Sigma fd^2}{N} - C^2}$

Q = 9.454

S.D. = 16.9136

$V = \frac{100\ S.D.}{M}$

Md = 22.429

V = 64.95

TABLE NO. VIII

DISTRIBUTION OF HONOR POINTS AND EXTRA-CURRICULAR ACTIVITY POINTS

Y - Variable (Extra-Curricular Points)	X - Variable (Honor Points)																
	-7-0	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	72-80	81-88	89-96	97-104	105-112	113-120	fY
89-96														1			1
81-88								1									1
73-80																	0
65-72					1	2											3
57-64					1				2		1						4
49-56				1	2	2		1			2		1				9
41-48			1	1				1		1	1						5
33-40		1				2	3			2	1	1	1		1		12
25-32		3	2	2	3	3		4	2			1	3	1	1	1	26
17-24		1	1	5	3	2	4	4	3	1	2	1	1				28
9-16		1	2	9	4	5	4	6	3	4	4	1		1			44
1-8			3		2					1							6
-7-0	1																1
fX	1	6	9	18	16	16	11	17	10	9	11	4	6	3	2	1	140 = N

TABLE NO. IX

MEASURES OF CENTRAL TENDENCY AND VARIABILITY

OF HONOR POINTS AND EXTRA-CURRICULAR POINTS

	Md	M	S.D.	Q_1	Q_3	Q	V	R
Honor Points	43.909	46.55	26.608	25.5	65.889	20.194	57.16	117
Extra-Curricular Points	22.429	26.04	16.9136	14.0909	33.0	9.454	64.95	94

Md - Median

S.D. - Standard Deviation

M - Mean

R - Range

Q_1 - 25th Percentile

Q_3 - 75th Percentile

Q - Quartile Deviation

V - Coefficient of Variation

The medians of the honor points and the extra-curricular points are both below their respective means. This would indicate that half of the group fell below the average in honor points and extra-curricular points.

If only the standard deviations and the quartile deviations were taken into account one might conclude that the honor points were much more variable than the extra-curricular points. Since each was calculated about a different mean, these absolute measures of variability should not be considered. The relative variability of the group in honor points and extra-curricular, calculated by taking the ratio of coefficient of variability of the honor points to the coefficient of variability of the extra-curricular points, would be a much better measure of variability.

$\frac{57.16}{64.95}$ equals .89. Expressed in per cent, the honor points are only eighty-nine per cent as variable as the extra-curricular points.

In Table No. IX, the middle two-thirds of the one hundred forty pupils received honor points ranging from approximately twenty to seventy-three.

In extra-curricular points the middle two-thirds of the group earned points ranging from nine to forty-three, approximately.

The ranges for the middle fifty per cent of the group in honor points and extra-curricular points are: 25.5 to 65.889 and 14.0909 to 33, respectively.

Tables No. VIII and No. IX indicate that seventy-eight per cent of the one hundred five pupils that are in the lower seventy-five per cent of the group in extra-curricular points are in the lower seventy-five per cent of the group in honor points. The remaining twenty-two per cent are in the upper quartile in honor points.

Approximately one-half of the pupils ranking in the upper quartile of the group in extra-curricular points rank above the average in honor points.

Thirteen of the thirty-five pupils in the upper quartile in honor points are also in the upper quartile in extra-curricular points.

Fifty per cent of the individuals in the upper quartile of honor points ranked below the average in extra-curricular points.

A COMPARATIVE STUDY OF HONOR POINTS AND ACTIVITY POINTS ON THE BASIS OF SEX

TABLE NO. X

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF HONOR POINTS

FOR BOYS

Honor Points	f	d	fd	fd^2
113-120	1	+9	9	81
105-112	0	+8	0	0
97-104	2	+7	14	98
89- 96	6	+6	30	180
81- 88	3	+5	15	75
73- 80	8	+4	32	128
65- 72	6	+3	18	54
57- 64	6	+2	12	24
49- 56	10	+1	10	10
41- 48	4		(+140)	
33- 40	6	-1	-6	6
25- 32	8	-2	-16	32
17- 24	7	-3	-21	63
9- 16	1	-4	-4	16
1- 8	2	-5	-10	50
-7- 0	1	-6	- 6	36
	N = 71		(-63)	858 = Σfd^2

i = Interval

Sfd = 77

$M = G.A. + C \times i$

$C = \frac{Sfd}{N}$

M = 53.176

$Q = \frac{Q3-Q1}{2}$

$S.D. = i\sqrt{\frac{Sfd^2}{N} - C^2}$

Q = 21.75

S.D. = 26.3352

$V = \frac{100\ S.D.}{M}$

Md = 54.26

V = 49.52

TABLE NO. XI

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF HONOR POINTS FOR BOYS

Honor Points	f	d	fd	fd^2
113-120	0	+9	0	0
105-112	2	+8	16	128
97-104	1	+7	7	49
89- 96	0	+6	0	0
81- 88	1	+5	5	25
73- 80	3	+4	12	48
65- 72	3	+3	9	27
57- 64	4	+2	8	16
49- 56	7	+1	7	7
41- 48	7		(+64)	
33- 40	10	-1	-10	10
25- 32	8	-2	-16	32
17- 24	11	-3	-33	99
9- 16	8	-4	-32	128
1- 8	4	-5	-20	100
-7- 0	0	-6	0	0
	N = 69		(-111)	669 = Sfd^2

i = Interval

-47 = Sfd

M = G.A.+ C x i

$C = \frac{Sfd}{N}$

M = 39.05

$Q = \frac{Q3-Q1}{2}$

$S.D. = i\sqrt{\frac{Sfd^2}{N} - C^2}$

Q = 16.233

S.D. = 24.3064

$V = \frac{100\ S.D.}{M}$

Md = 35.80

V = 62.24

TABLE NO. XII

MEASURES OF CENTRAL TENDENCY AND VARIABILITY OF HONOR POINTS BY SEX

Sex	Md	M	S.D.	Q_1	Q_3	Q	V	R
Boys	35.8	39.05	24.30	20.81	53.28	16.23	62.24	94
Girls	54.26	53.176	26.3352	31.75	75.25	21.75	49.52	117

Md - Median
S.D. - Standard Deviation
M - Mean
R - Range
Q_1 - 25th Percentile
Q_3 - 75th Percentile
Q - Quartile Deviation
V - Coefficient of Variation

The average girl received fourteen and one hundred twenty-six thousandths more honor points than the average boy. The median girl received eighteen and forty-six hundredths more honor points than the median boy.

Considering the standard deviation and the quartile deviation of the two groups, the boys group themselves around the central tendency more than do the girls. The middle two-thirds of the girls scored over the scale from 53.176 ± 26.3352, or approximately from twenty-six to seventy-nine. The middle two-thirds of the boys scored over the scale from 39.05 ± 24.3, or approximately fourteen to sixty-three, while the middle fifty per cent of the boys scored over the part of the scale from twenty to fifty-three.

Considering the coefficients of variability, the girls are seventy-nine per cent as variable as the boys.

TABLE NO. XIII

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF EXTRA-CURRICULAR POINTS FOR GIRLS

Extra-Curricular Points	f	d	fd	fd^2
89-96	0	+8	0	0
81-88	0	+7	0	0
73-80	0	+6	0	0
65-72	0	+5	0	0
57-64	1	+4	4	16
49-56	2	+3	6	18
41-48	3	+2	6	12
33-40	6	+1	6	6
25-32	15		(+22)	
17-24	14	-1	-14	14
9-16	27	-2	-54	108
1- 8	2	-3	-6	18
-7- 0	1	-4	-4	16
	N = 71		(-78)	$208 = Sfd^2$

i = Interval

M = G.A.+ C x i

M = 22.2

$S.D. = i\sqrt{\frac{Sfd^2}{N} - C^2}$

S.D. = 12.15

Md = 20.14

-56 = Sfd

$C = \frac{Sfd}{N}$

$Q = \frac{Q3-Q1}{2}$

Q = 7.98

$V = \frac{100\ S.D.}{M}$

V = 54.76

TABLE NO. XIV

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF EXTRA-CURRICULAR POINTS FOR BOYS

Extra-Curricular Points	f	d	fd	fd^2
89-96	1	+8	8	64
81-88	1	+7	7	49
73-80	0	+6	0	0
65-72	3	+5	15	75
57-64	3	+4	12	48
49-56	7	+3	21	63
41-48	2	+2	4	8
33-40	6	+1	6	6
25-32	11		(+73)	
17-24	14	-1	-14	14
9-16	17	-2	-34	68
1- 8	4	-3	-12	36
-7- 0	0	-4	0	0
	N = 69		(-60)	$431 = Sfd^2$

i = Interval

$M = G.A. + C \times i$

M = 30.00

$S.D. = i\sqrt{\frac{Sfd^2}{N} - C^2}$

S.D. = 19.61

Md = 24.71

13 = Sfd

$C = \frac{Sfd}{N}$

$Q = \frac{Q3-Q1}{2}$

Q = 12.716

$V = \frac{100\ S.D.}{M}$

V = 65.37

TABLE NO. XV

MEASURES OF CENTRAL TENDENCY AND VARIABILITY OF EXTRA-CURRICULAR POINTS BY SEX

Sex	Md	M	S.D.	Q_1	Q_3	Q	V	R
Boys	24.71	30.00	19.61	15.23	40.667	12.716	65.37	88
Girls	20.14	22.2	12.15	13.37	29.33	7.98	54.76	59

Md - Median

S.D. - Standard Deviation

M - Mean

R - Range

Q_1 - 25th Percentile

Q_3 - 75th Percentile

Q - Quartile Deviation

V - Coefficient of Variation

The average boy made seven and eight-tenths more activity points than the average girl. Also, the median boy made 4.57 more activity points than the median girl.

The middle two-thirds of the girls scored over the scale 22.2 ± 12.15, or from nine and seven-tenths to thirty-four and thirty-five hundredths. The middle two-thirds of the boys scored over the scale from ten and thirty-nine hundredths to forty-nine and sixty-one hundredths.

The middle fifty per cent of the boys scored over the scale from fifteen and twenty-three hundredths to forty and six hundred sixty-seven thousandths, while the middle fifty per cent of the girls scored from thirteen and thirty-seven hundredths to twenty-nine and thirty-three hundredths.

The boys scattered more about their central tendency. The girls are only eighty-three per cent as variable as the boys.

A COMPARATIVE STUDY OF THE EXTRA-CURRICULAR ACTIVITY POINTS AND HONOR POINTS BY GRADES

TABLE NO. XVI

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF HONOR POINTS FOR THE TENTH GRADE

Honor Points	f	d	fd	fd^2
113-120	0	+7	0	0
105-112	1	+6	6	36
97-104	1	+5	5	25
89- 96	3	+4	12	48
81- 88	2	+3	6	18
73- 80	3	+2	6	12
65- 72	6	+1	6	6
57- 64	4		(+41)	
49- 56	3	-1	-3	3
41- 48	0	-2	0	0
33- 40	4	-3	-12	36
25- 32	10	-4	-40	160
17- 24	10	-5	-50	250
9- 16	6	-6	-36	216
1- 8	6	-7	-42	294
-7- 0	1	-8	-8	64
	N = 60		(-191)	1168 = Sfd^2

i = Interval

-150 = Sfd

$M = G.A.* + C \times i$

$C = \frac{Sfd}{N}$

$M = 30.50$

$Q = \frac{Q3-Q1}{2}$

$S.D. = i\sqrt{\frac{Sfd^2}{N} - C^2}$

$S.D. = 29.08$

Q = 23.862

Md = 30.60

$V = \frac{100\ S.D.}{M}$

V = 95.35

TABLE NO. XVII

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF HONOR POINTS FOR THE ELEVENTH GRADE

Honor Points	f	d	fd	fd^2
113-120	0	+7	0	0
105-112	1	+6	6	36
97-104	1	+5	5	25
89- 96	0	+4	0	0
81- 88	0	+3	0	0
73- 80	3	+2	6	12
65- 72	0	+1	0	0
57- 64	1		(+17)	
49- 56	8	-1	-8	8
41- 48	6	-2	-12	24
33- 40	7	-3	-21	63
25- 32	3	-4	-12	48
17- 24	5	-5	-25	125
9- 16	2	-6	-12	72
1- 8	0	-7	0	0
	N = 37		(-90)	413 = Σfd^2

i = Interval

M = G.A. + C x i

M = 44.71

$S.D. = i\sqrt{\frac{\Sigma fd^2}{N} - C^2}$

S.D. = 21.56

Md = 43.00

-73 = Σfd

$C = \frac{\Sigma fd}{N}$

$Q = \frac{Q3-Q1}{2}$

Q = 11.57

$V = \frac{100\ S.D.}{M}$

V = 48.23

TABLE NO. XVIII

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF HONOR POINTS FOR

FOR THE TWELFTH GRADE

Honor Points	f	d	fd	d^2
113-120	1	+7	7	49
105-112	0	+6	0	0
97-104	1	+5	5	25
89- 96	3	+4	12	48
81- 88	2	+3	6	18
73- 80	5	+2	10	20
65- 72	3	+1	3	3
57- 64	5		(+43)	
49- 56	6	-1	-6	6
41- 48	5	-2	-10	20
33- 40	5	-3	-15	45
25- 32	3	-4	-12	48
17- 24	3	-5	-15	75
9- 16	1	-6	-6	36
1- 8	0	-7	0	9
	N = 43		(-64)	$393 = Sfd^2$

i = Interval

M = G.A. + C x i

M = 55.62

$S.D. = i\sqrt{\frac{Sfd^2}{N} - C^2}$

S.D. = 23.87

Md = 55.00

-21 = Sfd

$C = \frac{Sfd}{N}$

$Q = \frac{Q3-Q1}{2}$

Q = 18.00

$V = \frac{100\ S.D.}{M}$

V = 42.15

TABLE NO. XIX

MEASURES OF CENTRAL TENDENCY AND VARIABILITY OF HONOR POINTS BY GRADES

GRADE	Md	M	S.D.	Q_1	Q_3	Q	V	R
Tenth	30.6	30.5	29.08	18.6	66.33	23.86	95.35	111
Eleventh	43.00	44.71	21.56	31.00	53.75	11.37	48.23	101
Twelfth	55.00	56.62	23.87	39.0	75.00	18.00	42.15	104

Md - Median
S.D. - Standard Deviation
M - Mean
R - Range
Q_1 - 25th Percentile
Q_3 - 75th Percentile
Q - Quartile Deviation
V - Coefficient of Variation

From the above table it can be seen that the twelfth grade ranks well above the tenth and the eleven grade in honor points. Also, the eleventh grade ranks above the tenth grade.

When the coefficients of variability are taken into consideration the following is evident:

The twelfth grade is approximately eighty-seven per cent and forty-four per cent as variable as the eleventh and tenth grades, respectively.

The eleventh grade is approximately fifty per cent as variable as the tenth grade.

The tenth grade is the most variable, while the twelfth grade is the least variable.

When Q is considered for the tenth grade, it is evident that this grade has some members that rank unusually high.

TABLE NO. XX

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF EXTRA-CURRICULAR POINTS FOR THE TENTH GRADE

Extra-Curricular Points	f	d	fd	fd^2
89-96	0	+7	0	0
81-88	0	+6	0	0
73-80	0	+5	0	0
65-72	1	+4	4	16
57-64	1	+3	3	9
49-56	2	+2	4	8
41-48	2	+1	2	2
33-40	5		(+13)	
25-32	17	-1	-17	17
17-24	8	-2	-16	32
9-16	19	-3	-57	171
1- 8	4	-4	-16	64
-7- 0	1	-5	- 5	25
	N =60		(-111)	$344 = Sfd^2$

i = Interval

M = G.A.+ C x i

M = 23.43

$S.D. = i\sqrt{\frac{Sfd^2}{N} - C^2}$

S.D. = 14.04

Md = 23.00

$C = \frac{Sfd}{N}$

$Q = \frac{Q3-Q1}{2}$

Q = 9.39

$V = \frac{100\ S.D.}{M}$

V = 59.93

$-98 = Sfd$

TABLE NO. XXI

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF EXTRA-CURRICULAR POINTS FOR THE ELEVENTH GRADE

Extra-Curricular Points	f	d	fd	fd^2
89-96	1	+7	7	49
81-88	1	+6	6	36
73-80	0	+5	0	0
65-72	1	+4	4	16
57-64	0	+3	0	0
49-56	2	+2	4	8
41-48	2	+1	2	2
33-40	4		(+23)	
25-32	2	-1	-2	2
17-24	10	-2	-20	40
9-16	12	-3	-36	108
1- 8	2	-4	-8	32
-7- 0	0	-5	0	0
			(-66)	$295 = Sfd^2$

$N = \overline{37}$

i = Interval

$M = G.A. + C \times i$

$M = 27.20$

$-43 = Sfd$

$C = \frac{Sfd}{N}$

$S.D. = i\sqrt{\frac{Sfd^2}{N} - c^2}$

$Q = \frac{Q3-Q1}{2}$

$S.D. = 20.50$

$Q = 8.83$

$Md = 30.6$

$V = \frac{100\ S.D.}{M}$

$V = 75.36$

TABLE NO. XXII

CALCULATION OF AVERAGE, MEDIAN, Q, V, AND S.D. OF EXTRA-CURRICULAR POINTS FOR THE TWELFTH GRADE

Extra-Curricular Points	f	d	fd	fd^2
89-96	0	+7	0	0
81-88	0	+6	0	0
73-80	0	+5	0	0
65-72	1	+4	4	16
57-64	3	+3	9	27
49-56	5	+2	10	20
41-48	1	+1	1	1
33-40	3		(+ 24)	
25-32	7	-1	-7	7
17-24	10	-2	-20	40
9-16	13	-3	-39	117
1- 8	0	-4	0	0
-7- 0	0	-5	0	0
	N = 43		(-66)	$228 = Sfd^2$

i = Interval

M = G.A.+ C x i

M = 27.41

$S.D. = i\sqrt{\frac{Sfd^2}{N} - C^2}$

S.D. = 16.02

Md = 23.8

-42 = Sfd

$C = \frac{Sfd}{N}$

$Q = \frac{Q3-Q1}{2}$

Q = 7.69

$V = \frac{100\ S.D.}{M}$

V = 58.44

TABLE NO. XXIII

MEASURES OF CENTRAL TENDENCY AND VARIABILITY OF EXTRA-CURRICULAR POINTS BY GRADES

GRADE	Md	M	S.D.	Q_1	Q_3	Q	V	R
Tenth	23.0	23.43	14.04	12.33	31.176	9.39	59.93	65
Eleventh	20.6	27.20	20.50	13.83	36.5	8.83	75.36	88
Twelfth	23.8	27.41	16.02	15.61	31.0	7.69	58.44	62

Md - Median
S.D. - Standard Deviation
M - Mean
R - Range
Q_1 - 25th Percentile
Q_3 - 75th Percentile
Q - Quartile Deviation
V - Coefficient of Variation

In considering the measures of central tendency for the various grades in extra-curricular activity points, it is difficult to make any direct comparison. The eleventh and twelfth grades are equal as far as the mean is concerned. The eleventh grade median is slightly lower than the median of the twelfth grade. This fact, together with the difference of the standard deviation, indicates that the twelfth grade tends to group more about the mean than does the eleventh grade. The range of the eleventh grade group also indicates this.

The lower half of the tenth grade fell below the average of the eleventh and twelfth grades by four or more points.

There are individuals in the upper half of the tenth and the eleventh grades that brought the average of the grade up,due to their unusually high scores.

In terms of relative variability, the eleventh grade is the most variable. The tenth and twelfth grades are approximately seventy-nine per cent and seventy-seven per cent, respectively, as the eleventh grade.

The tenth and twelfth grades are approximately of the same degree of variability.

THE CORRELATION OF PARTICIPATION IN EXTRA-CURRICULAR ACTIVITIES AND ACHIEVEMENT IN CURRICULAR SUBJECTS

The relationship between participation in extra-curricular and achievement in curricular subject has been expressed so far inthis thesis in a comparative study of the central tendencies and variabilities.

The purpose of the correlation is to establish a quantitative relationship between honor points and extra-curricular activity points.

> Garret says the statistical device whereby relationship is expressed on a quantitative scale is called the "Coefficient of correlation." [10]

> Holzinger defines correlation as the tendency for two observed variables to be related in the form of a single mathematical function.[11]

Pearson's Product-Moment Method is used in determining the coefficient of correlation.

The coefficient of correlation has been found for the boys, for the girls, and for the entire group.

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10 Garret, Henry E., Statistics in Psychology and Education. P.149.

11 Holzinger, Karl J. Statistical Methods for Students in Education. P. 143.

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TABLE NO. XXIV

CALCULATION OF THE COEFFICIENT OF CORRELATION BETWEEN HONOR POINTS AND EXTRA-CURRICULAR ACTIVITY POINTS FOR BOYS BY PEARSON'S PRODUCT-MOMENT METHOD

X - Variable (Honor Points)

Y - Variable (Extra-Curricular Activity Points)

	-7-0	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80	81-88	89-96	97-104	105-112	113-120	f_y	d_y	fd_y	fd_y^2	d_xd_y +	d_xd_y −
89-96							8							1 56 / 56			1	+8	8	64	56	0
81-88							7	1 7 / 7									1	+7	7	49	7	0
73-80							6										0	+6	0	0	0	0
65-72					1 -10 / -10	2 -5 / -10	5										3	+5	15	75	0	20
57-64					1 -8 / -8		4		1 8 / 8		1 16 / 16						3	+4	12	48	24	8
49-56				1 -9 / -9	1 -6 / -6	2 -3 / -6	3	1 3 / 3			2 12 / 24						7	+3	21	63	27	21
41-48			1 -8 / -8				2			1 6 / 6							2	+2	4	8	6	8
33-40		1 -5 / -5				1 -1 / -1	1			1 3 / 3					1 8 / 8		6	+1	6	6	11	6
25-32	-6	2 -5	1 -4	1 -3	2 -2	2 -1		1	1	3	4	5	6	7	1 8	9	11		+73			
17-24			1 4 / 4	5 3 / 15	1 2 / 2		3 -1	2 -1 / -2		1 -3 / -3		1 -5 / -5					14	-1	-14	14	21	10
9-16		1 10 / 10	2 8 / 16	4 6 / 24	1 4 / 4	3 2 / 6	2 -2	2 -2 / -4	2 -4 / -8								17	-2	-34	68	60	12
1-8			3 12 / 36		1 6 / 6		-3										4	-3	-12	36	42	0
-7-0							-4										0	-4	0	0	0	0
							-5											-5				
f_x	0	4	8	11	8	10	7	7	4	3	3	1	0	1	2	0	69 = N		-60		254	85	169 = Σd_xd_y
d_x	-6	-5	-4	-3	-2	-1		+1	+2	+3	+4	+5	+6	+7	+8	+9				431 = Σfd_y^2			
fd_x	0	-20	-32	-33	-16	-10	-111	7	8	9	12	5	0	7	16	0			13 = Σfd_y				
fd_x^2	0	100	128	99	32	10		7	16	27	48	25	0	49	128	0			+64 = -47 = Σfd_x				
																			669 = Σfd_x^2				

i = Step Interval = 8

$C_x = \frac{Sfd_x}{N}$

$S.D._x = i\sqrt{\frac{Sfd_x^2}{N} - C_x^2} \times i$

$S.D._x = 24.3064$

$C_y = \frac{Sfd_y}{N}$

$S.D._y = \sqrt{\frac{Sfd_y^2}{N} - C_x^2}$

$S.D._y = 19.6136$

$r = \frac{Sd_xd_y - (C_x \cdot C_y)}{S.D._x \cdot S.D._y}$

$r = .34$

$P.E._r = \frac{.6745\ (1-r^2)}{\sqrt{N}}$

$P.E._r = .0718$

TABLE NO. XXV

CALCULATION OF THE COEFFICIENT OF CORRELATION BETWEEN HONOR POINTS AND EXTRA-CURRICULAR ACTIVITY POINTS FOR GIRLS BY PEARSON'S PRODUCT-MOMENT METHOD

X - Variable (Honor Points)

Y - Variable (Extra-Curricular Activity Points)

	-7-0	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80	81-88	89-96	97-104	105-112	113-120	f_y	d_y	fd_y	fd_y^2	$d_x d_y$ +	$d_x d_y$ −
89-96							8										0	+8	0	0	0	0
81-88							7										0	+7	0	0	0	0
73-80							6										0	+6	0	0	0	0
65-72							5									1	0	+5	0	0	0	0
57-64							4	1	8 8								1	+4	4	16	8	0
49-56					1 -6 -6		3						1 18 18				2	+3	6	18	18	6
41-48				1 -6 -6			2	1 2 2			1 8 8						3	+2	6	12	10	6
33-40						1 -1 -1	1			1 3 3	1 4 4	1 5 5	1 6 6				6	+1	6	6	18	1
	-6	-5	-4	-3	-2	-1		1	2	3	4	5	6	7	8	9	15		+22			
25-32		1	1	1	1	1		3	1		1	1	3	1		1						
17-24		1 5 5			2 2 4	2 1 2	-1 1	2 -1 -2	3 -2 -6		2 -4 -8		1 -6 -6				14	-1	-14	14	11	-22
9-16				5 6 30	3 4 12	2 2 4	-2 2	4 -2 -8	1 -4 -4	4 -6 -24	4 -8 -32	1 -10 -10		1 -14 -14			27	-2	-54	108	46	92
1-8					1 6 6		-3			1 -9 -9							2	-3	-6	18	6	9
-7-0	1 24 24						-4										1	-4	4	16	24	0
							-5											-5				
f_x	1	2	1	7	8	6	4	10	6	6	8	3	6	2	0	1	71 = N		-78		141	136
d_x	-6	-5	-4	-3	-2	-1		+1	+2	+3	+4	+5	+6	+7	+8	+9						
fd_x	-6	-10	-4	-21	-16	-6	-63	10	12	18	32	15	30	14	0	9	140	= 77	$= \Sigma fd_x$			
fd_x^2	36	50	16	63	32	6		10	24	54	128	75	180	98	0	81		853	$= \Sigma fd_x^2$			

$208 = \Sigma fd_y^2$

$-56 = \Sigma fd_y$

$5 = \Sigma d_x d_y$

i = Step Interval = 8

$C_x = \frac{Sfd_x}{N}$

$S.D._x = i\sqrt{\frac{Sfd_x^2}{N} - C_x^2}$

$S.D._x = 26.3352$

$C_y = \frac{Sfd_y}{N}$

$S.D._y = i\sqrt{\frac{Sfd_y^2}{N} - C_x^2}$

$S.D._y = 12.1576$

$r = \frac{Sd_x d_y - (C_x \cdot C_y)}{S.D._x \cdot S.D._y}$

$r = .1847$

$P.E._r = \frac{.6745\ (1-r^2)}{\sqrt{N}}$

$P.E._r = .0773$

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TABLE NO. XXVI

CALCULATION OF THE COEFFICIENT OF CORRELATION BETWEEN HONOR POINTS AND EXTRA-CURRICULAR ACTIVITY POINTS FOR THE ENTIRE GROUP BY PEARSON'S PRODUCT-MOMENT METHOD

X - Variable (Honor Points)

Y - Variable (Extra-Curricular Activity Points)

	-7-0	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80	81-88	89-96	97-104	105-112	113-120	f_y	d_y	fd_y	fd_y^2	$dxdy$ +	$dxdy$ −
89-96							2							1 56 56			1	+8	8	64	56	0
81-88							1	1 7 7									1	+7	7	49	7	0
73-80							6										0	+6	0	0	0	0
65-72					1 -10 -10	2 -5 -10	5									—	3	+5	15	75	0	20
57-64					1 -8 -8		4		2 8 16		1 16 16						4	+4	16	64	32	8
49-56				1 -9 -9	2 -6 -12	2 -3 -6	3	1 3 3			2 12 24		1 18 18				9	+3	27	81	45	27
41-48			1 -8 -8	1 -6 -6			2	1 2 2		1 6 6	1 8 8						5	+2	10	20	16	14
33-40		1 -5 -5				2 -1 -2	3			2 3 6	1 4 4	1 5 5	1 6 6		1 8 8		12	+1	12	12	29	7
25-32	-6	3 -3	2 -4	2 -3	3 -2	3 -1		4 1	2 2	3	4	1 5	3 6	1 7	1 8	1 9	26		+95			
17-24		1 5 5	1 4 4	5 3 15	3 2 6	2 1 2	4 -1	4 -1 -4	3 -2 -6	1 -3 -3	2 -4 -8	1 -5 -5	1 -6 -6				28	-1	-28	28	32	32
9-16		1 10 10	2 8 16	9 6 54	4 4 16	5 2 10	4 -2	6 -2 -12	3 -4 -12	4 -6 -24	4 -8 -32	1 -10 -10		1 -14 -14			44	-2	-88	176	106	104
1-8			3 12 36		2 6 12		-3			1 -9 -9							6	-3	-18	54	48	9
-7-0	1 24 24						-4										1	-4	-4	16	24	0
							-5											-5				
																					395	221
f_x	1	6	9	18	16	16	11	17	10	9	11	4	6	3	2	1	140 = N		-138			
d_x	-6	-5	-4	-3	-2	-1		+1	+2	+3	+4	+5	+6	+7	+8	+9						
fd_x	-6	-30	-36	-54	-32	-16	-174	17	20	27	44	20	36	21	16	9	210	=	36	= Σfd_x		
fd_x^2	36	150	144	162	64	16		17	40	81	176	100	216	147	128	81			1558	= Σfd_x^2		

639 = Σfd_y^2

-43 = Σfd_y

174 = $\Sigma dxdy$

i = Step Interval = 8

$C_x = \frac{Sfd_x}{N}$

$S.D._x = i\sqrt{\frac{Sfd_x^2}{N} - C_x^2}$

$S.D._x = 26.608$

$C_y = \frac{Sfd_y}{N}$

$S.D._y = i\sqrt{\frac{Sfd_y^2}{N} - C_y^2}$

$S.D._y = 16.9136$

$r = \frac{Sd_xd_y - (C_x \cdot C_y)}{S.D._x \cdot S.D._y}$

$r = .1879$

$P.E._r = \frac{.6745\ (1-r^2)}{\sqrt{N}}$

$P.E._r = .0544$

TABLE NO. XXVII

RESULTS OF THE CALCULATIONS OF COEFFICIENTS OF CORRELATIONS OF HONOR POINTS AND EXTRA-CURRICULAR ACTIVITY POINTS

	N	r	P.E.$_r$
Boys	79	.34	.0718
Girls	71	.1847	.9773
Entire Group	140	.1879	.0544

N - The Number of Cases

r - The Coefficient of Correlation

P.E.$_r$ - The Probable Error of the Coefficient of Correlation

An inspection of Table No. XXVII will show the following conditions to be true:

1. The coefficients of correlation are positive.
2. The coefficient of correlation of the boys is greater than four times its probable error.
3. The obtained r of the girls is less than four times its probable error.
4. The entire group has a correlation that is less than four times the probable error.
5. A significant relationship exists only for the boys.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

In considering the conclusions of this thesis the reader should keep in mind the following factors of the investigation:

1. The investigation was carried on in a senior high school with an average daily attendance of one hundred forty-six for 1936-37.

2. The investigation was made during two school years, 1935-36 and 1936-37, and that the data was secured from the year 1936-37.

3. A definite place on the daily schedule was given extra-curricular activities.

4. The student council was the center of and the guiding force in the extra-curricular program.

5. No limitation of participation was placed on the pupils.

6. No fixed amount of participation was required of pupils.

7. A point system was used in evaluating of the extra-curricular participation.

8. Awards of attainment were given in extra-curricular work.

CONCLUSION

The problem of this thesis is to determine within the limits of this study whether or not participation in extra-curricular activities interferes with achievement in curricular subjects.

In considering the results of the previous chapter, the following conclusions may be cited:

1. There is a definite sex difference existing in the honor points earned and the activity points received. The girls excelled

in curricular work, while the boys led in participation in extra-curricular activities.

2. There is also a definite grade difference. The twelfth grade excelled the tenth and eleventh in curricular achievement. Likewise, the eleventh grade made more achievement in curricular subjects.

3. There is essentially no difference in the classes as to participation in the activity program. Individuals in the eleventh grade, due to their participation, raised the average of their group. This is noticeable if the medians of the groups are studied.

4. The achievement in curricular subjects is eighty-nine per cent as variable as the participation in extra-curricular activities. Furthermore, seventy-eight per cent of the pupils in the lower three-fourths of the group in extra-curricular points are also in the lower three-fourths of the group receiving honor points. Fifty per cent of the individuals in the upper quartile in honor points ranked below average in extra-curricular points. Also, one-half of the students in the upper quartile of the group in extra-curricular activities rank above the average in honor points earned for achievement in curricular subjects. Therefore, this shows that extra-curricular participation does not interfere with curricular work.

5. The positive correlation, although not significant, indicates that there is no interference. The correlation should have been negative and significant to indicate with certainty that an individual ranking high in extra-curricular activities would rank correspondingly low in achievement in curricular work.

6. The correlation for the boys in achievement and participation was significant.[12] The large probable error in the girls correlation makes the r insignificant. This indicates that the boys ranking high in participation tended to excel in achievement in curricular achievement. This also indicates that boys receiving high marks in curricular subjects would likely participate more in extra-curricular activities than the pupil that received low marks.

The foregoing conclusions are much more significant when one considers that every pupil participated and that participation was voluntary. Also, it is significant that no limitation was placed on the pupil. Each student could exercise the utmost freedom in the amount of participation.

It is reasonably conclusive that participation in extra-curricular activities does not interfere with achievement in curricular subjects in the Sayre Senior High School.

RECOMMENDATIONS

In the light of the conclusions, a few recommendations are being made.

The better students should be encouraged to participate more in extra-curricular activities. It was shown in the study that more than half of the students in the upper quartile in curricular achievement were below the upper quartile in extra-curricular.

More time should be given the extra-curricular activities on the regular school program. Twenty-one per cent of the time is not enough.

The school board should subsidize the extra-curricular program in order that so much time and energy would not be spent in securing

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12 Garret, Henry E., op. cit., p. 170.

money to finance it. Then, there would not be those objectional and questionable practices resorted to in the raising of money. If the extra-curricular program is worth giving a place on the daily schedule, it is worth being supported in the same manner as the curricular program.

Better trained teachers are needed in extra-curricular work. The music directors and coaches are qualified individuals in most cases, but a successful activity is built upon the home-room and centered about the student council. Very few teachers are as well qualified in the management of a home-room, or a club, or a student council as a coach of football to coach a team. In this the teacher training institutions have a definite responsibility.

Most authorities suggest and state departments recommend that pupils be limited in their participation. The writer suggests that pupils be given an opportunity to participate as much as they desire.

The following quotation from Doctor Elbert K. Fretwell is a recommendation that is really worth while.

> First, it is the business of the school to organize the whole situation so that there is a favorable opportunity for everyone, teachers as well as pupils, to practice the qualities of the good citizen here and now with results satisfying to the one doing the practicing.[13]

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13 Fretwell, Elbert K., Extra-Curricular Activities in Secondary Schools. p.2.

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APPENDIX I

THE CALCULATION OF THE ABSCISSAE AND ORDINATES FOR THE CURVES OF DISTRIBUTION OF HONOR POINTS AND OF EXTRA-CURRICULAR ACTIVITY POINTS AS SHOWN BY FIGURE I AND FIGURE II, RESPECTIVELY.[14]

X	X-M	$\frac{X-M}{S.D.}$	Y	Z	$\frac{Y_o}{Z}$ Times
-7	-53.5568	-2.00	.0539910	.1353	.3464
1	-45.5568	-1.71	.0924591	.2317	.5929
9	-37.5568	-1.47	.1354181	.3394	.8689
17	-29.5568	-1.11	.2154582	.5412	1.3855
25	-21.5568	- .81	.2873689	.7203	1.844
33	-13.5568	- .51	.3502919	.8780	2.2476
41	- 5.5568	- .21	.3902419	.9781	2.504
43.909	- 2.541	- .09	.3973298	.9959	2.5495
49	2.4432	.09	.3973298	.9959	2.5495
57	10.4432	.45	.3605270	.9037	2.3143
65	18.4432	.69	.3144317	.7881	2.0175
73	26.4432	.99	.2443904	.6125	1.568
81	34.4432	1.29	.1736022	.4351	1.1138
89	42.4432	1.59	.1127042	.2825	.7067
97	50.4432	1.89	.0668711	.1676	.42908
105	58.4432	2.19	.0362619	.0908	.23244
113	66.4432	2.49	.0179711	.0450	.1152
116	69.4432	2.60	.0135830	.0340	.08704

HONOR POINTS

X = Score

M = Mean

S.D. = Standard Deviation

$\frac{X-M}{S.D.}$ = Abscissae

Y = Ordinate

$Z = \frac{Y}{\text{Maximum Ordinate}}$

S.D. = 26.608

N = 140

M = 46.5568

$Y_o = \frac{N}{2.5066\ S.D.}$

$Y_o = 2.56$

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14 Sorenson, Herbert. Statistics for Students of Psychology and Education. P.168.

EXTRA-CURRICULAR ACTIVITY POINTS

X	$X-M$	$\frac{X-M}{S.D.}$	Y	Z	$\frac{Y_o}{\text{Times } Z}$
-7	-33.0432	-1.95	.0595947	.1493	.4931
1	-25.0432	-1.48	.1334353	.3345	1.1049
9	-17.0432	-1.00	.2419707	.6065	2.0031
17	- 9.0432	- .53	.3466677	.8689	2.870
25	- 1.0432	- .06	.3982248	.9982	3.297
22.42	- 3.51070	- .20	.3910427	.9807	3.238
33	6.9568	.41	.3667817	.9193	3.0362
41	14.9568	.88	.2708640	.6789	2.2425
49	22.9568	1.35	.1603833	.4017	1.327
57	30.9568	1.83	.0747663	.1874	.690
65	38.9568	2.30	.0283270	.0710	.2345
73	46.9568	2.77	.0086052	.0215	.07101
81	54.9568	3.25	.0020290	.00508	.01678
89	62.9568	3.72	.0003800	.00095	.003138
94	67.9568	4.01	.0001286	.00031	.001024

X = Score

M = Means

S.D. = Standard Deviation

$\frac{X-M}{S.D.}$ = Abscissae

Y = Ordinate

$Z = \frac{Y}{\text{Maximum Ordinate}}$

S.D. = 16.9136

$N = 140$

$M = 26.0432$

$Y_o = \frac{N}{2.5066 \text{ S.D.}}$

$Y_o = 3.302$

Typed by:

Ammie Pruett