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The Effects of Participation in Professionally Related Areas of Physical Education on the Scholastic Achievement of Selected Physical Education Majors

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THE EFFECTS OF PARTICIPATION IN PROFESSIONALLY RELATED
AREAS OF PHYSICAL EDUCATION ON THE SCHOLASTIC
ACHIEVEMENT OF SELECTED PHYSICAL
EDUCATION MAJORS

(TITLE)

BY

DONALD E. NEECE

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

MASTER OF SCIENCE IN EDUCATION

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

1966

YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING
THIS PART OF THE GRADUATE DEGREE CITED ABOVE

8/2/66
DATE

2 August 1966
DATE

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CHAPTER I

INTRODUCTION

The study was made in an attempt to show the effects of participation in professionally related fields of physical education on scholastic achievement of selected major students. An evaluation of participation, in terms of its relationship to scholastic achievement, is of importance not only to people in the profession of physical education, but to all educators and the public whose interest and responsibilities include an understanding of the total educational program.

The writer found numerous articles written concerning the effects of participation in athletics and intramurals on scholastic achievement of high school and college students. The renewed interest of some universities on participation in all related areas for their major students has again brought up the point. The renewed interest on participation in all professionally related activities has been particularly true of the Physical Education Department at Eastern Illinois University located in Charleston, Illinois. Eastern is now keeping participation charts on each undergraduate physical education major. The charts are then used as aids in determining if students will be admitted to teacher education.

The review of related literature revealed; however, that little, if any, research has been conducted concerning the effects of participation in all related areas of physical education on the scholastic

achievement of physical education major students. It was from this standpoint that the writer was prompted to investigate this particular problem.

CHAPTER II

SURVEY OF RELATED LITERATURE

Previous writings related to the study have been primarily concerned with the effects of participation in varsity athletics and intramurals on students in general. The writer will deal with the effects of participation in professionally related activities on selected physical education major students.

The related literature was categorized into three groups:

- (1) the effects of extra-curricular activities on scholastic achievement,
- (2) the effects of varsity athletics on scholastic achievement and
- (3) the effects of intramurals on scholastic achievement.

The Effects of Extra-Curricular Activities on Scholastic Achievement

Short and Drake (12) conducted a study in 1940 to determine if extra-curricular activities had any effect on the scholastic averages of 138 senior high school students. They also wanted to find out if a period of high participation lowered the grade point average and compared this to a period when the same student was low in participation.

They determined high and low participation by assigning a definite number of points to each activity. They decided on 28 points as the breaking point. If the student had over 28 points he was considered to be high in participation and if he had less than 28 points he was low in participation.

They gathered their data from class participation records kept at the school. They also obtained grade point averages and I.Q. test scores from the Registrar's Office.

From the data collected, these conclusions were drawn:

1. Active pupils received higher marks than non-active pupils.
2. When active and non-active groups with almost identical I.Q.'s were compared, little or no difference in marks was noticed.
3. The highest correlation of school marks between periods when they were participating and not participating was shown by the active group.
4. The marks obtained by leaders during these periods of much activity were almost identical with those obtained during their periods of little activity.
5. Therefore, one might conclude that engaging in activities does not interfere with scholastic standings of the pupils. (12)

Tepper (14) and Twinning (16) conducted a study much like the one by Scott and Drake. They arrived at about the same conclusions except that Twinning found that when boys of equal I.Q. were matched, the boys who had not participated had a higher mean grade point average.

The Effects of Varsity Athletics on Scholastic Achievement

Numerous articles were written on the effects of varsity athletics of high school and college and scholastic achievement (1, 2, 3, 4, 5, 8, 9, 10, 11, 13 and 15). Although these studies did not pertain directly to the writer's study, he felt that it might be useful to look at the conclusions, which basically were:

1. Students engaged in varsity athletics received approximately the same marks as those of non-athletics of equal mental ability.
2. The athletes seemed to have a better scholastic record out of season than during competition.

3. It was found that as students progressed in class rank, the effects of participation lessened.

4. The native ability of athletes and non-athletes was found to be about the same.

The Effects of Intramurals on Scholastic Achievement

Hackensmith and Miller's study (6) was designed to investigate not only the relation of intramural participation to freshman academic grades, but also to the academic standings of sophomore, junior and senior university students. The data was collected from intramural participation records for the school year 1935-36, the I.Q. scores from the Department of Psychology and the grade point from the Office of Registration.

The study included 161 participants and 161 non-participants.

The results from the study are:

1. Freshman participants in intramural athletics are not markedly effected in their academic grades.
2. Participants in intramural athletics as a whole have higher mean intelligence sigma ranking than those who do not participate.
3. Sophomore participants show a slightly higher mean academic grade and the junior and senior intramural participants demonstrated a definitely higher mean academic grade than non-participants of the same class. (6)

Washke (17) and Hardin (7) conducted studies which, reached the same conclusions as did Hackensmith and Miller.

The survey of related literature shows that the studies which have been conducted state that participation in the areas covered had little, if any, effect on scholastic achievement of participants.

The three areas which were covered in this survey of literature were:

- (1) the effects of extra-curricular activities on scholastic

achievement, (2) the effects of varsity athletics on scholastic achievement and (3) the effects of intramurals on scholastic achievement.

CHAPTER III

PROCEDURE

The purpose of the study was to determine the effects of participation on the grade point average of selected physical education major students. The study was done to observe the effects, if any, of different levels of participation on the academic success, as described by grade point average, of selected major students at Eastern Illinois University. It was the writer's contention that participation in related activities of physical education would have little, if any, effect on the grade point average of selected physical education major students.

Definitions

Several definitions are needed to make clear the meaning of certain aspects of the study. They are:

Professionally related activity: Taking part in any activity that is connected to the physical education department at Eastern Illinois University. Included in this is the physical education majors club, varsity club, varsity athletics, intramural athletics, Phi Epsilon Kappa, manager or trainer for a varsity sport and intramural unit manager.

Selected major students: This term refers to the group wherein 61 per cent of the junior and senior physical education major students were included. This group numbered 26 juniors and 29 seniors majoring

in physical education.

Scholastic achievement: The grade point of the student at the end of any given term.

Phi Epsilon Kappa: National Honorary Physical Education Fraternity.

Letters were sent to ninety junior and senior physical education major students on campus requesting them to participate in the study and set up an interview date with each one. Of the total number of majors, 61 per cent participated in the study.

An interview worksheet was then set up (Appendix I). Each interview took approximately fifteen minutes and was arranged to find out what professionally related activities each physical education major student took part in during the three or four years in school from 1962 to 1966. The information obtained in these interviews was tabulated and used as a basis of the findings of the study.

The information obtained in the interviews was arranged to set up a point system, Table 1, to determine high and low participation.

TABLE 1
POINTS ASSIGNED TO EACH ACTIVITY

Activity	Points
Varsity Club	3
Phi Epsilon Kappa	3
Physical Education Majors Club	3
Officers of Clubs	1
Intramural Athletics (per sport)	4
Intramurals - one day meets	1
Intramural Unit Manager	3
Varsity Athletics	12
Varsity Managers	12
Varsity Trainers	12
Exhibition Gymnastics Team	12

The point system was based on the participation charts kept on each undergraduate physical education major at Eastern Illinois University with a few minor additions by the writer.

Each student was then evaluated to determine the quarters of high participation and low participation while enrolled in school. The writer decided to use fourteen points as the division between high participation and low participation.

A worksheet was prepared in order to record the number of quarter hours carried, the title of the courses taken and the grade received. This information was obtained from the Records Office at Eastern Illinois University. In order to determine the significance between the grade point average of the high and low participation groups, the t-formula for small surveys was applied to the data.

CHAPTER IV

INTERPRETATION OF DATA AND RESULTS

Eastern Illinois University located in Charleston, Illinois, was the only institution involved in the study. The years concerned in the study were from fall of 1962 to spring of 1966.

The writer decided to use fourteen points as the division between high and low participation. This division gave the writer 369 quarters of low participation and 161 quarters of high participation from which to draw conclusions.

Table 2, shows the percentage of participants in each professionally related club of the 61 per cent of the junior and senior physical education major students studied.

TABLE 2

PERCENTAGE OF PARTICIPANTS IN RELATED CLUBS
BASED ON AT LEAST TWO QUARTERS OF
PARTICIPATION

	Freshman	Sophomore	Junior	Senior
Physical Education				
Majors Club				
Junior	38%	46%	61.5%	0
Senior	55%	62%	58%	62%
Phi Epsilon Kappa				
Junior	0	19%	31%	0
Senior	0	0	21%	31%
Varsity Club				
Junior	0	.08%	19%	0
Senior	.08%	31%	41%	41%

In reference to Table 2, which shows the participation in professionally related clubs, the writer determined the percentage of participants in each club for every year the students were in school. It seems from Table 2 that as students progressed in class standing the participation in these clubs increased.

In Table 3, the percentage of participation in varsity athletics is recorded from the freshman year to either the junior or senior year, as the case may be, for the students studied. The table is divided to show the percentage of participation for the 26 juniors and 29 seniors studied.

TABLE 3

PERCENTAGE OF PARTICIPATION IN VARSITY ATHLETICS

	Freshman	Sophomore	Junior	Senior
<u>26 Juniors</u>				
One sport	31%	46%	38%	
Two sports	.08%	.03%	.03%	
Three sports	0	.03%	.03%	
<u>29 Seniors</u>				
One sport	51%	51%	45%	28%
Two sports	20%	17%	17%	.08%
Three sports	0	0	0	0

From Table 3 it appears that participation for the juniors remained about the same with a 15 per cent increase between the freshman and sophomore year and a drop of 8 per cent between sophomore and junior year. In the senior group the first three years remained about the same with only a 6 per cent decline between the sophomore and junior year. The big diminution in participation, however, came between the junior and senior year (17 per cent). Table 3 shows, also,

less than half of the students participating in athletics took part in more than one sport with this number decreasing with class rank.

It was found from the interviews that only two students were varsity team managers. One student was the manager of the varsity baseball team his sophomore and junior years. The other student was the varsity track manager during spring quarter of his senior year.

The interviews indicated that no student was a team trainer and only one person was a member of the gymnastic exhibition team. It was found from the interviews that eleven men served as intramural unit managers.

Table 4 shows the percentage of participation in intramural athletics.

TABLE 4
PERCENTAGE OF INTRAMURAL PARTICIPANTS
FOR STUDENTS STUDIED

Class	Fall	Winter	Spring
Freshman	22%	47%	35%
Sophomore	44%	69%	53%
Junior	51%	82%	53%
Senior	45%	69%	41%

In reference to Table 4, it can be seen that intramural participation increased as class rank advanced. This was true in all instances except for the spring quarter of the junior year where participation remained the same as the spring quarter of the sophomore year. It can be noted, also, from Table 4 that the highest participation is recorded

during the winter quarter. The increase in participation during the winter quarter was influenced by an increased activity program during this quarter.

By analyzing information received from the personal interviews with each student, the writer determined whether the student was high or low in participation for each quarter enrolled in school. Using fourteen points as the breaking point between high and low participation, the students would be classified in high participation if they had fourteen or more points and low participation if they had less than fourteen points.

Table 5 shows the mean grade point average for each student during his quarters of high participation and his quarters of low participation and the difference between the two. This table included only 62 per cent of the students studied because the other 38 per cent had either all participation or no participation; therefore, no observations could be made between high and low participation of these students.

The comparison in Table 5 shows that sixteen students had a better scholastic average during quarters of high participation with a summation total of 4.52. Eighteen students, however, were found with a better scholastic average during quarters of low participation with a summation total of 6.13. The total of 1.61 summation difference in favor of the low participation quarters was found.

TABLE 5

MEAN GRADE POINT AVERAGE AT HIGH AND LOW
 PARTICIPATION AND DIFFERENCE IN MEAN
 GRADE POINT OF HIGH AND LOW
 PARTICIPATION FOR EACH
 INDIVIDUAL

Student	Mean Grade Point Average		Difference in Mean Grade Point Average Between High and Low Participation
	High (+)	Low (-)	
1	3.00	2.45	+.55
2	2.80	3.33	-.53
3	1.94	2.28	-.34
4	3.24	2.92	+.32
5	2.33	2.55	-.22
6	2.00	2.22	-.22
7	1.82	2.10	-.28
8	2.31	2.25	-.28
9	2.59	2.44	+.15
10	2.22	2.00	+.22
11	2.32	2.21	+.11
12	2.20	2.24	-.04
13	2.52	2.75	-.23
14	2.44	3.10	-.66
15	2.78	2.68	+.10
16	2.27	2.65	-.38
17	2.14	2.06	+.08
18	2.54	2.46	+.08
19	1.67	2.19	-.52
20	2.16	2.42	-.26
21	1.09	2.03	-.94
22	3.88	2.69	+1.19
23	1.69	2.07	-.38
24	2.18	2.13	+.05
25	3.38	3.14	+.24
26	2.55	2.15	+.40
27	2.67	2.88	-.21
28	2.18	2.36	-.18
29	2.54	2.42	+.12
30	1.57	1.88	-.31
31	3.58	2.16	+.42
32	2.75	2.98	-.23
33	2.72	2.29	+.43
34	2.44	2.59	-.15

Total -1.61

Table 6 shows the division of all quarters into two groups; one high participation and one low participation. Also, the mean grade point average for all quarters of high participation and low participation which was obtained by dividing the total number of hours into the grade received for each respective group. The difference between the high and low participation groups was computed.

TABLE 6
DIFFERENCE BETWEEN MEAN GRADE POINT
AVERAGE OF ALL STUDENTS WITH
HIGH AND LOW PARTICIPATION

	Low Participation (-)	High Participation (+)	Difference
Mean Grade Point Average	2.54	2.35	-.19

From the comparison of mean grade point averages for all quarters of high participation and all quarters of low participation, the difference between the high and low participation quarters was found to be -.19. The difference of -.19 for low participation was found to be significant at the .001 level of confidence using the t-formula for small surveys.

The changing of letter grades into grade points is identical with the method used by Eastern Illinois University, which is: A equals 4.00; B equals 3.00; C equals 2.00; D equals 1.00 and F equals 0.00.

It was desired, also, to observe if there was any difference in the type of courses taken by the students from the quarter of high participation to the quarter of low participation. After setting up this comparison (Appendix II) the writer could find no way to draw

valid conclusions.

Results

From the data received it seemed that the following observations could be made with reference to the cases studied.

1. Participation of physical education majors in professionally related clubs increased as students progressed in class rank.
2. Participation in varsity athletics remained about the same during the first three years with a 17 per cent decrease during the senior year.
3. It was found that intramural participation increased between the freshman and sophomore year. Participation, however, remained about the same during the sophomore, junior, and senior years. It was found that an average increase of 26 per cent in intramural participation was found between fall and winter with an average decrease of 21 per cent between winter and spring.
4. Sixteen students had a higher scholastic average during high participation.
5. Eighteen students had a higher scholastic average during low participation.
6. A significant difference at the .001 level of confidence was found between the mean grade point averages for quarters of high and low participation in favor of low participation.

Discussion of Results

The writer feels that the increase in participation in professionally related clubs may have been caused by two factors. The first of these being that as students progress in class standing they

become more professionally minded. The second factor may be the increased emphasis on participation by the Physical Education Department at Eastern Illinois University.

The information collected in the study was of no help in determining why there was a 17 per cent decrease in participation of varsity athletics during the senior year.

The increase in intramural participation during the winter quarter may be caused by two factors. The first of these being that a larger number of activities are offered during the winter quarter. The second reason being that Illinois places a great deal of emphasis on basketball. The intramural basketball program at Eastern Illinois University is larger than all other activities in terms of participants and games played.

The difference between the mean grade point averages of high and low participation was significant at the .001 level of confidence in favor of low participation. However, when 62 per cent of the students studied were evaluated separately it was found that sixteen students had a higher scholastic average during high participation and eighteen students had a higher scholastic average during low participation. It was impossible to evaluate the other 38 per cent along these lines because they either had all participation or no participation.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The study was undertaken to see if there was any correlation between high participation and low participation and the grades received during these periods for selected physical education major students. The study included 61 per cent of the male junior and senior physical education majors who had been enrolled at Eastern Illinois University, located in Charleston, Illinois, between fall of 1962 and spring of 1966.

The subjects were asked to report for personal interviews with the writer to determine what professionally related activities they had participated in while enrolled at Eastern Illinois University. The writer ascertained the courses taken, the grade received and the over-all grade point average for each student recorded by the Office of the Registrar. The writer then compared the students' grades received while high in participation with those while low in participation. This information was programmed into the I.B.M. computers at the Data Processing Center at Eastern Illinois University.

Conclusions

Based on the preceding data and discussion of it and the limitations of the study, the following conclusions seem justified:

1. There is a significant difference between high and low participation in favor of low participation at the .001 level of

confidence.

2. It was found, however, that when students were evaluated separately sixteen students had higher mean grade point averages during high participation and eighteen students had higher mean grade point averages during low participation.

3. This suggests that more studies of this type should be undertaken. With these studies it should be possible to determine the effects of participation in extra-curricular activities on scholastic achievement.

Recommendations

From the standpoint of future studies being conducted, the following recommendations are made:

1. It is recommended that if further studies are undertaken that more subjects be used and more than one university be included in the study.

2. It is also recommended that participation be divided into three categories of high, medium and low.

APPENDIX I

PERSONAL INTERVIEW SHEET

1. Do you belong to the physical education majors club?

2. If so, when did you join?

<u>Fall</u>	<u>Winter</u>	<u>Spring</u>
1	1	1
2	2	2
3	3	3
4	4	4

3. Do you or have you ever held an office?

<u>Fall</u>	<u>Winter</u>	<u>Spring</u>
1	1	1
2	2	2
3	3	3
4	4	4

4. Are you and have you been an active member?

5. Do you belong to Phi Epsilon Kappa?

6. If so, when did you join?

<u>Fall</u>	<u>Winter</u>	<u>Spring</u>
1	1	1
2	2	2
3	3	3
4	4	4

7. Have you ever held or do you hold an office?

8. Are you and have you been an active member of Phi Epsilon Kappa?

9. Do you belong to the Varsity Club?

10. If so, when did you join?

<u>Fall</u>	<u>Winter</u>	<u>Spring</u>
1	1	1
2	2	2
3	3	3
4	4	4

11. Have you ever held or do you hold an office?

<u>Fall</u>	<u>Winter</u>	<u>Spring</u>
1	1	1
2	2	2
3	3	3
4	4	4

12. Are you and have you been an active member?

13. Are you a member of a varsity team or have you ever been a member?

14. What sports and how many years

Football -1-2-3-4	Baseball -1-2-3-4
Basketball -1-2-3-4	Tennis -1-2-3-4
Track -1-2-3-4	Soccer -1-2-3-4
Golf -1-2-3-4	Gymnastics -1-2-3-4
Cross Country -1-2-3-4	Swimming -1-2-3-4
Wrestling -1-2-3-4	

15. Are you a team manager or a team trainer for a sport or have you been; if yes, what sport (s) and how many years?

Football -1-2-3-4	Golf -1-2-3-4
Basketball -1-2-3-4	Cross Country -1-2-3-4
Track -1-2-3-4	Wrestling -1-2-3-4

Baseball -1-2-3-4

Gymnastics -1-2-3-4

Tennis -1-2-3-4

Swimming -1-2-3-4

Soccer -1-2-3-4

16. Do you belong to any intramural team?

17. What sports and how many years

Touch Football Fall - 1-2-3-4

Swimming Winter - 1-2-3-4

Soccer Fall - 1-2-3-4

Wrestling Winter - 1-2-3-4

Weight Lifting Fall - 1-2-3-4

Archery Spring - 1-2-3-4

Cross Country Fall - 1-2-3-4

Golf Spring - 1-2-3-4

Basketball Winter - 1-2-3-4

Tennis Spring - 1-2-3-4

Volleyball Winter - 1-2-3-4

Basketball
(free throw) Spring - 1-2-3-4

Badminton Winter - 1-2-3-4

Softball Spring - 1-2-3-4

Table Tennis Winter - 1-2-3-4

Track Spring - 1-2-3-4

Bowling Winter - 1-2-3-4

Sigma Delta Psi - 1-2-3-4

18. Are you a unit manager of an intramural team?

Fall

Winter

Spring

1

1

1

2

2

2

3

3

3

4

4

4

19. Do you commute to campus?

How far do you drive each day?

20. Do you belong to a social fraternity?

21. What quarter did you pledge?

22. When did you go active?

23. Do you work or have you worked?

<u>Fall</u>	<u>Winter</u>	<u>Spring</u>
1	1	1
2	2	2
3	3	3
4	4	4

24. How many hours a week do you work?

25. How many hours a week do you study?

26. Do you think you study more or less when you are in a number of activities during a quarter?

27. Do you belong to any other organizations or clubs?

APPENDIX II

COMPARISON OF COURSES TAKEN DURING
HIGH PARTICIPATION AND
LOW PARTICIPATION

High Participation	Low Participation
<u>Anthropology</u>	<u>Anthropology</u>
1. Introduction to Anthropology	1. Introduction to Anthropology
<u>Art</u>	<u>Art</u>
1. Design I	1. Drawing I
2. Introduction to Art	2. Drawing II
3. Ceramics	3. Design I
4. History of Art II	4. Design II
5. History of Art III	5. Introduction to Art
6. Art in Human Affairs	6. Art in Human Affairs
7. Art in Past Culture	7. Art in Past Culture
8. Art Today	8. Art Today
<u>Botany</u>	<u>Botany</u>
1. General Botany I	1. General Botany I
2. General Botany II	2. General Botany II
3. General Local Flora	3. General Local Flora
4. Morphology of Green Plants	4. General Biological Science
5. Methods of Teaching Biological Science in the High School	
<u>Business</u>	<u>Business</u>
1. Shorthand II	1. Typewriting I
2. Business Math	2. Typewriting III
3. Accounting II	3. Shorthand I
4. Principles of Retailing	4. Shorthand III
	5. Business Math
	6. Business Correspondence
	7. Introduction to Business
	8. Advanced Typewriting I
	9. Advanced Typewriting II
	10. Office Practice
	11. Accounting I
	12. Accounting II
	13. Accounting III
	14. Principles of Marketing
	15. Principles of Salesmanship
	16. Principles of Advertising
	17. Business Law I
	18. Business Law II
	19. Methods of Teaching Basic Business

High Participation	Low Participation
<u>Economics</u>	<u>Economics</u>
1. Principles of Economics	1. Principles of Economics I
	2. Principles of Economics II
<u>Education</u>	<u>Education</u>
1. American Public Education	1. Laboratory in Education I
2. Human Growth, Development and Learning	2. Laboratory in Education II
3. Educational Psychology	3. American Public Education
4. The Instructional Task in the Secondary School	4. Human Growth, Development and Learning
5. Measurements and Evaluation	5. Educational Psychology
6. Supervised Student Teaching	6. The Instructional Task in the Secondary School
7. Philosophy and History of Education	7. Measurements and Evaluation
	8. Supervised Student Teaching
	9. Philosophy and History of Education
<u>English</u>	<u>English</u>
1. Composition I	1. Composition I
2. Composition II	2. Composition II
3. Composition III	3. Composition III
4. Survey of English Literature	4. Survey of English Literature I
5. American Literature I	5. Survey of English Literature II
6. American Literature II	6. American Literature I
7. American Literature III	7. American Literature II
8. English Novel to 1850	8. American Literature III
9. World Literature	9. English Novel
	10. World Literature
	<u>Foreign Languages</u>
	1. Elementary French I
	2. Elementary French II
	3. Elementary French III
	4. German I
	5. German II
<u>Geography</u>	<u>Geography</u>
1. World Geography	1. Physical Geography I
2. Regional Geography of North America	2. Physical Geography II
3. Economic Geography	3. Physical Geography III
4. Geography of Asia	4. World Geography I
	5. Regional Geography of North America

High ParticipationLow ParticipationHealth Education

1. Personal Hygiene
2. School and Community Health Problems
3. Safety Education
4. Introduction to Drivers Education
5. Advanced Driver Education and Traffic Safety

History

1. History of the U.S. to 1840
2. History of the U.S. from 1841 to 1898
3. History of the U.S. since 1898
4. Medieval Europe
5. European History from 1500-1715
6. European History from 1715-1870
7. History of England to 1603
8. History of British Empire since 1815
9. Major Problems in Latin America History
10. Latin America and the U.S.
11. History of the American Frontier, the Colonial Period (1492-1783)
12. Social and Intellectual History of the U.S. in the 14th Century

Home Economics

1. Nutrition

Industrial Arts

1. Woodworking I
2. General Metals
3. Applied Electricity

Geography

6. Climates of the World
7. Elementary Earth Science
8. Geography of South America

Health Education

1. Personal Hygiene
2. School and Community Health Problems
3. Safety Education
4. Introduction to Drivers Education
5. Advanced Driver Education and Traffic Safety

History

1. History of the U.S. to 1840
2. History of the U.S. from 1841 to 1898
3. History of the U.S. since 1898
4. European History from 1500-1715
5. European History from 1715-1870
6. European History from 1870 to present
7. Latin America and the U.S. to 1830
8. History of the American Frontier: The Western Frontier

Industrial Arts

1. General Metals
2. Applied Electricity
3. Woodwork II

<u>High Participation</u>	<u>Low Participation</u>
<u>Industrial Arts</u>	<u>Industrial Arts</u>
4. Mechanical Drawing I	4. Mechanical Drawing III
5. Mechanical Drawing II	5. Mill Work
6. Mechanical Drawing III	6. Machine Metal Work I
7. Introduction to Graphic Arts	
8. Organizing and Teaching General Shop	
9. Machine Metal Work I	
10. Machine Metal Work II	
11. Recreational Crafts	
<u>Library</u>	<u>Library</u>
1. Introduction to the Library	1. Introduction to the Library
<u>Mathematics</u>	<u>Mathematics</u>
1. Elementary Mathematics	1. Elementary Mathematics
	2. Algebra and Trigonometry I
	3. Algebra and Trigonometry II
	4. Analytic Geometry
	5. Introduction to College Math
	6. College Geometry
	7. Calculus I
	8. Calculus II
<u>Music</u>	<u>Music</u>
1. History and Literature of Music	1. Introduction to Music
	2. Music Appreciation
	3. History and Literature of Music I
	4. History and Literature of Music II
	5. History and Literature of Music III
	6. History and Literature of Music V
<u>Philosophy</u>	<u>Philosophy</u>
1. Introduction to Philosophy	1. Introduction to Philosophy
2. History of Philosophy: Medieval	2. History of Philosophy
	3. History of Philosophy: Medieval
	4. Ethics
<u>Physical Education</u>	<u>Physical Education</u>
1. Varsity Baseball	1. Varsity Baseball
2. Varsity Basketball	2. Varsity Soccer
3. Varsity Soccer	3. Varsity Football

High Participation	Low Participation
4. Varsity Football	4. Varsity Gymnastics
5. Varsity Gymnastics	5. Varsity Wrestling
6. Varsity Wrestling	6. Varsity Track
7. Varsity Track	7. Varsity Swimming
8. Varsity Swimming	8. Basic Physical Education
9. Basic Physical Education	9. Prescribed Activities
10. Prescribed Activities	10. Basketball
11. Recreational Team Games	11. Recreational Team Games
12. Soccer	12. Soccer
13. Touch Football	13. Softball
14. Volleyball	14. Touch Football
15. Badminton	15. Volleyball
16. Golf	16. Archery
17. Gymnastics	17. Badminton
18. Tennis	18. Golf
19. Wrestling	19. Gymnastics
20. Track	20. Tennis
21. Swimming	21. Wrestling
22. Bowling	22. Track
23. Social Dance	23. Stunts and Tumbling
24. Basic Activities for Elementary and Secondary School	24. Swimming
25. Elementary Tumbling, Stunts and Pyramids	25. Bowling
26. First Aid and Safety Education	26. Social Dance
27. Introduction to Physical Education	27. Advanced Swimming
28. Technique of Teaching Basketball	28. Basic Activities for Elementary and Secondary School
29. Technique of Teaching Recreational Team Games	29. Elementary Tumbling, Stunts and Pyramids
30. Technique of Teaching Soccer	30. Introduction to Physical Education
31. Technique of Teaching Softball	31. First Aid and Safety Education
32. Technique of Teaching Touch Football	32. Technique of Teaching Basketball
33. Technique of Teaching Volleyball	33. Technique of Teaching Recreational Team Games
34. Technique of Teaching Archery	34. Technique of Teaching Soccer
35. Technique of Teaching Badminton	35. Technique of Teaching Softball
36. Technique of Teaching Golf	36. Technique of Teaching Touch Football
37. Technique of Teaching Gymnastics	37. Technique of Teaching Volleyball
	38. Technique of Teaching Archery
	39. Technique of Teaching Badminton

<u>High Participation</u>	<u>Low Participation</u>
<u>Physical Education</u>	<u>Physical Education</u>
38. Technique of Teaching Tennis	40. Technique of Teaching Golf
39. Technique of Teaching Wrestling	41. Technique of Teaching Gymnastics Apparatus
40. Technique of Teaching Stunts and Tumbling	42. Technique of Teaching Tennis
41. Technique of Teaching Swimming	43. Technique of Teaching Wrestling
42. Health Education in Elementary, Junior High School and High School	44. Technique of Teaching Stunts and Tumbling
43. Organization and Administration of Playgrounds	45. Technique of Teaching Swimming
44. Kinesiology	46. Health Education in Elementary, Junior High and Senior High School
45. Organization of Grade Level Activities and Methods of Teaching the Activities in Physical Education	47. Organization and Administration of Playgrounds
46. Basketball Coaching	48. Kinesiology
47. Football Coaching	49. Organization of Grade Level Activities and Methods of Teaching the Activity in Physical Education
48. Track and Field Coaching	50. Basketball Coaching
49. Baseball Coaching	51. Football Coaching
50. Camping	52. Track and Field Coaching
51. History and Principles of Physical Education	53. Baseball Coaching
52. Physical Education Administration and Supervision	54. Camping
53. The Prevention and Care of Athletic Injuries	55. History and Principles of Physical Education
	56. Physical Education Administration and Supervision
	57. The Prevention and Care of Athletic Injuries
	58. Administration of Inter-school Athletics
<u>Physiology</u>	<u>Physiology</u>
1. Physiology	1. Physiology
<u>Political Science</u>	<u>Political Science</u>
1. American National Government	1. Elements of Government
	2. International Organization
<u>Psychology</u>	<u>Psychology</u>
1. Introduction to Psychology	1. Introduction to Psychology
	2. Mental Hygiene

- High Participation

Low Participation
Social Science

1. A Survey of World Civilization
2. The National Government
3. State and Local Government
4. Elements of Economics
5. Methods and Materials in the Social Studies in the Secondary School

Sociology

1. Principles of Sociology
2. Social Problems and Social Trends
3. Marriage and the Family

Sociology

1. Principles of Sociology
2. Social Problems and Social Trends
3. The Sociology of Urban Life
4. Marriage and the Family

Speech

1. Speaking in Public
2. Voice and Phonetics
3. Beginning Oral Interpretation
4. Discussion
5. Speech Pathology
6. Teaching Speech

Speech

1. Speaking in Public
2. Voice and Phonetics
3. Speech Composition
4. Discussion
5. Speech Pathology
6. Debate
7. Teaching Speech

Zoology

1. General Zoology I
2. General Zoology II
3. General Zoology III
4. Anatomy
5. Methods of Teaching Biological Science in the High School

Zoology

1. General Zoology I
2. General Zoology II
3. General Zoology III
4. Vertebrate Zoology
5. Comparative Anatomy Vertebrate
6. Embryology
7. Anatomy
8. Methods of Teaching Biological Science in the High School

REFERENCES

1. Conner, Tom. "Varsity Athletes Make Superior Scholars," Scholastic Coach, XXIV, (November 1954), pp. 56-57.
2. Cooper, J.A. and E. C. Davis. "Athletic Ability and Scholarship," American Physical Education Association Research Quarterly, V, (December 1934), pp. 68-78.
3. Cormany, W. J. B. "High School Athletics and Scholarship Measured by Achievement Tests," School Review, XLIII, (June 1935), pp. 456-461.
4. Ferguson, G. W. "A Comparison of Athletes Grade Point Averages with Those of Non-Athletes with Similar Intelligence Quotients," (Unpublished Master Thesis: Eastern Illinois University, Charleston, Illinois), 1963.
5. Finch, F. N. "Athletics and Achievement in High School," School and Society, XXXV, (February 27, 1932), pp. 299-300.
6. Hackensmith, C. W. and L. Miller. "A Comparison of the Academic Grades and Intelligence Scores of Participants and Non-Participants in Intramural Athletics at the University of Kentucky," American Physical Education Association Research Quarterly, IX, (March, 1938), pp. 94-95.
7. Hardin, W. R. "A Comparison of Grade Point Averages of Participants and Non-Participants in the Intramural Program," (Unpublished Master Thesis: Eastern Illinois University, Charleston, Illinois), 1963, p.3.
8. Harwick, John. "Does Participation Affect Academic Achievement," School Activity, XXXII, (March 1961), pp. 204-213.
9. Monroe, Walter S. "The Effect of Participation in Extra-Curricular Activities on Scholarship in the High School," School Review, XXXVII, (December, 1929), pp. 747-748.
10. Rarich, L. "Survey of Athletic Participation and Scholastic Development," Journal of Educational Research, XXXVII, (November, 1943), pp. 174-180.
11. Reals, W. H. and R. G. Reese. "High School Lettermen, Their Intelligence and Scholarship," School Review, XLVII, (September, 1939), pp. 534-539.

12. Short, Ruth M. and Richard N. Drake. "A Study in Participation," School Activities, XIII, (September, 1941), pp. 3-4.
13. Snoddy, N. L. and J. R. Shannon. "Standardized Achievement Measurements of Athletes and Non-Athletes," School Review, XLVII, (October, 1939), pp. 610-612.
14. Tepper, Edith H. "Scholarship and Extra-Curricular Participation," School Activities, XIII, (October, 1941), pp. 51-52.
15. Tuttle, W. W. and F. S. Beebe. "A Study of the Scholastic Attainment of Letter Winners at the State University of Iowa," American Physical Education Association Research Quarterly, XII, (May, 1941), pp. 174-180.
16. Twinning, Charles W. "The Relationship of Extra-Curricular Activities to School Marks," School Activities, XXVIII, (February, 1957), pp. 181-184.
17. Washke, Paul R. "A Study of Intramural Sports Participation and Scholastic Attainment," American Physical Education Association Research Quarterly, XI, (May, 1940), pp. 22-27.