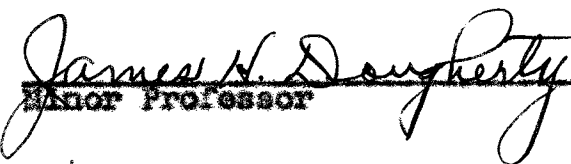



RELATIONSHIPS BETWEEN PHYSICAL SKILLS AND TOTAL  
ADJUSTMENT OF JUNIOR HIGH SCHOOL BOYS

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ADJUSTMENT OF JUNIOR HIGH SCHOOL BOYS

THESIS

Presented to the Graduate Council of the  
North Texas State College in Partial  
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By

180222

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## CHAPTER I

### INTRODUCTION

#### Statement of the Problem

The problem in this study is to show the possible relationship between improved physical skills and the total adjustment of boys at the junior high school level. A limited number of boys selected from the seventh and eighth grades who were without adequate physical skills were given special assistance for improving such skills, and a record was kept of the procedure and possible results of this instructional program.

#### Purpose of the Study

The purpose of this study is to determine the possible effects of improved physical skills on the total adjustment of boys in a certain seventh and eighth grade. It is apparent that more boys would participate in play activities and sports if some time were spent in helping them to improve their physical skills. The major sports of this school are football, basketball, softball, and track. The boys who have not acquired an interest and the physical skills for these games do not have an opportunity to compete with boys of their own age. The eight boys who were selected for this

study were about the same age, size, and in good physical condition, as were the boys who were playing on the teams. An effort was made to develop the fundamental physical skills of these boys in order to enable them to take part in these sports either as players or as substitutes this year or the next. All authorities in education agree that motor skills should be developed. These skills are important in the everyday lives of boys and girls. The development of physical skills contributes to the desirable habits, attitudes, and abilities of the individual. A boy's popularity and acceptance by the group depend to a large extent on his development of physical skills.

As expressed by Rarick,

The latent potentialities of each normal human being at birth are enormous. It is possible to fully develop only a portion of the abilities of any one person. The home, the school, and the community, therefore, have a tremendous responsibility when it is fully realized how significant the direction of the development of the child may become. It has been only within recent years that physical education as an instructional part of the program has been admitted to the curriculum. In the past, many educators have perhaps felt that motor development will occur without much direction. This has in a sense been supported by observation of a few children who have developed motor skills quite effectively after school and on the playground. However, more careful observation will show that there are invariably many children who are so poorly skilled that they seldom enter into playground activities. Since we are interested in the total development of the child, it becomes a responsibility of the school to help more children develop these skills which are so necessary for effective adjustment to the social group.<sup>1</sup>

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<sup>1</sup> Lawrence Rarick, "Redirecting the Emphasis in Physical Education," Education, LXX (October, 1949), 122.

This view is further expressed by Cubberly.

The building up among the boys and girls of a school of a good physical tone and a good school morale is one of the large returns that come from giving attention to the play activities of the school ground. Few other things do so much to transform the yard bully into a useful citizen, bring out the good feeling, reduce discipline, teach pupil self-control, train the muscles and the eyes to coordinate in games involving learned skills, or awaken the best spirit of the pupils.<sup>2</sup>

Dutton expresses this view:

We strive to educate elementary-school children according to well-accepted basic needs. One of the strongest of these basic drives is the desire to play and to participate in a wide variety of games and activities with other children. The skillful teacher will present many learning situations centering around play and games. Because of the keen interests and the freedom of response we often can teach more good will and understanding of other racial groups in a few minutes on the playground or in the activity room than in several hours or days in the classroom with other methods or subjects.<sup>3</sup>

Experiences that provide enjoyment and satisfaction are necessary to the wholesome adjustment of any individual. Play in its various forms satisfies the need for physical activity, offers mental, social, and emotional growth of each pupil.

As indicated by Jones,

Through the group activity provided for in physical education, the child has many opportunities to develop

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<sup>2</sup>E. P. Cubberly, Introduction to the Study of Education, p. 306.

<sup>3</sup>W. H. Dutton, "Health Teaching and Physical Education Can Increase Good Will," The National Elementary Principal, Twenty-fifth Yearbook of the Department of Elementary School Principals, p. 196.

and express qualities such as cooperation, consideration of others, willingness to take turns, and readiness to assume responsibility, all of which are essential to a democratic way of life.<sup>4</sup>

#### Justification

The purpose of this study was to determine the effects improved physical skills had on the total adjustment of boys in the seventh and eighth grades. In each grade in the elementary school there are boys who have not been encouraged to enter into play activities, games, and sports. Nash states:

For a number of years certain leaders have been pointing out that an education which trains people for work but not for play and leisure is at best a half-done job. The existing method of training people as receptacles for knowledge, and then turning them on the world with no aptitudes, no skills, no interests for the occupation of their leisure, is humanly inadequate and socially dangerous. It is not the way to make good citizens, nor to make happy and healthy men and women.<sup>5</sup>

It is hoped that the findings of this study will encourage other teachers, parents, and school administrators to build a curriculum which will help children to have a cooperative spirit, to follow capable leadership, and to accept duties and responsibilities.

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<sup>4</sup>Edwina Jones, Edna Morgan, and Gladys Stevens, Methods and Materials in Physical Education, p. 2.

<sup>5</sup>Jay B. Nash, Interpretation of Physical Education, III, 95.



### Source of Data

The data obtained for this study were gathered from an analysis of eight boys in the seventh and eighth grades. The school nurse examined each boy carefully and found him to be well developed physically. The health of the boys was good for their records did not show a case of serious illness and their attendance at school was regular. At play-time these boys were usually found in groups of two or three standing around watching the other children play. They would not play with their group because they had not developed the control of their muscles sufficiently to participate with those who had developed better coordination.

The other sources of data were books, periodicals, reports, and certain test results. The test results were from a Sociometric Test; Stanford Achievement Test, Advanced Battery, Forms D and G; the California Personality Test, Elementary Form A; and Kuhlmann-Anderson Intelligence Test, Fifth Edition. These results were obtained to determine each boy's development as compared with the others in his grade.

### Method of Procedure

A case study of each boy and his advancement was kept for a period of nine months. The first step was to give each boy a physical examination in September to determine if there were any defects of eyes, ears, nose, throat, heart,

lungs, and feet. Each boy was given the Brace Test of Motor Ability to determine the muscular development as to agility, balance, control, flexibility, agility, and balance, strength, and strength and control.<sup>6</sup>

The second step was to select the two boys who were best developed to play football on the elementary team and encourage them to participate in this sport. Four of the boys were selected and encouraged to play basketball. The other two boys were interested in softball and worked on improving their skills for this sport. In May a re-test was given to check the progress that had been made over the scores on the previous tests.

#### Limitations

The material in this study dealing with the improvement of physical skills of boys is limited to creating a desire to participate in sports and play activities that are suitable for boys in the seventh and eighth grades, to develop the large muscles, and to be recognized as a member of the group in school. The facilities did not afford a study of the many other forms of games and sports that could be used to help develop proficiency in activities, that promote skills, attitudes, and habits of conduct that are conducive to optimum growth and development.

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<sup>6</sup> David Kingsley Brace, Measuring Motor Ability, pp. 3-5.

### Organization

This study is presented in five chapters. The present chapter has stated the purpose of the study, justification, sources of data, method of procedure, and limitations. Chapter II presents a brief case description of each boy and gives the results in table form of the first tests. Chapter III gives the procedure followed to develop in these boys skills for the sport selected. In Chapter IV will be found the results of the re-tests and the possible effects improved physical skills had on each boy's total adjustment. In the final chapter are the summary, conclusions, and recommendations.

## CHAPTER II

### THE ADJUSTMENT AND PHYSICAL SKILLS OF CERTAIN SEVENTH- AND EIGHTH-GRADE BOYS

The boys selected for this study were from the seventh and eighth grades. They are thought to be typical cases found in the elementary school year after year. In this study the boys were not bad nor incorrigible but were outside their social group because of their inability to perform certain physical skills as well as most boys of this age.

This chapter contains a case description and the results of tests given to these boys at the beginning of this study to determine certain aspects of their total adjustment. These tests included health condition, motor ability, personality adjustment, social acceptance by members in their groups, intelligence quotient, and grade achievement.

A brief case description of each boy is intended to present a picture of his activities on the playground and in the classroom at the beginning of this study.

#### Case A

Age: Thirteen years, six months

Grade: Eighth

Weight: One hundred pounds

Physical fitness: Excellent

Motor ability: Fair

Intelligence quotient: 108

Case A was near the average age, height, and weight of the boys in these two groups who participated in the sports carried on by this school. He was interested and wanted to play with the others, but would stand and watch. If he were invited to join in games he would play until someone teased or criticized him. Then he would leave to join in some of the smaller boys' games. This did not last long for some of the smaller boys would come to the teacher complaining about Case A, who was breaking up their play.

Case A was not chosen for any group activity in the room until nearly all of the others had been selected. He did not have too much trouble in getting his lessons, but was usually moving around the room trying to find someone to talk with. He was happier in a group of two or three than he was in a large group.

The problem presented by Case A was his preference for the association of the smaller and younger boys who could not play games any better than he could. He was not recognized and accepted in his class work because of his lack of association with his group in play activities.

## Case B

Age: Thirteen years, nine months

Grade: Eighth

Weight: One hundred twenty-two pounds

Physical fitness: Excellent

Motor ability: Fair

Intelligence quotient: 97

Case B was six inches taller and thirteen pounds heavier than the average height and weight of the boys in these two groups.

On the playground he spent most of his time playing with the younger boys in a game of tag or hide-and-seek in the shrubbery. The other boys never invited him to play with them, because he had not developed the necessary physical skills to play football, basketball, and softball.

He was never able to complete his classroom work for he spent much time in watching the other pupils. The teacher had to watch him constantly to get him to complete his assignments. He had formed such a habit of inattention that he had much trouble in keeping up with most of his classmates.

The problem presented by Case B was to get him interested in the activities carried on by boys of his age, and in the classroom to overcome the habit of daydreaming and put forth an effort to work up to his ability.

## Case C

Age: Thirteen years, six months

Grade: Eighth

Weight: Ninety-eight pounds

Physical fitness: Excellent

Motor ability: Fair

Intelligence quotient: 122

Case C could not play games as well as the boys in the lower grades. He was awkward and when he tried to play with them he soon became discouraged and left the game to spend the rest of the play period watching the others play.

On the achievement test Case C made the highest score in this group. He was always the first to finish his work and wanted to spend the rest of the time wandering around the room disturbing those who were working. He was a great talker and usually knew the right answer to most of the questions that came up in class. The members of the class did not like him because he had formed the habit of making fun of them if their answers to questions were wrong.

Case C knew his weakness on the playground but he tried to overcome this by being overbearing in the classroom. This attitude had made him very unpopular with his group.

## Case D

Age: Thirteen years, eight months

Grade: Eighth

Weight: Eighty-two pounds

Physical fitness: Excellent

Motor ability: Poor

Intelligence quotient: 103

Case D was small for his age. He was two inches shorter and weighed twenty-seven pounds less than the average for the boys on the athletic teams. Some of the boys who were playing these games were younger and below the average height and weight. This could not be considered a reason for him not to participate in these games.

When Case D was four years old his parents separated and his mother had to work to support them. He was looked after by his grandmother until he was old enough to go to school. When he started to school he played in the neighborhood after school with the larger boys until his mother came home in the afternoon. These larger boys mistreated and teased him, and he evidently developed a feeling of inferiority.

At school during the play period he would stay away from the other boys and hang around the teachers to keep them from teasing him. At the beginning of school this year he was still rejected by both boys and girls in his room and on the playground.

He distrubed the other children in the classroom because he thought he had the protection of the teacher and was always meddling in the affairs of the other pupils.



Case D's problem was to be accepted by the members in his class and to build up his confidence and a sense of personal worth by helping him develop some physical skills that other boys had developed.

#### Case E

Age: Twelve years, six months  
Grade: Seventh  
Weight: One hundred two pounds  
Physical fitness: Excellent  
Motor ability: Poor  
Intelligence quotient: 96

Case E was one inch shorter and weighed seven pounds less than the average height and weight of the boys taking part in the school's athletic program. He was well liked by all the students in the school and did not have any trouble getting along with people.

On the playground Cases E and F were close friends and were inseparable most of the time. At their play period they would spend most of their time sitting around talking. If they did attempt to play, it was with the boys in the third and fourth grades.

Case E was a great supporter of the athletic program and always attended the games as a spectator. He and his father attended nearly all the athletic events that were held near their home.

In the classroom his work was hard for him as he was almost a grade behind his grade level, but he worked hard and never became discouraged with his progress. He was accepted by the other students, but was never selected to work on any outstanding project carried on by the students.

The problem presented by Case E was his lack of physical activity in organized play groups and active participation in group work.

#### Case F

Age: Eleven years, eight months

Grade: Seventh

Weight: One hundred six pounds

Physical fitness: Excellent

Motor ability: Poor

Intelligence quotient: 101

Case F was the youngest of the boys in this study. He was one inch taller and his weight was three pounds under the average of the boys taking part in the athletic program.

Case F was liked by all the members of the class. As stated, Cases E and F were very close friends. Case F was much stronger physically than Case E but he usually stayed with Case E and neither of them would play active games.

Case F was almost a grade behind the national norm on his achievement test. Some of this was because of his

slowness in getting his assignments. He did not seem to be dissatisfied with his progress, but always tried to get each lesson.

The problem presented by Case F was to get him to take part in physical activity and try to play in the games played by the boys in his grade and group.

#### Case G

Age: Twelve years, six months

Grade: Seventh

Weight: One hundred nineteen pounds

Physical fitness: Excellent

Motor ability: Poor

Intelligence quotient: 106.

Case G was four inches taller and weighed nine pounds more than the average height and weight of these two groups of boys. His physical condition was excellent but he had not played enough of the harder games to develop the proper muscle coordination to compete with the more active boys. On the playground he could be found watching the ball games but would always refuse to play when he was invited.

In the classroom Case G was very polite. He was timid and would not talk unless he was called on for an answer to a question. Most of his school work was difficult for him but he was a good worker and tried hard to keep up with his work.

Case G's problem was to gain more confidence in himself and to create an interest and a desire to take part in the physical exercises offered by the school.

#### Case H

Age: Twelve years, six months  
Grade: Seven  
Weight: One hundred one pounds  
Physical fitness: Excellent  
Motor ability: Good  
Intelligence quotient: 99

Case H was the average in height and eight pounds underweight for the average height and weight of the boys in these two groups. He was quarrelsome and had a hard time getting along with his classmates. He tried to be boss both in the classroom and on the playground. He liked to play games with the other boys but could not get along with them.

In the classroom this bossy attitude was displayed and he spent most of his time interfering with the other pupils which prevented him from doing acceptable school work.

Case H needed help in learning how to cooperate with others and to be accepted as a member of the group.

In Table 1 will be found the results of the health examination given these eight boys to determine their physical condition at the beginning of this study in order to establish their fitness to take part in play activities

TABLE 1  
RESULTS OF INITIAL HEALTH EXAMINATION  
OF EACH BOY

Case	Examined for Defects of					
	Ears, Eyes Nose, Throat	Heart	Lungs	Defects	Height	Weight
A	good	good	good	none	60"	100 lbs.
B	good	good	good	none	66"	122 lbs.
C	good	good	good	none	62"	98 lbs.
D	good	good	good	none	58"	82 lbs.
E	good	good	good	none	59"	102 lbs.
F	good	good	good	none	61"	106 lbs.
G	good	good	good	none	64"	119 lbs.
H	good	good	good	none	60"	101 lbs.

and sports offered by the school. The terms used in checking each item on the examination are "excellent," "average," and "poor."

By examining the results in Table 1, it may be seen that none of the boys in this study group had any physical defects that would prevent him from playing games that were played by boys in these two grades. The average height of all the boys in these two groups was sixty inches and the average weight was 111 pounds. The range in height of the boys studied was fifty-eight inches to sixty-four inches, which is near the average for boys in this age group. The range in weight is eighty-two pounds to 122 pounds.

In the test for motor ability are found thirty tests that are appropriate for boys in junior high school. These tests were used to determine coordination and balance in the use of the large muscles. Table 2 shows the results for each boy on these thirty tests.

TABLE 2  
RESULT OF MOTOR ABILITY TEST GIVEN THE EIGHT CASES  
AT THE BEGINNING OF THIS STUDY

Case	Type and Number of Test Completed*							Total Score
	a 6	b 6	c 5	d 2	e 5	f 2	g 4	
A	4	6	3	2	4	2	3	24
B	2	6	3	2	4	2	3	22
C	4	5	3	1	2	1	3	19
D	3	4	3	1	2	1	3	17
E	2	4	2	1	2	1	2	14
F	2	4	2	1	2	1	2	14
G	3	4	2	1	4	2	3	19
H	2	5	3	2	2	2	3	19

\*Key to type of test:  
a--agility  
b--balance  
c--control  
d--flexibility  
e--agility and balance  
f--strength  
g--strength and control

Data in Table 2 show that none of the boys examined were able to perform successfully all of the test for

motor ability. Two of the boys completed twenty or more of the tests. Cases E and F had the lowest total score, which was fourteen for each boy.

The indications from these test results are that these boys have not been as active and interested in playing games that would develop the large muscles of the boy and promote the physical skills that boys of this age should be able to perform.

Many of the apparent physical difficulties of students have no observable physical basis, but may result from unsatisfactory efforts to solve conflicts which arise because school activities are not in harmony with their interests, needs, and capacities.

To determine the emotional stability of each boy in this study the California Test of Personality<sup>1</sup> was administered at the beginning of this study.

The purpose of the California Test of Personality is to provide the data for aiding students to maintain or develop a sane balance between self- and social-adjustment. Student reactions to items are obtained, not primarily for the usefulness of total or section scores, but to detect areas and specific types of tendencies to think, feel, and act which reveal undesirable individual adjustments.

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<sup>1</sup>Willis W. Clark, Ernest W. Tiegs, and Lewis P. Thorpe, California Test of Personality, Intermediate Form A.

Table 3 contains the total percentile rank each boy made on the self-adjustment, social-adjustment, total-adjustment, and the norm for this test.

TABLE 3

PERCENTILE NORMS OF SELF-ADJUSTMENT, SOCIAL-ADJUSTMENT AND TOTAL ADJUSTMENT OF EACH BOY WHEN STUDY BEGAN

Case	Self-Adjustment Percentile	Social-Adjustment Percentile	Total-Adjustment Percentile	Percentile Norm
A	65	80	75	99
B	10	5	10	99
C	40	55	45	99
D	5	60	15	99
E	70	75	75	99
F	90	80	85	99
G	95	75	85	99
H	45	85	70	99

The lowest rank in self-adjustment was five, made by Case D. The highest rank was ninety-five, made by Case G.

On social-adjustment Case B had the lowest rank which was five, and Case H had the highest rank of eighty-five. In total-adjustment Case B was the lowest with a rank of ten, and Cases F and G were the highest with a rank of eighty-five each.



The social acceptance of each boy by members in his group was procured by giving the Sociometric Test, "How I Feel Toward Others."<sup>2</sup> This is a test used to measure the inter-personal organization of a group and reveals an individual's status in the eyes of his peers.

In Table 4 are presented each boy's social acceptance percentage and the total number of votes each boy gave and received from his classmates.

TABLE 4  
INITIAL RESULTS OF EACH BOY'S SOCIAL ACCEPTANCE  
IN SEPTEMBER AND TOTAL POINTS HE GAVE AND  
RECEIVED FROM HIS CLASSMATES

Case	Social Acceptance Index in Per Cent	Total Points Given	Total Points Received
A	53	27	28
B	33	20	17
C	61	23	32
D	-17	33	- 9
E	35	11	24
F	29	- 5	20
G	40	-10	27
H	50	31	34

To get the social acceptance score the total number of points that any one person could receive was divided into

<sup>2</sup>M. E. Bonney, "How I Feel Toward Others," Denton, North Texas State College.

the total number of points that any one person did receive. The highest percentage of social acceptance received by any boy taking these tests was 75 per cent. The most points given by any boys on the test to a classmate were sixty-eight. The highest number of points received by any boy was thirty-nine.

From Table 4 the range in social acceptance was -19 per cent to  $\neq$  61 per cent. Only three of the boys in this study secured 50 per cent or above on social acceptance. The range in points given by any one person was a minus five to a positive thirty-three. The lowest number of points received by any of the boys was a minus nine and the highest was a positive thirty-four.

In September the Stanford Achievement Test, Advanced Battery, Form D,<sup>3</sup> was given to the boys in this study to ascertain whether any notable progress would be made in total grade achievement during the school year. It was also given to determine if their maladjustment could be due to retardation in grade achievement.

This particular achievement test is divided into ten separate sections, including tests on paragraph meaning, word meaning, language usage, arithmetic reasoning, arithmetic computation, literature, social studies one and two, elementary science, and spelling.

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<sup>3</sup>Truman L. Kelley, Giles M. Rush, and Lewis M. Terman, Stanford Achievement Test, Advanced Battery, Form D.

Table 5 shows each boy's grade in school and his grade achievement on the Stanford Achievement Test, Advanced Battery, Form D, and the test norm for each grade at the beginning of the study.

TABLE 5

GRADE IN SCHOOL AND GRADE ACHIEVEMENT ON THE STANFORD ACHIEVEMENT TEST, FORM D, AND NORM GRADE FOR EACH BOY AT BEGINNING OF THE STUDY

Case	Grade in School	Grade Achievement		Norm Grade Equivalent	
		Grade	Month	Grade	Month
A	8	7	2	8	1
B	8	7	4	8	1
C	8	11 <sup>4</sup>	0	8	1
D	8	9	8	8	1
E	7	6	8	7	1
F	7	5	8	7	1
G	7	6	4	7	1
H	7	6	2	7	1

Data in Table 5 show the grade each boy was classified in school. The grade achievement determined by his score on the achievement test and also the grade norm for this test at the time the test was given are shown. The highest grade equivalent was made by Case C. Grade eleven is the highest score on this test; however, Case C's score was

much higher than the grade eleven score. Case F had the lowest grade equivalent of any of these eight boys. He was one grade and two months below the norm grade for this test. There is not enough evidence indicated by comparing the grade equivalent of each boy with the norm grade equivalent to cause any maladjustment.

In reviewing the cases, it is noted that these boys were not adjusted to their groups as indicated by the test results. Their lack of interest in play activities was probably because of their inability to perform physical skills as well as boys of their own age.

### CHAPTER III

#### THE PROGRAM AND PROCEDURE DEVELOPED TO IMPROVE THE PHYSICAL SKILLS OF THE EIGHT BOYS IN THIS STUDY

In devising the various athletic programs to provide for the improvement of physical skills and the whole development of these eight boys, it was necessary for the activities to be planned for pleasure and recreation. A program that would provide competition with members of similar physical skills and promote a feeling of success instead of frustration and defeat was attempted.

Recreation activities and physical exercise have positive values in promoting health, not only because they lead to the development of vital organs, but also because they contribute to the mental, social, and moral development of pupils. However, the importance of physical exercise can be over-emphasized. The best play activities are the ones which are joyous and vigorous, develop muscular power and balance, and also nurture emotional control and wholesome human relationships.<sup>1</sup>

Sharman further states:

Every child must have an equal chance to succeed and gain satisfaction through sports and other physical education activities. In order to insure an equal chance in sports, opportunities must be provided for youth of approximately the same athletic ability to

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<sup>1</sup> State Department of Education, Guide to Helpful Living in the Elementary School, Bulletin No. 475, p. 46.

play with and against each other. Children should be permitted and encouraged to organize and conduct the games in which they participate; and the activity should be suited to the age, sex, size, interests, and physical conditions of boys and girls.<sup>2</sup>

The investigator of this problem, with the cooperation and able assistance of the seventh-grade teacher and the coach, set up three distinct programs in order to provide the activity that could be carried on by these boys to be in their own grade and age group with success.

This school was a member of a very active athletic program carried on with the other six elementary schools. At the beginning of school in September, the athletic program was set up for these schools. Each school provided a team in football, basketball, softball, and track. At the beginning of each season a schedule was set up to run each sport about two months. The schedule provided for each team to play one or two competition games each week with member teams. At the close of each season the champion team was awarded a small trophy.

The investigator of this study had been associated with these eight boys in the classroom and on the playground from the time they entered the third grade. He had been observing them rather closely in the fifth and sixth grades when they still did not show any interest in the playground and athletic

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<sup>2</sup>Jackson R. Sharman, "Purpose of Physical Education in Schools," Education, LXX (October, 1949), 82.

activities carried on by the other boys in these grades. In the classroom it was apparent that these boys were not receiving the cooperation and social acceptance due them because they were among the last to be included in room activities.

In classifying these boys for the development programs, they were grouped in pairs on the following basis: size, grade, friendship, lack of physical skills, or because they were working and could not practice after school for the regular athletic events.

#### Cases A and B

The program for the football season was set up on the following schedule: The first week's practice was devoted to warming up exercises, kicking, throwing, and catching passes, blocking, and tackling. Observation was being made of the physical development of each boy to determine the position he would be able to play best on the team. At the beginning of the second week each boy was selected for a particular position to work. The third week the regular daily practice started which consisted of the first thirty minutes discussing the rules and plays to be used. Fifteen minutes were devoted to running two laps around the football field, followed by conditioning exercises. The rest of the time was spent developing the fundamental skills needed by each boy to play his particular position, running plays, and scrimmaging.

Most of the conditioning exercises used and the purpose of each are presented by Lee and Wagner.

A Conditioning Series That Has Been Successfully Tried Out

Name of Exercise	Main Purpose of the Exercise
1. Warmer-upper	1. To stimulate the circulation for warming up and to increase cardio-respiratory endurance.
2. Arm circling	2. To reduce muscle tension and increase flexibility of shoulder girdle.
3. Body swing	3. To reduce muscle tension.
4. Trunk twister	4. To increase flexibility of the shoulder girdle, spine, and thorax.
5. Trunk limbering	5. To increase flexibility of spine and legs.
6. Full squats or squat jumps	6. Foot, leg, and thigh strength.
7. Sit-ups	7. Abdominal strength.
8. Hip raising	8. Lower back and hip strength.
9. Hip roll	9. Abdominal strength.
10. Push-ups	10. Arm and shoulder girdle strength.
11. Wing lifts	11. Neck and upper back strength.
12. Abdominal pumping	12. Increase pelvic circulation and relieve dipmenorrhea. <sup>3</sup>
13. Foot rocker	13. Strengthen muscles supporting the longitudinal arch of the foot. <sup>4</sup>

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<sup>3</sup>Exercise 12 was omitted.

<sup>4</sup>Mabel Lee and Miriam M. Wagner, Fundamentals of Body Mechanics and Conditioning, p. 65.



Cases A and B were in the eighth grade and were the two largest boys in this study. Since they had the highest score on the motor ability test, the investigator and the coach encouraged them to check out football equipment and work out with the other boys in football practice.

At the beginning of the second week Cases A and B were told they would get to play some at end position if they could improve on catching the ball. This created more interest and they spent the second week throwing and catching passes as recommended by Killinger in his book, Football.

Catching passes.--The catch should be made with the hands. The finer muscles and nerve endings are located in the fingers. Moreover, the fingers and hands are more flexible than the arms and body. Fingers should be spread and the entire upper part of the body should be entirely relaxed. The ball should be caught high in the air while looking back over the shoulder and running at full speed.

If the pass is short the receiver should exert every possible effort to return to make the catch or prevent a possible interception.

Getting free to catch a pass.--Every eligible pass receiver, if he hopes to be the choice of the passer, must learn to disguise his intentions and free himself from the defense. He may:

1. Feint to block an opponent and suddenly break into the open.
2. Use a change of pace, i.e., run at ordinary speed until the ball is passed, then sprint past the opponent.
3. Feint in one direction and suddenly break the opposite way.
4. Break fast into the open and execute a sudden stop.
5. Run downfield and break at a sharp angle.
6. Follow one or more teammates acting as decoys.<sup>5</sup>

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<sup>5</sup>W. Glenn Killinger, Football, pp. 14-15.

At the beginning of the third week the boys had developed enough to start daily practice with the team and work out at these two positions and were able to play some in the first game. They continued to improve and when the season was over, they had played enough to receive a small sterling football which was awarded each member who made the team.

Case A had improved his motor abilities to such an extent that he was able to play on the basketball and softball teams. His improvement in group relations had also improved and he was elected to a place on the advertising staff of the school newspaper.

Case B was accepted on the basketball team as a substitute and as a regular player in softball.

#### Cases C and D

Cases C and D did not go out for football because of their lack of interest and physical development. In order to get them interested and active in the athletic program, Case C was appointed "spotter" for each game to be broadcast over the public address system. To hold this job, it was necessary to know the players, rules of the game, and to have a football vocabulary. He spent each afternoon on the practice field observing each boy and the position he played. After a few games he became interested and began practicing with the smaller boys throwing and catching passes.

Case D was elected manager of the team to take care of the football equipment and to have the first aid kit always with the team while practicing and at the game. This job did not require all of his time on the practice field and he soon joined the play activities of the smaller boys.

This program had been so successful for Cases C and D that they wanted to try out for basketball. When the basketball equipment was issued, they checked out their equipment and came out for practice with the regular team.

In January the regular basketball season opened to run through two months. The schedule provided for each team to play one or two competitive games each week with the other elementary schools. At the conclusion of the season the winning team in the play-off game was awarded a small trophy.

Practice was held each afternoon after school. The first thirty minutes were used in discussing basketball fundamentals and plays. The rest of the time was spent on the basketball court practicing the fundamental skills in passing, shooting, dribbling, and working on the plays learned.

Some of the fundamentals each boy was taught and practiced in playing basketball are described.

#### Catching the Ball

The fingers should be well spread. The wrists and elbows should be free, loose, and the hands should be

permitted to give with the ball when caught. Most of the contact in receiving the ball is made with the finger tips.

#### Types of Passes

Chest pass.--The ball is held in both hands in front of the chest. The ball is held between the fingers of both hands and pushed toward the receiver. When the ball is released a quick flexing or snap of the wrist and fingers is necessary. At the finish of the pass, the hands go forward in the direction of the ball and the palms of the hands are facing the receiver.

One hand over the shoulder pass.--Hold the ball in either the right or the left hand with the fingers spread out over the back of the ball. The ball rests on the palm of the hand and is balanced by the fingers as it is drawn back beside the ear. A step is taken with the foot opposite the passing arm in the direction the pass is made.

Bounce pass.--The ball is held in one or both hands and bounced to the receiver.

#### Dribbling

The ball is bounced three-fourths of the arm's length directly in front of the body and knee high. The fingers, hand, wrist, and arm should move up and down with the ball. It is merely pushed down with a slight wrist action. The hand meets the ball as it rebounds upward, gives with it, and then presses it to the floor again.

### Starts and Stops

Starts.--Quick starts are developed by keeping low and learning to shift the weight quickly to either foot.

Stops.--The player keeps low by bending the knees and lowering the hips, feet well apart, with one foot in front of the other.

### Pivot

The knees are bent, hips lowered, weight placed on the foot in the direction the player wishes to turn. The other foot is carried around in the direction in which he wishes the ball to go. The pivot can be made in a forward or reverse direction.

### The Lay-up Shot

The player cuts toward the basket at top speed with arms up, the ball in the right or left hand, and fingers spread behind the ball. When close enough to the basket to attempt a shot, jump high into the air and release the ball with a twist of the wrist. This shot can be performed with either hand.

### Set Shot

The body is slightly stooped, both feet on the floor, and body well balanced. Keep eyes on the rim of the basket, hold the ball in both hands with the thumbs and

fingers. Straighten the body and give the ball a slight push toward the basket.

#### Guarding

Spread feet wide apart, knees bent, and hips lowered. Take short steps either forward, backward, or to either side. Keep the feet in close contact with the floor. The hands may be held with one hand up and the other hand to the side, or extend hands and arms to the side.

Cases C and D continued practicing every afternoon with the regular basketball team trying to improve on the fundamentals. They realized their weakness and accepted the fact that they were only substitutes, but were able to play in several games with the other schools.

After being associated with boys in their own group, C and D seemed to be better adjusted. Case C was elected reporter for the school paper and was able to carry on this job. Case D's relations with the group had improved as he was always on the playground and the boys had quit teasing and criticizing him in his efforts to play with them.

#### Cases E and F

Cases E and F had not been active in any of the playground activities and when the test of motor activity was given to them, they had the lowest score of any of the boys in this study. They showed their interest in athletic and

play activities from the standpoint of being spectators by attending all the athletic contests between the schools.

In trying to get the boys to participate in play activities, the investigator was successful in getting them to play one day in the basketball program designed for Cases G and H. At the end of the play period they expressed their dislike for basketball, "because it was too hard." This was probably because of their inability to compete with members of this group who had been more active in physical exercise and had more endurance in running and playing.

To encourage them in physical activities, the seventh grade teacher selected five boys, including E and F, and four girls from the seventh grade. These nine pupils had not entered into any of the play activities on the playground with other boys and girls. In order to select an activity that several people could take part in, a modified game of softball was organized.

A place was selected on the school ground large enough for this game, which provided for the development of softball skills in batting, running, catching flies, and ground balls, throwing and pitching.

In order to set up a program that could be followed each day at the play periods without losing so much time in daily organization, the game "Far Base" was selected. This game

provided practice in nearly all of the skills of softball with some of the members of their own grade and with similar physical skills.

#### Far Base

Space.--Gymnasium or playground with a home base and a large area for a base sixty feet or more straight out from home base.

Formation.--One team at bat. The other team scattered over the field, one pitcher, and one catcher.

Skills.--All softball skills but base running.

The members of the team at bat take turns at bat. A fair hit is any ball batted in front of home base. On a fair hit the batter runs to the far base. He may either stay there or return to home immediately. When the next batter hits, the first runner need not leave the far base unless he wishes to do so. As many may occupy the far base as desire and may return home in any order or all at once.

A runner is out only by being tagged with the ball. He need not run in a straight line but may dodge or run anywhere on the field to avoid being tagged. A batter is out on two strikes or when a batted ball is caught before it hits the floor or ground. Three balls allow the batter to walk.



Each side bats until all players have had one turn each at bat, and then the sides change. Play may continue for as many innings as desired.<sup>6</sup>

This group continued to play "Far Base" for four months. During this time social relations had improved on the playground and in the classroom. Cases E and F stayed after school some afternoons to play softball with the other boys. This is believed to be an improvement in the proper direction.

#### Cases G and H

Cases G and H were large enough to play on the athletic teams, but they had not developed their physical skills and did not play games with the other boys on the playground. The investigator set up a program of basketball for them to play and he supervised the play period. This group consisted of some boys from the sixth and seventh grades who were interested in taking part in basketball the next year.

It did not seem advisable to stress too much drill in the fundamentals of this sport, but to create a situation to play, be with members of their own age, and improve their physical skills. In order to keep this program on play basis only a few of the fundamentals in basketball were taught which could be used in regular practice by the

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<sup>6</sup>Henry C. Craine, Teaching Athletic Skills in Physical Education, pp. 138-139.

regular team. These included catching the ball, passing, dribbling, and shooting goals.

A description of these fundamentals taught to these boys is presented.

Catching the ball.--The fingers should be well spread. The wrists and elbows should be free and loose. Most of the contact in receiving the ball is made with the finger tips and the hands should be permitted to give with the ball when caught.

Chest pass.--The ball is held in both hands in front of the chest. To insure freedom and flexibility, hold the ball with the fingers of both hands and push the ball toward the receiver. As the ball is released, give a quick flexing of the wrist and fingers. At the finish of the pass, the hands go forward in the direction of the ball and the palms of the hands are facing the receiver.

Bounce pass.--This pass can be made with either hand or with both. The ball is held between the fingers and thumbs of both hands, if desired, and bounced so as to hit the floor about three feet from the receiver.

Dribbling.--The ball is bounced about three-fourths length of the arm from the body and directly in front about knee high. The fingers, hand, wrist, and arms should move up and down with the ball. The hand meets the ball as it rebounds upward, gives with it, and then presses it to the floor again. Do not slap the ball.

The pivot.--The knees are bent, hips lowered, weight placed on the foot in the direction the player wishes to turn. The other foot is carried around in the direction in which he wishes the ball to go. The pivot can be made in either a forward or a reverse direction.

The lay-up-shot.--The player cuts toward the basket at top speed with arms up, the ball in the right or left hand, and fingers spread. When close enough to the basket to attempt a shot, jump high into the air and release the ball with a twist of the wrist.

This program was received with enthusiasm by both boys. They were anxious to take part in this program and were the first to be on the basketball court and the last to leave at the end of the play period. They showed their interest and desire to play by asking questions that would improve their physical skills.

Case G had become better adjusted in the classroom. He had become more aggressive and his response in group work was very noticeable.

It seemed that Case H had made some improvement in the classroom. His relations with others showed an improvement. He was trying to work with the members of the class instead of trying to boss them.

The programs for these eight boys were planned to improve their physical skills. These activities, provided

for pleasure and recreation, increased their opportunity to mix with members of their group and promoted a feeling of success instead of failure and defeat.

## CHAPTER IV

### THE COMPARISON OF THE TEST RESULTS OBTAINED AT THE BEGINNING AND CONCLUSION OF THIS STUDY

In order to present the progress made by each boy in improved physical skills, personality adjustment, social acceptance, and grade achievement as a result of the programs described in Chapter III, the test results obtained at the beginning of this study will be compared with the test results at the conclusion of the study.

A comparison for the over-all health condition is omitted. The purpose of presenting these data initially was to determine whether these boys' failure to participate in active games was due to any physical handicaps or condition. The school's health chart showed a steady gain in height and weight for the year. None of the boys had a serious illness during the time of this study.

The Scale of Motor Ability Tests calls for a wide variety of muscular reaction. The abdominal muscles are fundamental in many of the activities, as these muscles play a major part in most active bodily movements. Some of the tests require jumping accompanied by active movements of the arms and legs. Others include maintaining body

balance while performing the tests. There are seven types of activity represented by these tests. Six of the tests measure agility, six measure balance, five measure control, two measure flexibility, five measure agility and balance, two measure strength, and four measure strength and control.

In Table 6 the test given at the beginning of this study on the seven types of activity is compared with the same test given after each boy had followed the athletic program.

Case A showed a gain of only three tests on the total score, a gain of one test in control, one in agility and balance, and one in strength and control. The explanation for such a low gain for Case A was his high score on the first performance. Case B had a gain of two tests in agility, one in control, one in agility and balance, and one in strength and control. His total gain was five tests. Case C had a gain of one test in balance, two in control, one in flexibility, two in agility and balance, one in strength, and one in strength and control. His total gain in tests was eight. Case D showed a gain of one test in control, one in flexibility, two in agility and balance, and one each in strength, and strength and control, a total gain of six tests. Case E had a gain of two tests in agility and two in strength and control. In balance, control, flexibility, agility and balance, and strength, he showed a gain of one test in each. He had the highest total gain of

TABLE 6  
 THE COMPARISON OF THE MOTOR ABILITY TEST RESULTS OF THE EIGHT SEVENTH AND EIGHTH GRADE BOYS AT THE BEGINNING AND CONCLUSION OF THE STUDY

Case	Type and Number of Test Completed														Total Score	
	Agility		Balance		Control		Flexibility		Agility and Balance		Strength		Strength and Control		1st	2nd
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
A	4	4	6	6	3	4	2	2	4	5	2	2	3	4	24	27
B	2	4	6	6	3	4	2	2	4	5	2	2	3	4	22	27
C	4	4	5	6	3	5	1	2	2	4	1	2	3	4	19	27
D	3	3	4	4	3	4	1	2	4	4	1	2	3	4	17	23
E	2	4	4	5	2	3	1	2	2	3	1	2	2	4	14	23
F	2	3	4	5	2	2	1	2	2	3	1	2	2	2	14	19
G	3	4	4	4	2	3	1	2	4	5	2	2	3	4	19	24
H	2	4	5	3	4	2	2	2	2	5	2	2	3	4	19	26

any of the boys with a score of nine tests. Case F had a gain of one test in each type of activity except in control, and strength and control which remained the same. His total gain was five tests. Case G did not show a gain in balance and strength, but all the other types of activity showed a gain of one each. His total gain was five tests. Case H showed a gain of two tests in agility, three in agility and balance, and one each for control, and strength and control. He failed to show a gain in balance, flexibility, and strength. He had a total gain of seven tests.

The total scores show a gain for each boy. Case A had the lowest total gain of three tests and Case E had the highest gain of nine tests. It is evident that participation in the activity programs helped to improve the control of the larger muscles of the body that are necessary for play activities.

The California Test of Personality has been designed to identify and reveal the status of certain highly important factors in personality and social adjustment usually designated as intangibles. The major purpose of the test is to reveal the extent to which the student is adjusting to the problems and conditions which confront him and is developing a normal, happy, and socially effective personality.

The profile of the test is divided into two sections. The purpose of Section 1 is to indicate how the student feels and thinks about himself, his self-reliance, his estimate of



his own worth, his sense of personal freedom, and his feeling of belonging. In this section the student also reveals certain withdrawing and nervous tendencies which he may possess. Section 2 consists of social-adjustment components. Its purpose is to show the student functions as a social being, his knowledge of social standards, his social skills, his freedom from anti-social tendencies, and his family, school, and community relationships.

Table 7 shows the percentile rank for each boy in self-adjustment, social-adjustment, and total-adjustment on the September and May tests.

TABLE 7.

THE COMPARISON OF PERCENTILE RANK FOR THE FIRST AND SECOND TEST IN SELF-ADJUSTMENT, SOCIAL-ADJUSTMENT, AND TOTAL-ADJUSTMENT FOR EACH BOY IN THIS STUDY

Case	Self-Adjustment Percentile		Social-Adjustment Percentile		Total-Adjustment Percentile	
	First Test	Second Test	First Test	Second Test	First Test	Second Test
A	65	95	80	95	75	95
B	10	10	5	65	10	30
C	40	99	55	90	45	99
D	5	50	60	60	15	55
E	70	90	75	90	75	90
F	90	90	80	95	85	95
G	95	95	75	80	85	90
H	45	90	85	85	70	85

The percentile rank in self-adjustment for Case A on the first test is sixty-five and on the second test his rank is ninety-five. An increase of thirty in percentile rank toward better self-adjustment is shown for Case A. On social-adjustment, his percentile rank on the first test was eighty and for the second test it was ninety-five, an increase of fifteen in percentile rank. Comparing the percentile rank for total adjustment, his position increased from the seventy-fifth to the ninety-fifth percentile. Case B did not show a gain or a loss in self-adjustment. In social adjustment he had the lowest percentile rank of any of the boys studied. His gain for social adjustment was from the fifth to the sixty-fifth percentile, an indication of improved social relations. His total adjustment increased from the tenth percentile to the thirtieth, an increase only in social adjustment. Case C showed a gain in self-adjustment from the fortieth percentile rank to the ninety-ninth. In social-adjustment his rank increased from the fifty-fifth to the ninetieth percentile. The total increase in total-adjustment was from forty-five to ninety-nine, an improvement in both self-adjustment and social-adjustment. Case D had the lowest rank of any of these cases on the first test in self-adjustment. He gained from the fifth percentile to the fiftieth at the time of the second test. In social adjustment his percentile remained the same. His total adjustment showed a gain in rank from fifteenth to fifty-fifth,

a total gain of thirty. The gain for Case E was from the seventieth to the ninetieth rank in self-adjustment. His social-adjustment gain was from seventy-five to the ninetieth rank, a gain from the seventy-fifth to the ninetieth percentile in total-adjustment. Case F did not show a gain or a loss in self-adjustment, but his rank remained at ninety. In social-adjustment his rank increased from eighty to ninety-five. In his total-adjustment his rank increased from eighty-five to ninety-five. Case G did not show any change in self-adjustment rank, which was ninety-five. In social-adjustment his rank was from seventy-five to eighty. On total-adjustment his improvement was from eighty-five to the ninetieth rank. Case H showed a gain in self-adjustment from the forty-fifth percentile rank to the ninetieth, but his rank remained at eighty-five in social-adjustment. His gain in rank for total-adjustment was from seventy to the eighty-fifth percentile rank.

The results in percentile rank on the personality test for each boy show the greatest gain made in self-adjustment by Case C. He had a gain from the fortieth to the ninety-ninth rank. Cases B, F, and G did not change in self-adjustment rank. Case B had a low rank of ten, but the other two cases had a rank of ninety or above. Case B had the greatest gain in social-adjustment, while the rank for Cases D and H remained the same. The percentile rank for

total-adjustment shows a gain for each boy. The greatest gain in rank of forty-four for Case C and the lowest was made by Cases A and B, a gain of twenty percentile points.

The importance of an individual's relationships with members of his group is recognized by most educators. His acceptance or rejection by the group can and will affect his personal and academic growth, favorably or adversely. In order to get each boy's standing in his group, the sociometric test, "How I Feel toward Others," was given to each member in the seventh and eighth grades. The items used in this study will show each boy's percentage of acceptance in the group, the total number of points he gave and received from the members in his grade group.

To compare the sociometric test results, Table 8 will present the results of the first test given at the beginning of the study with the final test results at the conclusion of the study.

In social-acceptance Case A's index was fifty-three per cent on the first test and increased to 70 per cent on the second test. The total number of points he gave to his classmates was twenty-seven compared with forty-one. On the first test he received twenty-eight points but on the second test he received forty-one points. Case B had 33 per cent on the first test and 55 per cent on the second test for social acceptance. He gave three points more to his classmates on the second test than he did on the first test. He

TABLE 8

COMPARISON OF THE TWO TESTS FOR EACH BOY'S TOTAL ACCEPTANCE INDEX IN THE CLASS AND THE TOTAL NUMBER OF POINTS HE GAVE TO AND RECEIVED FROM CLASSMATES

Case	Social-Acceptance Index		Total Points Given		Total Points Received	
	First Test	Second Test	First Test	Second Test	First Test	Second Test
A	53%	70%	27	41	28	41
B	33	55	20	23	17	32
C	61	68	23	37	32	40
D	-17	41	33	38	- 9	24
E	35	35	11	36	24	24
F	29	29	- 5	39	20	20
G	40	45	-10	15	27	31
H	50	47	31	43	34	32

gained fifteen more points on the second test from his classmates than he had on the first. Case C's percentage of increase in social acceptance was from sixty-one to sixty-eight. The total points he gave to members in his group on the first test were twenty-three and for the second test he gave thirty-seven. For total points he received on the first test thirty-two compared with forty for the second test. Case D's social acceptance percentage was minus seventeen but increased to positive forty-one at the time of the second test. The total points he gave on the first test were thirty-three and thirty-eight for the second test. His total points received for the

first test were a minus nine but increased on the second test to positive twenty-four points. Case E's percentage of social acceptance did not change on the two tests but remained at 35 per cent. He had a gain from eleven points to thirty-six for points given to members in his group. The total points received on the two tests remained at twenty-four. The social acceptance index percentage did not change on the two tests for Case F. The number of points he gave to his classmates increased from minus five to positive thirty-nine. For total points received the number remained at twenty for the two tests. In percentage gain for social acceptance index Case G gained from 40 to 45 per cent. He gave a minus ten points on the first test and fifteen on the second. The total number of points received on the first test was twenty-seven and thirty-one on the second test. Case H showed a loss of 3 per cent on the two tests in social acceptance. His first percentage was fifty and for the second test it was 47 per cent. On the first test he gave thirty-one points and forty-three for the second test. He showed a loss of two points for total points received. He received thirty-four points on the first test and thirty-two on the second test.

By comparing the two test results in Table 8, Case D showed the greatest gain in social acceptance, his gain being 55 per cent. Cases E and F did not show a gain, but their percentage of social acceptance remained the same on the two tests. The greatest increase in total points given

to their classmates was by Case F. Case B gave the least increase on the two tests. For total points received the greatest increase was received by Case D. Case H showed a loss of two points and Cases E's and F's points remained the same for the two tests. It is evident from the test results that these boys made notable gains in their social relations within their groups. Their opportunities had been increased to have a better understanding and to know each other better, as indicated by the increase in the number of points they gave and received from their classmates.

The Stanford Achievement Test, Advanced Battery, is designed to compare scores in one subject with scores made in another, or to obtain an average or composite achievement score. This test gives the age and grade equivalents for the ten parts of the test and also the age and grade equivalent for the total score made on the test. This test was given for the purpose of determining how close each boy was classified in school to the norm on this test, and, also, to note the achievement for each boy during the time of the two tests.

Table 9 presents each boy's grade in school and a comparison of his grade equivalent on the two tests. The grade equivalent norm is, also, shown on this table.

Case A was in the eighth grade. The test results on the first test show his grade equivalent to be the seventh year and second month. The norm for this test was the eighth

TABLE 9

THE COMPARISON OF EACH BOY'S ACHIEVEMENT AS DETERMINED BY  
THE STANFORD ACHIEVEMENT TESTS, ADVANCED BATTERY,  
FORMS D AND G, AT THE BEGINNING AND THE  
CONCLUSION OF THIS STUDY

Case	Grade	Grade Achievement				Norm Grade Equivalent			
		1st Test		2nd Test		1st Test		2nd Test	
		Gr.	Eq.	Gr.	Eq.	Gr.	Eq.	Gr.	Eq.
		Yr.	Mo.	Yr.	Mo.	Yr.	Mo.	Yr.	Mo.
A	8	7	2	11 $\frac{1}{2}$	0	8	1	8	8
B	8	7	4	8	5	8	1	8	8
C	8	11 $\frac{1}{2}$	0	11 $\frac{1}{2}$	0	8	1	8	8
D	8	9	8	11 $\frac{1}{2}$	0	8	1	8	8
E	7	6	8	7	4	7	1	7	8
F	7	5	8	5	8	7	1	7	8
G	7	6	4	7	6	7	1	7	8
H	7	6	2	7	0	7	1	7	8

year and first month. On the second test the highest grade equivalent that could be scored was the eleventh year. Case A exceeded this scoring and his achievement is shown as the eleventh year plus. The norm at the time of this test was the eighth year and eighth month. He shows a growth of more than three years between the time of the two tests. Case B was in the eighth grade. On the first test his total score showed a grade equivalent of seventh year and fourth month. The second test shows his grade equivalent to be the eighth year and fifth month, compared to the test norm of eighth



year and eighth month. The grade equivalent for Case C could not be determined by this test, as the eleventh year was the highest score given. His total score was eighty-one for the first test and eighty-eight for the second, which denotes growth for the year. Case D was in the eighth grade and for the first test his grade equivalent was ninth year and eighth month. The total score for the second test was eighty, which could not be translated on this test. This is an indication of several years' growth between the time of the two tests. Case E was in the seventh grade. His grade equivalent on the first test was the sixth year, eighth month. The norm was the seventh year and first month at the time of this test. His growth in achievement on the second test was seventh year and fourth month. His test results show some growth but not enough to equal the grade norm at the time of the last test, which was the seventh year and eighth month. Case F was in the seventh grade. His test results show a grade equivalent of fifth year and eighth month, and did not change for the second test. Case G had a grade equivalent of the sixth year and fourth month for the first test. The second test results show his grade equivalent to be seventh year, sixth month. He had made more than one year's growth between the time of the two tests. Case H was in the seventh grade and his grade equivalent on the first test was the sixth year and second month. The second test shows an increase to the

seventh year, which denotes some growth in achievement. The amount of growth cannot be determined for Cases A, C, and D, as their test scores exceeded the grade equivalent given on this test. This seems to indicate an enormous growth in achievement. For the cases whose growth could be determined by this test, Case G showed the greatest gain. Case F was the only boy in this study whose test scores do not indicate growth in achievement during the time of this study.

Chapter IV presented a comparison of the test results obtained at the beginning of this study with the test results at the conclusion of the study for the following types of tests: Scale of Motor Ability, Personality Test, Sociometric Test, and Grade Achievement.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

Since it is the responsibility of the school to promote the wholesome well-rounded growth and development of all children, this study attempts to illustrate possible relationships between the improvement and development of physical skills and other desirable habits, attitudes, and abilities of the individual.

There are a few boys in each grade in school who are physically developed but have never entered into play activities of the school. The investigator took a special interest in these boys to create a desire to improve their physical skills through play activities and sports.

#### Conclusions

From this study the following conclusions may be drawn:

1. The personal interest of an adult and a planned program to meet the special needs of boys will promote rapid development in physical skills.
2. The development of the large muscles of the body is important for the physical growth and development of boys in the seventh and eighth grades.

3. Interest and participation in play activities are more interesting to boys when the members of the group have similar development in physical skills.

4. Participation in play activities with members of their own school group seems to help in personality adjustment.

5. Desirable social relations seem to be promoted and improved through play activities.

6. The improvement in physical skills and social acceptance appears to have a positive relationship with achievement in school as measured by objective tests.

7. The improvement in physical skills through play activities is important in the total development of boys at this age level.

#### Recommendations

After a study of this problem the following recommendations are offered:

1. Administrators and classroom teachers should plan the play activities to include all children.

2. The play program should be planned before the play period.

3. Children should be grouped for play activities according to their physical skills.

4. Play activities should be planned on the basis of the interests and abilities of the individuals.

5. Play programs should be used to improve the socially maladjusted children.

6. The play period should be used to develop leadership and cooperation.

## BIBLIOGRAPHY

### Books

- Brace, David Kinsley, Measuring Motor Ability, A Scale of Motor Ability Tests, New York, A. S. Barnes Company, 1927.
- Blanchard, Vaughn S., and Collins, Lauretine B., A Modern Physical Education Program, New York, A. S. Barnes Company, 1940.
- Craine, Henry C., Teaching Athletic Skills in Physical Education, New York, Inor Publishing Company, 1942.
- Cubberly, E. P., Introduction to the Study of Education, Boston, Houghton Mifflin Company, 1925.
- Jones, Edwina, Morgan, Edna, and Stevens, Gladys, Methods and Materials in Physical Education, New York, World Book Company, 1950.
- Killinger, W. Glenn, Football, New York, A. S. Barnes and Company, 1939.
- Lee, Mabel, and Wagner, Miriam M., Fundamentals of Body Mechanics and Conditioning, Philadelphia, W. B. Saunders Company, 1949.
- Murphy, Charles C., Basketball, New York, A. S. Barnes Company, 1939.
- Nash, Jay B., Interpretation of Physical Education, New York, A. S. Barnes Company, 1932.
- Noren, Arthur T., Softball, New York, A. S. Barnes Company, 1939.

### Articles

- Bonney, M. E., "A Study of the Sociometric Process among Sixth Grade Children," Journal of Educational Psychology, XXXVII (September, 1946), 363.

Flory, Charles D., Alded, Elizabeth, and Simmons, Madeline, "Classroom Teachers Improve the Personality Adjustment of their Pupils," Journal of Educational Research, XXXVIII (September, 1944), 1-8.

Rarick, Lawrence, "Redirecting the Emphasis in Physical Education," Education, LXX (October, 1949), 122.

Sharman, Jackson R., "Purpose of Physical Education in Schools," Education, LXX (October, 1944), 82.

#### Yearbooks

Black, Virginia Lee, "A Comprehensive Approach to the Solution of Behavior Problems," The National Elementary Principal, Nineteenth Yearbook of the Department of Elementary School Principals, National Education Association, Washington, Vol. XIX, 1940.

Dutton, W. H., "Health Teaching and Physical Education Can Increase Goodwill," The National Elementary Principal, Twenty-fifth Yearbook of the Department of Elementary School Principals, National Education Association, Washington, Vol. XXVI, 1946.

#### Bulletins

State Department of Education, Guide to Healthful Living in Elementary Schools, Bulletin Number 475, Austin, 1946.

State Department of Education, Texas Handbook of Instruction for Health Education and Physical Education for Junior and Senior High Schools, Bulletin Number 444, Austin, 1944.

#### Tests

Bonney, M. E., "How I Feel toward Others," Denton, North Texas State College (mimeographed).

Clark, Willis W., Tiegs, Ernest W., and Thorpe, Lewis P., California Test of Personality, Intermediate Form A, Los Angeles, California Test Bureau, 1942.

Kelley, Truman L., Rush, Giles M., and Terman, Lewis M., Stanford Achievement Test, Advanced Battery, Forms D and G, New York, World Book Company, 1940.