

Prairie View A&M University

Digital Commons @PVAMU

---

All Theses

---

5-1965

## An Evaluation Of Selected Pupils In The Physical Education Program In A Senior High School In South Central Texas

James Echol Petty

*Prairie View Agricultural and Mechanical College*

Follow this and additional works at: <https://digitalcommons.pvamu.edu/pvamu-theses>

---

### Recommended Citation

Petty, J. E. (1965). An Evaluation Of Selected Pupils In The Physical Education Program In A Senior High School In South Central Texas. Retrieved from <https://digitalcommons.pvamu.edu/pvamu-theses/781>

This Thesis is brought to you for free and open access by Digital Commons @PVAMU. It has been accepted for inclusion in All Theses by an authorized administrator of Digital Commons @PVAMU. For more information, please contact [hvkoshy@pvamu.edu](mailto:hvkoshy@pvamu.edu).

AN EVALUATION OF SELECTED PUPILS IN THE  
PHYSICAL EDUCATION PROGRAM IN A SENIOR HIGH  
SCHOOL IN SOUTH CENTRAL TEXAS



PETTY  
1965

R  
1.732  
56e

AN EVALUATION OF SELECTED PUPILS IN THE PHYSICAL  
EDUCATION PROGRAM IN A SENIOR HIGH SCHOOL IN  
SOUTH CENTRAL TEXAS

A Thesis  
By  
James Echol Petty

Submitted to the Graduate School of  
Prairie View Agricultural and Mechanical College  
In Partial Fulfillment of the  
Degree of  
MASTER OF SCIENCE

May 1965

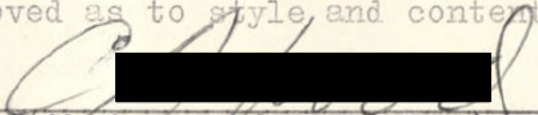
Physical Education

LC  
208.8  
W54  
1950

AN EVALUATION OF SELECTED PUPILS IN THE PHYSICAL  
EDUCATION PROGRAM IN A SENIOR HIGH SCHOOL IN  
SOUTH CENTRAL TEXAS

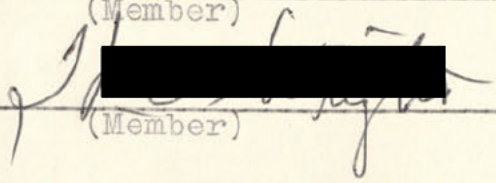
A Thesis  
By  
James Echol Petty

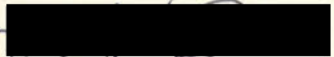
Approved as to style and content by:

  
\_\_\_\_\_  
(Chairman of Committee)

\_\_\_\_\_  
(Head of Department)

\_\_\_\_\_  
(Member)

  
\_\_\_\_\_  
(Member)

  
\_\_\_\_\_  
(Member)

\_\_\_\_\_  
(Member)

\_\_\_\_\_  
(Member)

\_\_\_\_\_  
(Month) (Year)

## ACKNOWLEDGEMENT

The writer wishes to express grateful appreciation to Dr. C. A. Wood for patience and guidance offered; also to the two coaches, Mr. Aycock and Burns, who took time to help collect data for this paper.

James E. Petty

## DEDICATION

From love and affection shown, the writer wishes to dedicate this thesis to his immediate family: Laura E. Smith - Petty, wife, and sons Edward Allen Petty, James Echol Petty, Jr., and William Henry Petty.

## TABLE OF CONTENTS

	Page
Acknowledgement	1
Dedication	2
Chapter	
I Introduction	3
II Related Literature	6
III Profile of An Adolescent	10
IV Profile of a Physical Education Program	23
V A Well Co-ordinated Physical Education Program and the Adolescent	27
VI. Administration of Physical Education Devices and Instruments	34
VII. Test and Measurements of Physical Education Program	37
Grams	
Charts	
Tests	
VIII. Summary and Conclusion	66
Bibliography	

## OUTLINE

- I. Introduction
  - A. Definition of terms
  - B. Preface
  - C. Problem
  - D. Purpose
  - E. Source of data
  - F. Procedure
- II. Related Literature
- III. Anticipated results
  - A. Profile of an adolescent
    - 1. Who is an adolescent?
    - 2. Common problems of an adolescent
      - a. Biological problems
      - b. Sociological problems
      - c. Physiological problems
    - 3. Common needs of an adolescent
    - 4. Common reactions to adolescents
      - a. Reactions of peers
      - b. Reactions of parents
      - c. Reactions of teachers
      - d. Reactions of community
  - B. Profile of a physical education program
    - 1. Purpose of physical education program
    - 2. Weaknesses and strengths of physical education program
    - 3. Potentials of a well organized physical education program
      - a. Role of the school
      - b. Role of the instructor
      - c. Role and duty of the students



- C. A well co-ordinated physical education program and the adolescent
  - 1. Physiological development
  - 2. Anatomical development
  - 3. Sociological development
    - a. Limitations of physical education program
    - b. Relationship to other phases of the curriculum
- D. Administration of physical education program, devices and instruments
- E. Test and measurements of physical education program
  - 1. Urgency of thorough testing program
  - 2. Standards used in measuring the testing program
  - 3. Evaluation of test and measurements
  - 4. Charts, graphs and grams showing before and after results of the applications of an attempted well co-ordinated physical education program with adolescents

#### IV. Summary and Conclusions

- A. Future needs
- B. Side effects learned through this study
  - 1. Weaknesses of study
  - 2. Other problems to be solved
  - 3. Recommendations

#### V. Bibliography

## INTRODUCTION

The adolescent is often one of the most misunderstood, misguided and uncontrollable of all age groups. Since many a parent, teacher, and above all the adolescent himself do not understand the phenomena encountered by the adolescent, many a little life is lost at this stage.

The term adolescent comes from the Latin verb, *adolescere*, meaning to grow into maturity, and includes the age group or span from approximately eleven to twenty-one years of age. Physically, this is the stage for spurts of growth, clamor for individual and group identity.

Individual differences are often ignored, pooled or generalized in many schools. Many schools lack the proper guidance departments and personnel. All too soon, the adolescent is caught up in a dragnet of misguided delinquents and shelved as trouble makers.

Energies, potentials, differences and environments have to be reckoned with, studied, and given vent to. The physical educator has to know himself in order to make the co-ordination effective and useful. Physical education is the accumulation of wholesome experiences through participation in large muscle activities that promote optimum growth and development.

Though all departments, levels and phases of the school curriculum are to be a green house where young lives are to be nurtured, watered, and allowed to flourish, the physical education department has one area essential to adolescent development not found in other branches of the school's program; development of the physical aspects and faculties of the adolescent.

Like other age groups, new patterns, experiences, adjustments and associations must be made, yet they are often neglected, undeveloped or crowded out by other values.

The well-rounded physical education program lends aid in establishing and developing slighted needs of the adolescents and can help him become more useful to himself and others. Too, many negative results can be avoided, wholesome sociological and biological mechanics can be employed to render a better interrelationship between the adolescent and his environment.

## PROBLEM

This study seeks to determine how a well organized and well co-ordinated physical education program can aid in the total development of the adolescent.

## PURPOSE

The purpose of this study is to portray how and what mechanics can be employed to help members of this age group understand themselves.

Further, it is to show actual results of an attempt made to provide a wholesome physical education program, the improvements made by the adolescents, and the benefits reaped, at the O. J. Thomas High School, Cameron, Texas. This study was undertaken September 1963, and this paper will reflect the results as of May, 1964; allowing a full school term as an observation and testing period.

It is to show that even though adolescents have problems the world over, and though guidance counselors may be at a minimum, physical education definitely can help them co-ordinate physical energies with problematical difficulties and yield a well rounded individual.

## SCOPE

This body of literature includes one year of observation, students' activities and concentrated physical education program at O. J. Thomas High School. Too, the scope is specifically concerned with a class of thirty-five boys.

## Chapter II

## Review of Related Literature

In searching the literature, the writer has not found a study of the same nature, however, similar studies have been noted. There are several historical studies in the broad areas of physical education and the problems of adolescents.

Hall<sup>1</sup>, in his book, Adolescence, Its Psychology, has shown its relations to physiology, anthropology, sociology, sex, crime, religion, and education which are all related to the writer's subject, so much so, that each will be discussed in a later chapter.

Jenny<sup>2</sup>, in his book, points out the importance of fully recognizing the area of physical education in the total education for all, and the tremendous scope and responsibility of this special area. The innate traits of each individual should be reckoned with, and the role of the physical educator in a program of fitness. The qualities necessary for success in a given area and the need for a dynamic public relations program, and trends in the various fields are included for proper orientation of youth. These youths will be the leaders in the fields of tomorrow; all of which will prove very useful in developing the study.

McCloy<sup>3</sup> states that test and measurements in the field of physical education are comparatively recent outgrowths of the general testing movement, beginning

---

<sup>1</sup> Stanley C. Hall, Adolescence, Its Psychology, (Appleton and Company, 1931)

<sup>2</sup> John H. Jenny, Physical Education, Health Education and Recreation, (New York: The MacMillan Co., 1961)

<sup>3</sup> Charles H. McCloy, Test and Measurements in Health and Physical Education, (New York: Appleton-Century-Croft Inc., 2nd ed., 1939-42)

late in the nineteenth century. The author had made no attempt to be all-inclusive or even to present the historical development of this field. But he has dealt with it in general and cited the test that he considered to be among the best. He further states that tests or research are only valid as their basic data. These are points which will be given careful consideration by the writer.

Nash,<sup>4</sup> who speaks quite plainly on the results of physical education and his accumulated experiences in a twenty-year period of teaching courses in the interpretations and objectives of physical education, proposes:

To investigate the place of education in a democracy, to indicate the specific contributions of physical education to general educational objectives, to indicate the relationships between physical education as a functioning organism, man as a skillful organism.

During the junior or senior years of curricula which prepare majors for the physical education profession, a course is often given on interpretations and objectives, or on the philosophy of physical education. Such a course correlates the implications of the exact sciences, social science, sociology, psychology, history and the philosophy of education. This book offers a point of departure for a discussion of these areas in education. Material in this publication on physical education will help administrators in public school, teacher training institutions, colleges, and universities to familiarize themselves with physical education.

Rice<sup>5</sup> makes plain the primary aim of his book when he tells the story of physical education from the earliest times to the moderns. By physical education is meant

---

<sup>4</sup> Jay B. Nash, Interpretations and Objectives, (Hill and Hill, Inc., 1948) , p. 11

<sup>5</sup> Emmet A. Rice, A Brief History of Physical Education, ( Barnes, 1929)

instruction or participation in those activities that serve as a means of maintaining physical welfare. The political, social, and religious conditions which determine the presence or absence of the character of physical education in a given society are discussed at length. The theories and methods of the leaders and the various movements are given considerable attention. The relationship that physical education has borne to general education throughout its history is also briefly mentioned.

So extensive has become the field of physical education in the United States, that it now includes not only the practice of gymnastics and athletic sports, but local and national recreation programs, playgrounds activities, medical inspections, hygiene instruction, nutrition classes and school clinics.

Clarke says, no other single factor means so much for a boy's social status among his peers as the ability to play well with his class group. It has also been observed that skill in games is a contributing factor to status for the younger girl, but in a lesser degree than it is for the boy of the same age group. Too, physical education contributes to the prestige of an adolescent, for outstanding skills in athletics or other physical education activities can maintain prestige of an adolescent through few other assets are possessed.<sup>6</sup>

The contribution of physical education to the social acceptability of adolescents is obvious, says Lois H. Meeks.<sup>7</sup> She further states that social acceptance is a requisite for satisfactory personal and social adjustment.

---

<sup>6</sup> Harrison H. Clarke, Application of Measurement to Health and Physical Education, (New York, Prentice Hall, Inc., 1951), p. 220

<sup>7</sup> Lois H. Meek, The Personal-Social Development of Boys and Girls, (New York, Committee of Workshops, 1940), p. 204

Lack of social status frequently results in discontent and unhappiness; attainment of status, once lacking, may produce marked changes in an individual's personality and feeling of well being. Obtaining and maintaining social acceptability is particularly important during adolescence, as an emerging interest of social relationships is characteristic of this age group.

To conclude Lois Meek's observations, she says that that the learning of physical skills is an important element in social adjustment. It often constitutes the difference between the development of social, well intergrated individuals and, unsocial, retiring types. The physical education program, therefore, has a strategic position for contributing to the developemnt of individual students in their personal social relations.



CHAPTER III  
Profile of an Adolescent

Growing into maturity involves many processes and stages. Broadly, it is referred to as the period of transition when the individual puts away childish things and prepares for the duties and responsibilities of an adult. At this stage, he is neither child nor adult.

Narrowing it down, the adolescent stage may be defined as a period of physical development, a chronological age span, or as a sociological phenomenon.

To further explore the phases mentioned above, the period of physical development and age span can be coupled in order to bring out their meaning more clearly; the periods of physical development being preadolescent or puberty, early adolescent and late adolescent.<sup>1</sup>

The period of pubescence which falls in the preadolescent stage, is the period of sexual maturing. It is characterized by a spurt of physical growth. The height of pubescence is puberty, and is marked by certain indications of sexual maturity in girls as the menarche, or first menses, and in boys by the presence of spermatozoa, the male reproductive cells, and is perhaps the most valid sign. This period covers an age span of about eleven to thirteen in girls and approximately twelve to fourteen in boys.<sup>2</sup> This period coincides roughly with the junior high school age.

Early adolescence extends from the time of sexual maturity to approximately sixteen and a half years of age. It is characterized by new interests and gradual

---

<sup>1</sup> Compton's Pictured Encyclopedia, Chicago, ( F.E. Compton and Company, 1962) p. 340

<sup>2</sup> Ibid.

maturing of behavior. The late adolescent stage extends from sixteen and a half to twenty-one years, and coincides roughly with the college years. This period lasts until physical development is relatively complete.

The above ages represent mean figures, and are often unrealistic, for neither psychological nor biological maturity is reached all at once. Yet, the above is necessary in order to set a frame of reference throughout this study.

The adolescent stage defined as a sociological phenomenon, reflects the mores of the western culture; this is the contents and reflections of the associated material studied for this paper. The definition is very broad and this period serves as an apprenticeship filling the interim between biological maturity and sociological adulthood.

Many factors contribute to the social definition of the adolescent stage; religion, government, and familial group, all help to establish his status. Early marriages and economic necessity, project some adolescents into adulthood at relatively early ages. Yet the adolescent period may be socially lengthened by such factors as obstacles to employment or extended education. While the median age for marriage is decreasing with each score of years, the adolescent period is still longer than in earlier times. Thus to define the adolescent stage from a sociological standpoint, it may be safe to conclude that it is the period in the adolescent's life when society ceases to regard a person as a child, but does not yet accord him full status of an adult in the social arena.<sup>3</sup>

---

<sup>3</sup> Dorothy Rogers, The Psychology of Adolescence, (New York, Meredith Publishing Co., 1962) p. 4

For a point of clarification, when the word adolescent is used, it refers to the age group eleven through twenty-one, limited by the scope of this paper to students in the grades nine through twelve.

The adolescent faces many problems. The biological problems stem from physical developments which pose uncomfortableness from lack of complete and proper guidance and dissimilarity with peers, among many other reasons.

The common biological problems fall into two categories, primary and secondary. The primary category is prenatal and persists throughout life. It affects the rate of maturation, as it does the age of arrival of pubescence. Girls arrive a year or two earlier than boys, usually at twelve or fourteen; boys usually at fourteen to sixteen.<sup>4</sup>

The pituitary, located at the base of the brain, is called the master gland because of the powerful affects it has on the operations of the other glands and influences it exerts on growth and metabolism. At different times in individuals, the gonads are stimulated by the pituitary hormone to produce mature spermatozoa or ova as well as estrogens or androgens. In boys and girls these hormones constantly increase in amount from the third year through puberty. About one and a half years before the menarche, or time just before menstruation, estrogen excretion becomes cyclical in girls and increases in amount. No such cyclical excretions are found in boys.<sup>5</sup>

Problems stemming from primary biological implications include for the girls, the oncoming of the menses. This comes as a shock to many girls, even though the word has long been whispered. In order to get at this age old

---

<sup>4</sup> Paul H. Landis, Adolescence and Youth, ( New York and London, McGraw-Hill Book Company, Inc., 1945) p. 43

<sup>5</sup> I. T. Nathanson, L. E. Towne, and J.C. Aub, " Normal Excretion of Sex Hormones in Childhood," Endocrinology , Vol. 23 ( 1941 ) pp. 851-856

biological fact, physiological implications are undertaken also. If proper preparations are made by parents and teachers, the hush-hush attitude fades, no physiological problems arise, and the child enters into the new awakening with the establishment of a biological fact, rather than a bio-emotional shock. In fact, it is doubtful that the modern girl who has been given the bare rudiments of sex education suffers any serious emotional disturbance from this source.

Other problems connected with the menarche would be gonadal imbalance, thyroid or nutritional deficiency, or structural defects of the uterus often causing uncomfor-  
tableness or sometimes pain.

In boys, the primary category covers the production of spermatozoa, which is usually accompanied by nocturnal emissions. This primary development has many secondary implications which pose psychological problems which are biologically orientated.

Other primary problems would be the failure of the pituitary gland to function properly, the reproductive organs would then remain in an immature state, and secondary sex characteristics would fail to develop normally. An excess of the pituitary hormone in early life, produces precocious sexual development.

Though no single standard exists for assessing pubertal status in boys, Kinsey suggests that it is the time of the first ejaculation, although certain stimulations may produce it prematurely.<sup>6</sup>

The development of secondary sexual characteristics offer more problems than do the primary ones.<sup>7</sup> Here too,

---

<sup>6</sup> A.C. Kinsey and others, Sexual Behavior in the Human Male, ( Philadelphia, Saunders, 1948 )

<sup>7</sup> Paul H. Landis, op. cit., p. 37

we have a coupling or overlapping of meaning in that to explain any one problem, we run into another problem. Thus, the secondary category of biological problems will be presented in co-ordination with the psychological problems, for the relations between hormones and behavior are extremely complex. Variation in hormonal output may lead to greater or lesser reactivity to stimuli and consequently may afford a physiological base for unpredictable adolescent behavior.

It is rather surprising that even though emphasis on biological aspects of adolescent problems has preoccupied teacher training institutions for generations, the school often lets the obvious biological fact go un-noticed, ie., girls are about two to four years more advanced physiologically and biologically than boys.<sup>8</sup>

The forced association of those of chronological ages, but of different biological maturity, hinders dating, courtship, and intramural sports provided for boys and girls on the same grade level. This substantiates the statement, "Physical education classes for boys and girls should be separated at the end of the fourth grade."<sup>9</sup>

The secondary characteristics are changes in body proportions, notable widening of the hips of the girls, growth of pubic hair, hair in the armpits, fuzzy hair on the face of the boy, deviates from the norm in weight or height, development of the apocrine sweat glands, complexion difficulties and sexual awareness.

A special problem for the girl is adjusting to breast development. It often causes shyness when adults say, "You are budding". Little bosoms cause girls to wear falsies in an effort to keep up with other developed girls. Slouchi-

---

<sup>8</sup> Ibid.

<sup>9</sup> Jesse Feiring Williams, The Principles of Physical Education, (Philadelphia and London, W.B. Saunders Company, 1964) p. 235

ness is often developed by an over developed girl. She tends to put on baggy clothes in order to hide or conceal her heaviness in a particular area. Another problem stemming from this area, is the fact that the nipples are supplied with nerve endings that contain erectile tissue identical with that of the penis or clitoris; when this happens before the brassiere is worn, it often a source of embarrassment.

Some similar problems are posed by hip development. Small hipped girls often adopt a provocative walk, or are shy and overanxious about the same. Overdeveloped hips sometimes cause slouchiness in dress, poor posture, or a provocative walk.

Girls who feel that they are just right, often wear clothing that is too tight in an effort to show off their anatomical endowments and to attract the attention of the opposite sex.

The lack of pubic and axillary hairs when other peers have them, causes concern in boys and girls. In boys, it is associated with manhood, but hirsutism among girls, causes embarrassment, and is usually a glandular disorder.

Until a boy learns to handle his changing voice, caused by the lengthening of the vocal cords, he is often embarrassed by unexpected shifts in tone. Often this makes for hesitancy in reciting in class, or failure to sing in the choral group.<sup>10</sup>

Tallness in girls often causes poor posture from poor body carriage, while shortness in boys often cause extreme erratic behavior patterns, though sometimes they strive extra hard with school work, hobbies and sports in an effort

---

<sup>10</sup> Rogers, op. cit. , p. 93

to compensate for this.

Puberty is the time when the apocrine sweat glands develop. The glands are found in areas of the body with significant sex functions, such as breasts and genital areas. They have characteristic odors that are unpleasant, and the odor is increased by physical activities and the menstrual period.

Halitosis, foot odors, unclean hair, poor facial care, poor grooming, and unkept nails, are all common problems of the adolescent.

A problem, no less of importance, is caused by increased activity of the sebaceous glands which often become blocked with plugs of waxy material to which dirt clings, causing blackheads. Drainage is poor because excretory ducts of the glands have not increased proportionately in size. Blocked glands which become infected, cause acne. Acne may also be caused by an imbalance between male and female hormones.<sup>11</sup>

Then comes the age old problem of homosexuality, which often is ascribed to the failure to establish satisfying heterosexual social and emotional relations with the other sex through normal means. There are other stimuli which create this effect also. In some rare cases, this is purely a biological problem.

More problems which might be purely physiological, or a combination of two problems are:

1. Excessive sex talk
  2. Gross and offensive advances toward the opposite sex
  3. Circulation of pornographic literature
- Sociological problems are numerous and below is a

---

11

Ibid.

list of several of the common causes of problems in this category.

1. Lack of social ease and grace
2. Lack of popularity
3. Lack of good friends and companions
4. Intake of alcohols and drugs; smoking
5. Lack of properly supervised community recreation
6. Poor preparation for marriage
7. Lack of sound sex education
8. Poor dress
9. Prejudices ( race, social class, nationality, religion)
10. Lack of balance between self-expression and self-control
11. Retarded or slow sexual development
12. Cliques
13. Reckless driving
14. Lack of sound and wholesome relations with the opposite sex.
15. Facial ugliness, plain features and deformities
16. Delinquency

Just as there was an overlapping of biological and physiological problems, the sociological and biological problems overlap. One of the most striking socio-biological problems is sex. The very mention of the word brings titters to a classroom, or you get a hush-hush attention.

Parental instructions, mores, cultures, income brackets, religious training, or metabolic rate of the adolescent, are some of the factors figuring into his attitude toward sex education and behavior.<sup>12</sup> This problem can be further divided into sub-problems:

---

12

Landis, Op. cit., p. 147



1. Excessive petting
2. Misguided facts about masturbation
3. Fear of sex instruction
4. Nymphomania
5. Premartial intercourse
6. Pregancy before marriage

The commong needs of an adolescent would develop an endless list. Below are some of the most often incurred needs and drives:

1. Understanding parents and teachers.
2. Sound nutritional diets
3. Sound religious beliefs
4. Sound sex education
5. Sound relations with opposite sex
6. Wholesome moral codes
7. Popularity
8. Wholesome recreation
9. A sense of belonging
10. Patriotism
11. Respect for self and others
12. Freedom from prejudice
13. Teachers and parents with sound moral rapport
14. Spending of some sort ( spending money of their own)

The adolescent has many problems and needs, yet the attitudes and reactions of the people who constitute his immediate surroundings have much to do with his behavior patterns.

An adolescent is either tolerated, accepted and liked, accepted and disliked, or rejected. It is this area of being accepted or learning to be accepted by one's peers, which causes many of the pysio-sociological problems.<sup>13</sup>

<sup>13</sup> Maureen daly, ed. Profile of Youth, ( Phila-  
delphia, Lippincott, 1951 ) , p. 168

In the first place, group relationships satisfy what Slavson calls "group hunger", or the drive to escape loneliness.

Secondly, group relationships help the individual to differentiate the concept he has of himself; as a result, it gives him the opportunity to know other persons. Too, group relations involve definition of social roles.

Peer groups are usually attracted to :

1. Students with money
2. Students with cars or other objects many others do not have
3. Pretty girls and handsome boys
4. Hygienically sound adolescents
5. Alert students
6. Some students who excel in hobbies or subjects
7. Gossipers ( Surprisingly so)
8. Those who share their work load
9. Gang leaders
10. Good athletes
11. One who can keep a secret told him ( contrast to number 7 )
12. (Temporarily) heavy petters ( females)

Peer groups usually reject:

1. Braggarts
2. Loud mouths
3. Sore losers
4. Superior students
5. Poor dancers
6. Members of different social, religious strains or race
7. Tattletales
8. ( Sadly ) Children with deformities or homely figures or faces

This last one causes many an adolescent to find his

role in society, for he seeks to excell in something. What he lacks in social adjustment, he makes up by compensating through excellence in some task.

Parents are the very core of what an adolescent becomes. In spite of the best efforts of parents, the family may lack many desirable qualities in the home.<sup>14</sup>

These are some of the common reactions of parents:

1. Humiliation of adolescent in the presence of peers
2. Hands off policy
3. Work off own complexes, inhibitions and repressions upon the adolescent
4. Continually make them feel inferior or superior
5. Failure to treat each child as an individual
6. Failure to lend an ear to explanation before punishment
7. Failure to develop good sibling's relations
8. Shun or evade answering questions
9. Provide no means for home recreation

Parents with good and sound adolescent-parent rapport often have the following reactions:

1. Set good examples and maintain that offsprings do the same.
2. See that the least whimsical questions are answered.
3. Seek to help co-ordinate or at least encourage entertainment at home.
4. Strive to keep abreast with social trends
5. Help, but not dictate what the child should wear
6. Have a natural and satisfactory love life at home

---

<sup>14</sup> Landis, Op. Cit. , p. 241

Thom says:

There is perhaps no single factor in the adolescent's environment that is more important than having parents who are well mated and happy in their love life..... children are quick to sense the satisfactions and dissatisfactions which parents get out of their companionship with each other.<sup>15</sup>

The community's reaction to adolescents is divided. Often, it ignores their problems and complains, and then there are those who go all out to provide some kind of outlet for them.

Those who strive to provide something, usually have hobby centers, swimming pools and skating rinks. The community represented in the scope of this study, provides only baseball and softball for the children who qualify to play. This community profile is that segment not included in the school.

Where other institutions fail, the school is in a position to make up for many of the deficiencies. It is here that many a child makes his very first outside contact. His permanent life's goals, negatively or positively, make their molds here.

The school, as a whole, should provide media in which an adolescent can thrive, grow and flourish.

The students often give a verbal reflection of the reactions of teachers or schools, as:

1. My teacher plays favorites.
2. You have to be an athlete in order to pass.
3. Teachers fill our ears with what to do and not how to do.

---

<sup>15</sup> Douglas A. Thom, Normal Youth and Its Everyday Problems, ( D. Appleton Century Company, Inc., New York, 1932 ) pp. 65-66

4. High school gives the kind of training that I need.
5. Teachers give me no encouragement.
6. The teacher does/does not understand.
7. We feel that we should have more voice in self-government.
8. The teacher is too hard or too easy.
9. The teacher really knows what he is talking about.

Whether or not the above are valid measurements by which a school and teachers can be judged, they are reflections of many polled American adolescents, and pretty much of all the honest truth telling there is in the world is done by children.<sup>16</sup>

Other reactions of school elements are:

1. Teachers put more emphasis on winning awards and grades than on values, methods, and basic achievements.
2. Teachers often are strict disciplinarians with no definite end point desired from the means.

The particulars available to an adolescent through the school will be modified in the next chapter, "The Profile of a Physical Education Program."

---

<sup>16</sup> H.H. Remmers and D.H. Radler, The American Teenager, ( Indianapolis-New York, The Bobbs-Merrill Company, Inc., 1957) cover sheet

## CHAPTER IV

### Profile of a Physical Education Program

Physical education is the accumulation of wholesome experiences through participation in large muscle activities that promote optimum growth and development.<sup>1</sup>

The physical education program, as all education is a product of the community in which it exists. Thus, the local community plays an important part in the philosophy and formation of the school program.

Broadly, it is the purpose of a physical education program to maintain and improve the health of the students in our schools. This refers to all aspects of health, including the physical, mental, emotional and social areas. The general purpose is usually stated in broad terms, with no distinction made for boys or girls.

It is the purpose of physical education to develop the various organic systems of the body. Physical power is built in the individual particularly through participation, performance, and wise use of the activities. Such participation, if engaged in wisely and adopted to the needs of the individual, results in the ability to sustain maximum effort, the ability to recover and the ability to resist fatigue. The value of this purpose or objective is that an individual will be more active, have better performance, and be healthier, if the organic systems of the body are functioning properly. Through vigorous muscular activities, the heart provides better circulation for the body and the person is able to perform work for a longer period of time, with better art and with ease.

---

1

Charles A. Bucher, et. al., Methods and Materials for Secondary School Physical Education, (St. Louis, The C.V. Mosby Company, 1961), p. 153

Further, the purpose of physical education is to develop neuromuscular skills, provide knowledge, judgment, appreciations in regards to well balanced diets, sanitation, factors regarding diseases, and a worthy use of leisure time. To conclude the purpose, it is to build up organic-social development so that the adolescent will adjust to the changes within himself, and to others, thus establishing desirable standards of conduct essential to good citizenship.

Weaknesses of a physical education program vary from one school to another. Generally, limitations of a physical education program include the following:

1. Limited budget - Many schools do not provide enough money for the minimum requirements necessary to carry out an effective physical education program.
2. Weakness in personnel. Many physical education teachers feel as if they are overworked and underpaid. The affectiveness of the whole program can suffer from this type of thinking.
3. Idiosyncrasies of the community (home and church), about the type of dress, type of activities and exercises that should be employed in the physical education class, make for some areas of weakness in the physical education program.
4. Lackadaisical attitudes on the part of students and others in the school often make it difficult to give the total program the emphasis that it needs. This area of weakness provides a genuine challenge to the physical educator.
5. Athletics, the availability of the students participating in the total program, and the establishing of the annual program, cause or pose problems, oft times. This in itself causes weaknesses in the physical education program.

6. Oversized classes create an area of weakness.
7. Co-educational classes sometimes create an area of weakness.

Strengths, happily outweigh the weaknesses. The strengths are:

1. Due to the informality of the physical education class, most adolescents look forward to physical education with great anticipation.
2. The physical education class allows many adolescents to excel where academic subjects sometime fail.
3. Physical education is a branch of study which allows demonstrative activities, thus creating a medium wherein responses can be seen easily.
4. Group play stimulates many shy adolescents to feel free to participate.
5. Physical education allows a manifestation of certain instincts common to all human beings. This serves as a kind of preparation for the activities of adult life.<sup>2</sup>
6. Another strength comes from the fact that peers often look up to and identify themselves with outstanding athletes or cheerleaders.<sup>3</sup>

Having stated the weaknesses and strengths of the physical education program, it can be deducted that the true worth of the program can be served best when careful planning precedes the launching of the years work. The potentials provide for development in the four main areas, physical fitness, physical skill, knowledge and appreciation, and social development. In addition to these general areas of development, there are many specific potentials, and

---

<sup>2</sup> Richard Kraus, et. al., Recreation's Leader's Handbook, (New York, Toronto, London, McGraw-Hill Book Company, Inc.) p. 7

<sup>3</sup> Ibid., p. 7



they are:

1. Provide maximum participation for all class members.
2. Provide maximum instruction and supervision through the careful selection of formations and skills keyed to form small and large groups.
3. Provide for the safety of the students, and in turn instill in the adolescent the principle of being careful.
4. Promote carry-over values and transfer of learning into daily life situations through teaching co-operation and good sportmanship.
5. Promote creativity on the part of each student.
6. Promote learning by proceeding from what is already known to that which is unknown. In so doing, the adolescent is able to understand the relationship of learning new skills with those already learned.
7. Promote greater student interest and enthusiasm.
8. Provide a medium through which self-evaluation can be made by each student.
9. Provide self expression through anatomical development.
10. Provide sound health education.
11. Help lessen the tensions experienced by the adolescent.
12. Help build endurance.

There are many more potentials, but these will be expounded upon in the chapter, "A well co-ordinated physical education program and the adolescent."

The potentials of the students are many, and will cover three broad categories, sound organic systems, social poise, and grace.

## CHAPTER V

### A Well Co-ordinated Physical Education Program and the Adolescent

A well co-ordinated physical education program gets at all of the needs, anxieties, fears and problems of an adolescent.<sup>1</sup> Though each may not be solved or conquered, a well planned program should help ease the tensions of the adolescent, and create an environment conducive to sound work and play.

Physiological, anatomical, and sociological development are discussed together, for the results stem from an inter-relatedness of the three. Embracing these three areas, a well co-ordinated program provides the following:

1. A sense of well being brought about by adjustments made by the adolescent.<sup>2</sup>
2. Adjustment to heterosexual interest. Many adolescents' fears and worries center around this particular phase of development. The physical education program can help relieve these tensions through co-educational activities.
3. Adjustment to physical changes.
4. Finding security - The physical education teacher has a very real responsibility toward the security of adolescents in all activities. All students can be made to feel at ease in the gymnasium, and

---

<sup>1</sup> Robert G. Simpson, Fundamentals of Educational Psychology, ( New York, J.B. Lippincott Company, 1949) p. 195

<sup>2</sup> Charles A. Bucher, et. al., Methods and Materials for Secondary School Physical Education, ( St. Louis, C.V. Mosby Company, 1961) p. 27

this may be accomplished by giving concrete instructions and establishing definite procedures and regulations so that students will know exactly what is expected of them. This insures a feeling of security, at least in regards to physical education. Many can connect, associate, and carry over this feeling to other areas where instability is experienced. Security will lead to other responses, such as freedom of movement, leadership ability, and adventure.

All teachers need to understand the basic problems faced by adolescents in reference to their need for affection. Problems in regards to affection usually arise either from fears centered around the making or losing of friends or from conflicts with them. Still others may stem from a desire for continued affection from parents, which is in conflict with a simultaneous need for independence from them.<sup>3</sup>

The physical education teacher has a very important role to play in respect to adolescent health problems. He should take advantage of every opportunity to offer guidance in health matters. The need for proper diet, rest and exercise is easily related to athletic performance. Guidance in proper body mechanics and posture is a responsibility of the physical educator. Each physical education program should contain a unit or series of classes devoted to postural studies for the identification of defects and improvement of postural conditions. Tall girls or short boys are led to see themselves from the best views. Many complexes due to stature are dispelled on the gymnasium floor. The extremes in either case of boy or girl can be led to excel or develop himself in several phases of phy-

---

<sup>3</sup>  
Compton's Pictured Encyclopedia, ( Chicago, F.E. Compton and Company, 1962) p. 340

sical education. Achievement can be realized through success in many varied interests and teachers find that satisfaction comes through superior performance and achievement. For those students who have difficulty with their performance in physical education, the teacher should provide a program varied enough so that in some particular activity or sport, a sense of accomplishment is derived.

If through stressing proper rest and eating habits the complexions are not improved, the teacher may point out that a physician will have to be consulted.

A new area, of exercises is now being employed to help dispel underdeveloped areas of the body, and help students with weight problems. That new area, isometrics, can be inserted into the program to help trim off unsightly pounds, or build up muscular co-ordination and control muscles in others.

Superiority in physical pursuits provides one outlet for adjusting the self picture for individuals who have difficulty in some areas of the academic work. Students who can achieve in some area of physical education naturally augment their sense of well being or sense of worth.

A well co-ordinated program provides showers for cleanliness and surprisingly, this is the major chance for many youngsters to get a good bath.

To help adolescents feel secure in themselves without depending on parental or other adult controls, the physical education teacher should try to offer many opportunities for the development of self-responsibility, self-discipline, and self reliance.<sup>4</sup> This is done through assignment of leadership positions and through class planning of rules and regulations for conduct. By letting students mutually formulate their standards for behavior, the neces-

---

<sup>5</sup> Bucher, op. cit., p. 28

sity for having them is better understood, and they are more willing to follow them.

An understanding of the physical, emotion, and social problems of the student is a must, for emotionally upset adolescents learn little and they need help in controlling emotional responses. It is the responsibility of teachers to assist them in achieving this goal.

Social development can be thought of in terms of adolescent's relationships with friends of his own sex, with friends of the opposite sex, and with adults. In each of these areas, different stages of growth are found, appearing later in boys than girls, and to a different degree. The developmental process itself is based on the adolescent's desire to break away from his parents and to assume selfhood in his social world.

In early adolescence the individual finds a place in the social world by becoming a part of a large group, which usually consists of age mates of the same sex. This occurs with girls in junior high and somewhat later, perhaps in the ninth or tenth grade, with boys. Groupings usually evolve from similar school cases, neighborhoods, and social backgrounds. They provide standards of behavior, such as manner of dress and talk, as well as opportunities to learn how to act with people in different situations.

In mid-adolescence, the dictates of the peer groups continue to be strong. However, the crowds break down into smaller, more adhesive cliques that promote snob-bishness and prejudices not usually found in the larger groupings. With girls these close friendships maintain an extreme importance which continue into the college years, while boys seldom rely as completely on friendships.

There are two important implications for physical education stemming from this phase of adolescent-social development. One concerns leadership and the other clique formation. Clique formation can have injurious effects. The socializing phase of physical education activities, the squad and teamwork entailed should point out the qualities of all individuals and promote consideration for and co-operation with people of all races and religions. The harmful effects of ostracizing a few people, so frequently found small cliques, should be discussed during class organization, with the hope that desirable extra curricular practices will be followed.

Because the development of leadership qualities is an essential phase of physical education, the program should provide many opportunities for guidance in the selection of good leaders. This factor of wise leadership should carry over into the adolescent's out-of-school world.

The development of interest in the opposite sex has two important implications in the physical education program: planning the co-educational activities and the individual class program.

Co-educational activities should be geared to provide an opportunity for relaxed socialization with no undue embarrassment. Knowing the activity helps the adolescent overcome the fear of socializing. Younger girls love to play all kinds of games, but with physical development comes an increased desire to be attractive, graceful, and poised. Physical education geared in the right channels can cause this poise and grace to be nurtured rather than cause extreme physical prowess.

Even a well co-ordinated physical education program has limitations. If the parents take no interest or can-

not provide the proper diet, the best taught health education will come to naught for that particular student. Too, home life often exposes the adolescent to media far from the conducive ones needed for physical, mental or social relaxation.

In planning the yearly program, teachers must select specific objectives from those outlined in the overall curriculum of the school. By so doing, a well co-ordinated program can actually help the adolescents benefit from all of its potentials.

A well co-ordinated physical education program has a definite relationship with the other phases of the school's curriculum. Each teacher in a school should teach, in a sense, the whole child, just as if he is the child's only teacher.

Well taught good grooming, hygienic care, poise, grace and dexterity are closely related to the home economic class, and should have carry-over values.

Too much cannot be said for the interrelatedness of the sciences and physical education, especially, biology. All of the anatomy taught in physical education is biology, chemistry or some related course. The physics principles are put into practice in many of the calisthenics and motor skills. The same holds true for portions of the general science course and physical education.

English engulfs all subject matter and though each course carries its peculiar terminology with connotations, however, good grammar can always be employed as a necessity in teaching all phases of the curriculum.

From mathematics, probability, ratio and proportion are used in several different phases of physical education.

The teaching of proper treatment of personal property and the property of others, can have carry over values for agriculture, business courses and shop classes. Speed, too, aids in business classes.



CHAPTER VI  
Administration of Physical Education Devices  
and Instruments

The physical education program is made up mainly of physical skills, drills and activities. It is the aim of this chapter to tell how and what physical skills, activities and drills should be taught for maximum development and, how these instruments should be administered in order to get the best results.

The skills, devices and instruments used in the physical education class should be ones that the teacher can do and perform to the degree that the students and student-leaders can satisfactorily learn through methodical and mimetical actions. Performance is the backbone of physical education and therefore is purposeful toward all of its goals.<sup>1</sup>

Drills are used frequently and are especially important in physical education to automatize the various skills necessary for the activities. Since some mastery of skills is essential to satisfactory game play, the practice of skills in drill is necessary.

Drills in physical education can be a dull memorizing process, or they can be nearly as much fun as the game from which they are derived. The drills are always an outgrowth of a game situation. This provides meaning to the drill. The drills allow maximum participation for all class members. The students have a turn to practice more frequently when the class is divided into smaller units. Sociograms show how leaders can be

---

1

Charles A. Bucher, et. al., Methods and Materials for Secondary School Physical Education, (St. Louis, The C.V. Mosby Company, 1961) p. 178

chosen for groups, though this does not always provide the most valid measurement by which leaders must be chosen.

To administer the different devices and instruments, much attention was given to individual differences and needs. The task was to assure the child's participation in activities which would develop anticipatory behavior, and that would motivate learning.<sup>2</sup> It is the instructor's responsibility to make the students more aware of their basic needs so that they will have a greater desire to learn. The greater the motivation, the more rapid the learning. In introducing the game of basketball, the game as a whole was introduced first. Then the game was broken down into its component parts and aspects of dribbling, shooting, strategy, and defense.

According to the SR or Bond theory, the prerequisite for learning is the resultant effect following and actual performance. It holds further that each set of stimulus has its own responses. A child can be molded by the environmental forces surrounding him.<sup>3</sup> Prerequisites for volleyball were throwing and catching. This helped to develop the ability to set up and spike a ball. For baseball, throwing, running, sliding, batting, and catching were prerequisites.

Physical education activities that should be covered in the secondary school are as follows:<sup>4</sup>

Team games: baseball, softball, touch football, volleyball, soccer, and field hockey.

Dual and Individual sports: track, badminton, table tennis, deck tennis, handball, horseshoes, tennis,

---

<sup>2</sup>Ibid. p. 178

<sup>3</sup>Ibid. p. 176

<sup>4</sup>Bucher, Charles A., Foundations of Physical Education,  
(St. Louis, 1960, The C.V. Mosby Company)

archery, golf and shuffleboard

Rhythms and dancing: social dancing, folk dancing, rhythms, gymnastic dancing, square dancing, tap dancing, and modern dancing

Formal activities: calisthenics and marching

Water activities: swimming, diving, lifesaving, water games

Outdoor winter sports: skating, snow games, ice hockey, skiing and tobogganing

Gymnastics: tumbling, pyramid building, apparatus rope, climbing, and acrobatics

Other activities: relays, correctives, camping

Though many devices and instruments are needed for thorough physical education administration, these are essentially the tools and mechanics used at O. J. Thomas High School: baseball, softball, touch-football, volleyball, badminton, calisthenics, tumbling, acrobatics, relays and correctives.

Chart number I, shown in the following chapter, is a sample plan of the devices used, the physical fitness traits sought, knowledge and appreciation to be derived and the social development to be gained.

CHAPTER VII

Tests and Measurements of Physical Education Program

In test and measurements of physical education, the teachers have the responsibility of evaluating the degree to which they are accomplishing professional objectives; these objectives cover two general areas, pupil achievement and program administration.

Since this paper is concerned with the adolescent, stress is placed on pupil achievement. Evaluation of pupil achievement should determine to what extent program objectives are being met.<sup>1</sup>

Evaluation reveals levels of student development toward each of the four major goals: physical fitness, physical skills, knowledge and appreciation, and social development. Results of evaluation also serve other purposes including motivation of students, guidance, grouping and program planning.

Needless to say, a test should measure what it suppose to measure. That is, if a test is to measure balance, the results should be in terms of balance, and not some other physical characteristic.

Physical fitness tests are valuable in pointing out pupil status and achievement toward this goal. Tests of motor capacity, strength test, cardiovascular tests, and fitness batteries are examples of this type of evaluation.

Tests should have an accepted scale of performance scores normal for particular age levels and groups. Norms are useful for comparison of the achievements of one group with those of similar groups.

---

<sup>1</sup> Charles A. Bucher, et. al., Foundations of Physical Education, ( The C.V. Mosby Company, St. Louis, 1960) p. 277

The testing device should consistently produce the same results. If a test were repeated under similar conditions with the same group, the results should be equivalent - with the better performers again scoring high. The instructor should take great care in surveying different types of test, the desired results and the administration of the tests. To expect valid results from a testing program, without giving ample time to a testing program's instruments, defeats the purpose. Yet, it should be possible to administer a test to a class without too much expense, loss of time, or other complications to the detriment of the program.

There are some standardized test available, and below are some of the various kinds of tests: Rogers strength Test<sup>2</sup>, California Physical Fitness Penathlon<sup>3</sup>, and Indiana Physical Fitness Test for High School Boys and Girls.<sup>4</sup>

In order to evaluate the program, tests were administered periodically, and they were:

Physical fitness

1. Pull-up : to test arm and shoulder girdle strength.
2. 50 yard dash: to test speed
3. Sit-ups: to test strength of abdominal muscles and hip flexors.
4. Standing broad jump: to test explosive power of the leg extensors.

---

<sup>2</sup> H. Harrison Clarke, Application of Measurement to Health and Physical Education, N. J., Prentice Hall, Inc., 1950) p. 47

<sup>3</sup> California Physical Fitness Pentathlon, Bulletin of the California State Department of Education, 11:8, Nov., 1958

<sup>4</sup> State of Indiana: Physical Fitness Manual for High School Boys, Bulletin No. 136, 1944, Department of Public Inst.

5. Softball throw for distance: to test arm strength
6. 600 yard walk or run: to test cardiovascular system
7. Shuttle run: to test speed and change of direction

Physical skills:

1. Reference to scores in badminton
2. Intramural games of basketball, baseball, football, volleyball
3. Improvement in gymnastics, stunts, tumbling

Knowledge and Appreciation

1. Oral quizzes
2. Written test on techniques, terminology, questionnaires, opinion polls and surveys

Social development

1. Observation of students with an anecdotal record being kept by the instructor
2. Rating scales
3. Comparison of behavior of students with other data kept by other faculty members
4. General observation of attitudes, interests and social status

The results of all types of tests of student achievement should be put to use if the process of evaluation is to have any direct value for the students.

Sociogram number I shows that at the beginning of this study, one of the students ( Danny ), was not chosen as a team mate by anyone. This indicated that this adolescent needed to be assimilated into a group. With this knowledge, among other information, students can receive help to improve their social relationships. Though the sociogram actually used in the class was a larger one, the type of results shown on the second sociogram, is reflective of the social growth within the physical education classes.

The first sociogram was graphed at the beginning of the school year and served as a prognostic device. The second, administered in early May, served as a diagnostic device.

In order to measure and determine the progress of the adolescents in the class of thirty-five boys treated at O. J. Thomas High School, their major problems, disturbances, and needs were carefully noted in September, and again in May.

Of the thirty-five, 9th grade boys studied, twenty-one of the boys were rather awkward in their movements, and were in need of exercises to help with muscle control. Their awkwardness was very obvious while doing the side straddle hop, trunk twisting, and alternate toe touch. In May of the same school year, only one boy was still rather awkward. The others had made vast improvements. Lack of good muscular co-ordination, resulting in awkward movements, had much to do with these adolescents' inability to adjust during the adolescent period.

In their mannerisms, movements and exercises, 14 of the 35 boys possessed grace. While doing squat-thrust, leg raiser, ankle bounce, and running in place, they possessed the quickness and smoothness of motion, which during the tests for gracefulness, termed them graceful. In May, the tests showed that 28 of the boys had become quite graceful in their exercises and plays. This showed an increase of 14 boys who had profited by the physical education program.

During the onset of this study, ten boys had marked posture problems; one boy manifested this trait during certain exercises that he did not like. Four out of the ten were tall for their age and had a tendency to slump while walking. Others had developed the habit of shifting one shoulder higher than the other, thus giving one arm a dangling effect. In May, all of the boys had excellent posture.

Chart I, shows exercises, physical skills, games taught, and the desired results from each.

Weight charts were used to determine whether the students were over or under weight. Body structure, age and height were termed as the determinants for this comparison.

Tests showed that twenty-eight of the boys had well built muscular systems. None of them looked like Charles Atlas, however the biceps, triceps, leg muscles and arm muscles were well defined, even though five of the thirty-five boys were underweight. Two other boys who had weight problems, were overweight, when their weights were compared with the normal weight chart.

At the onset of this physical education program in September, such exercises as the side straddle hop, turn and bounce, and bend and reach, were administered to measure co-ordination. Twenty-four students had sound co-ordination, according to the test results. Such maneuvers as ball bouncing, showed still further areas of poor co-ordination. In May, thirty-one of these students, not only did the side straddle hop well, but they also played basketball and baseball well. This showed an increase of seven over the September results.

Half of the class failed to respond to leadership and in turn did not co-operate well. This was partially due to ill feelings between classmates. Many of the students wanted to lead all of the time. Devices as socio-grams I and II were valuable in determining leaders. Too, many students were given a chance to lead in different activities, and thus followship was experienced by all class members. Cliques were not entirely broken up, but friendly attitudes were established with other members of the class. In May, thirty-one of the boys followed leadership well, and as leadership-followship improved, better



co-operation and sportsmanship resulted.

Seven students showed marked traits of selfishness. They seemed to keep equipment longer than the time allotted, always wanted to be first, and repeatedly failed to wait their turn. In May, three of these seven students had not overcome selfishness altogether, although one of these three had made improvements.

Alertness was measured by several observatory means in conjunction with the tests used to measure the same. Twenty-one students could pass balls upon a moments notice to change direction. This figure, according to the tests, increased to thirty-one by May.

Strength and endurance were measured by push-ups, chinning and taking laps around the gymnasium or track field.

Speed was measured by actual clocking and timing the students' speed in the fifty yard dash, relays, and competitive passing matches.

Team play skills were measured by scores from various games requiring team work.

The knowledge of rules, games strategy, and techniques of play were measured often. Test showed in September, that few students knew the correct rules to any game. This was to be expected however, since this freshman class had never had formal physical education. Those who did not take written test well, were quizzed orally. The theory of rules, game strategy and technique of play were satisfactorily mastered.

Half of the class possessed poor health habits, as uncombed hair, unclean teeth, body odors, unclean underwear, unpresed and dirty top clothes. Daily inspections were made and by May, 99% of the students looked cleaned and were making use of the school shower.

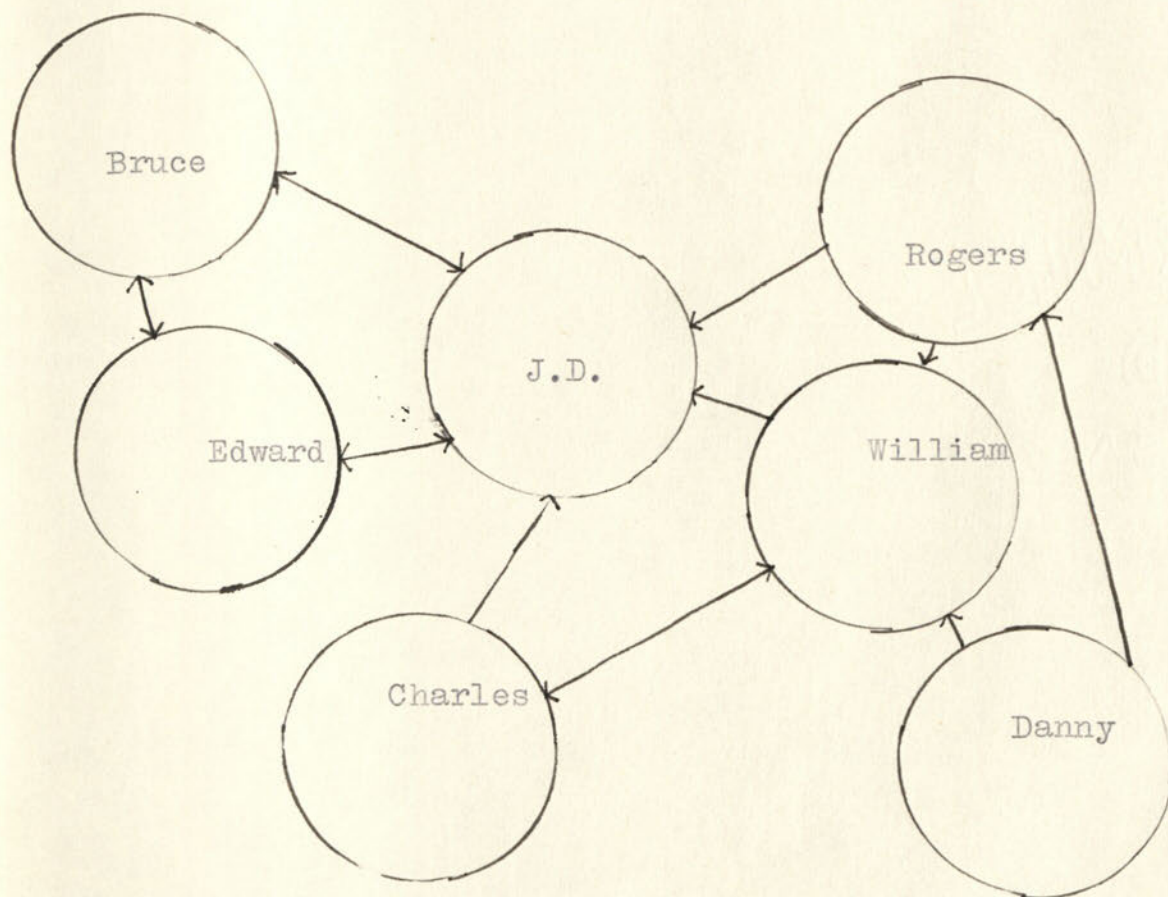
Willingness to put forth effort was measured by the results of the written tests, and observatory means. The first written test on rules of badminton showed that little effort had been exerted to master the rules of the game. However, the students had to adjust to the instructor's method of teaching and means of administering tests. This was taken into consideration during the rating process.

Throughout the year, it was learned that the same yardstick could not be used to measure all students.

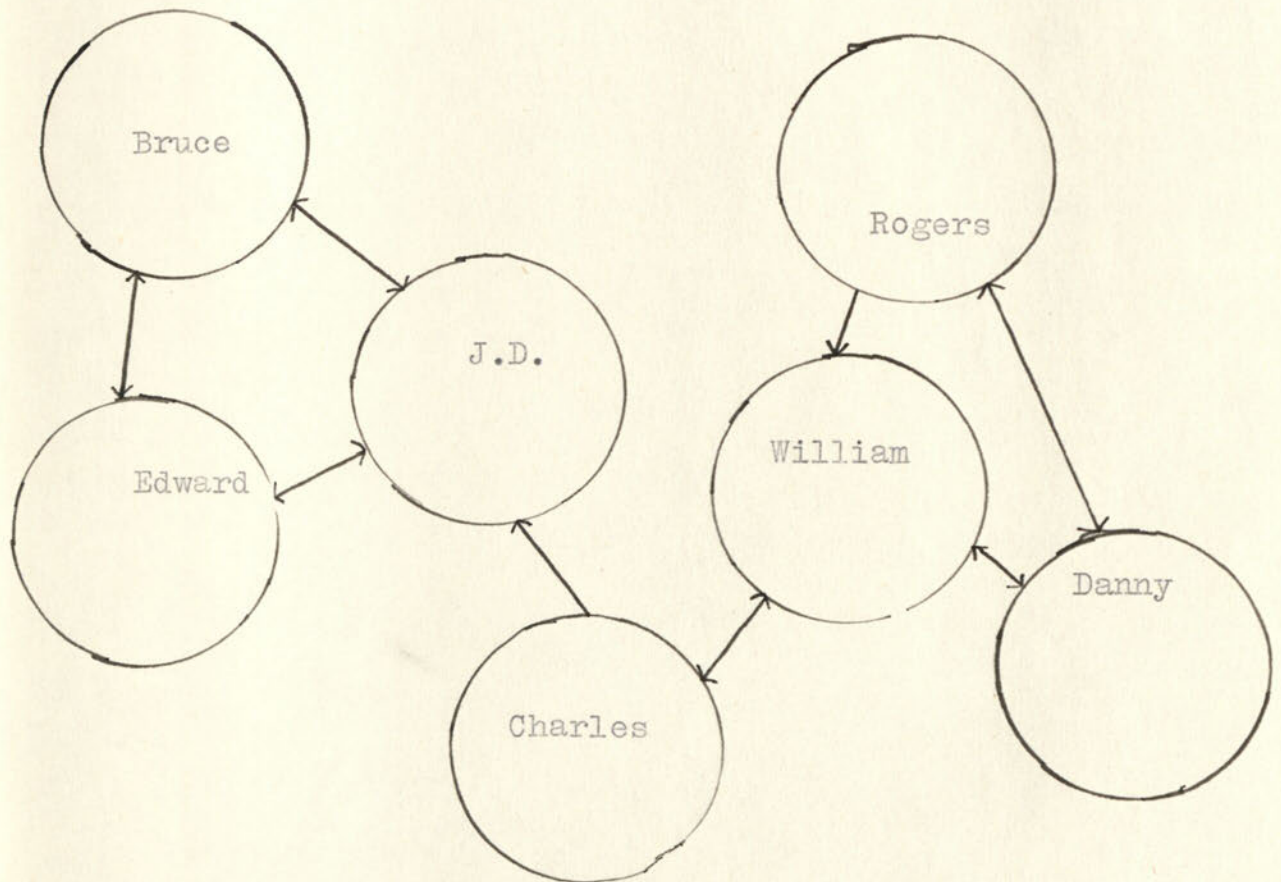
Sociogram I: This sociogram was taken late in September from a class of thirty-five boys, which was further broken down into five groups of seven. This group was arbitrarily chosen from the five subdivisions to show how the sociogram can be used to choose leaders.

This sociogram was taken by asking each student to list two people with whom they would like to work. Their choices were limited to the given subgroups.

This gram can be interpreted to show that J.D. is the strongest leader, with William close behind. Danny was not chosen by anyone as a team-mate.



Sociogram II, taken early in May, shows a shift in social status; same class, same sub-groups, and no drop-outs. It might interesting to know that Danny and William are brothers, eighteen months apart.



## CHART I

Sample physical education program for 35 9th grade boys

Physical Fitness	Physical Skills	Knowledge & Appreciation	Social Development
------------------	-----------------	--------------------------	--------------------

## BADMINTON

posture	serve	etiquette	Partnership
balance	forehand	double rules	etiquette
agility	backhand		

## VOLLEYBALL

posture	single tap	volleyball history	Improve group relationships and teamwork
balance	serve	etiquette	
agility	smash	offensive and defensive strategies	
accuracy	test	rules rotation test	

## BASKETBALL

endurance	passes	history	teamwork
speed	dribble	offensive and defensive strategies	new group leadership
accuracy	pivot		
balance	foul-shooting		
agility	goal shooting		

CHART I  
(Continued)

Physical Fitness	Physical Skills	Knowledge & Appreciation	Social Development
---------------------	--------------------	-----------------------------	-----------------------

CALISTHENICS

strength	stunts	value of training Olympic performers	safety consciousness
endurance	tumbling		
balance	apparatus		leadership

SOFTBALL

speed	base playing	history	co-operation
speed & endurance	base-running		
agility	batting	rules	teamwork
accuracy	throwing	scoring	
	bunting		
	catching		
	fielding	scoring	

To supplement the foregoing observation procedures, the writer administered several physical education tests to determine the progress being made by students in the study. The tests include:

### ARM STRENGTH TEST

The arm strength test is composed of two exercises:

#### 1. Pull-ups

The boys' pull-up test is administered from a chin-ning bar. In taking the pull-up test, the subject hangs from the bars by his hands, using forward hand grip. He then chins himself as many times as he can. In executing the movement, he should pull himself up until his chin is even with the hands. The body is then lowered until the knees are straight. No kicking, jerking or skipping is allowed.

Half-counts are recorded if the subject does not pull all the way up, does not straighten arms completely when lowering the body, or if he kicks during the performance.

#### 2. Push-ups

The player squats, bending the knees and turning them out at  $90^{\circ}$ . He places both hands on the floor, shoulder width apart, fingers forward. The feet are jumped to the rear so that the weight of the body rests on hands and toes only. The body must neither sink in the middle (swayback) nor rear up with the hips high. With eyes looking straight ahead, the player bends his arms until chest (not chin) abdomen, and knees nearly touch the floor, straightens the arms - push up. This is repeated as many times as possible. The formula for rating or scoring this test is as follows:

pull-ups + push-ups X  $\frac{(\text{weight})}{10}$  + height - 60

Ten (10) and sixty (60) are constants.

### ENDURANCE TEST

Fifty (50) yard to two-hundred (200) yard run. The degree to which the pace for a maximum effort for a short distance (50 yards) can be maintained for a longer distance (200 yards), is used as a measure of endurance. The best time for two trials for each distance, with adequate between time rests, is necessary to obtain a reliable score.

### TEST FOR CO-ORDINATION

A run, jump, and throw. The 50 yard dash is used for the run; the standing broad jump for the jump; and a softball throw for the throw.

### MOTOR FITNESS TEST

The motor fitness or motor skill test is composed of the following four items:

#### 1. Straddle chins

With individuals paired for approximate height, the subject being tested lies on his back, clasping the hands (finger hold) of his partner, who stands astride him, body erect. The subject chins as many times as possible, each time raising his body, back straight in line with legs, until the chest meets firm resistance from partner's thighs.

#### 2. Squat-thrusts

as a test in itself, the squat-thrust is used to test large muscles, speed, power, agility and co-ordination. It is a four part exercise, and is performed as rapidly as possible for ( 20 ) seconds.

a. Bend knees and hips and place hands on the floor



( squat-rest position ). Fingers should point forward; arms may be between, outside or in front of the bent knees.

b. Extend legs backward until body is straight from shoulders to heels ( front-leaning rest ).

c. Return to squat-rest position

d. Stand straight.

One point is scored for each complete squat-thrust.

### 3. Vertical jump

Used alone, this exercise tests the ability of the body to develop power in relation to the weight of the individual himself. In order to record the jump capacity, the subject makes two chalk marks on a dark clean wall: one made standing with the arm fully extended, and the other at the height of the jump. The distance between the two chalk marks, is the jump capacity or score.

### 4. Push-up ( see previous page ).

The following sample score card shows how the information received from the tests for; arm strength, endurance, co-ordination and motor fitness, is recorded and used.

SAMPLE SCORE CARD FOR INDIVIDUAL STUDENTS

	Student's Name	
	<u>Sept.</u>	<u>May</u>
Age	13 yr. 2 mos.	13 yr. 11 mos.
weight ( lbs )	120	123
height ( ins )	60	61
pull-ups	8	15
push-ups	7	21
50 yd dash ( sec.)	7.8	7.5
200 yd dash	22	20
Sitting av.	8	8
Standing broad jump (yd.)	3	3.6
baseball throw ( yd )	142	145
straddle-chin	8	9
squat-thrust	5	16
vertical jump (ft.)	2	2'7"

From these exercises, skills, and test scores, a combination of two or more provides other test scores, as the formula demands.

Arm strength

push-ups + pull-ups X (weight) + height - 60

	<u>Sept.</u>	<u>May</u>
	10	
	180lbs.	430 lbs.

Motor skill

(straddle chin + squat-thrust+ push-ups) X vertical jump

	<u>Sept.</u>	<u>May</u>
	40	119

Endurance test score

	<u>Sept.</u>	<u>May</u>
<u>Time in sec. for 50 yd. dash X 100 =</u>	35	38
Time in sec. for 200 yd. dash		

The following chart lists the actual scores made by students in the study on strength, endurance and motor skill tests. Scores made in September are compared with those achieved by the same group in May of the same year.

## CHART II

Percentage scores assigned to students based on observation and individual attention in September and May.

<u>CHARACTERISTIC</u>	<u>%</u> <u>SEPTEMBER</u>	<u>%</u> <u>MAY</u>
Awkwardness	60	2
Grace	40	40
Poor posture	30	0
Weight problem	50	10
Well built muscles	80	98
Co-ordination	70	90
Leadership-followship	50	90
Selfishness	20	10
Alertness	60	90
Strength	95	99
Endurance	80	95
Speed	50	90
Motor skills	60	99
Team play skills	90	100
Knowledge of rules	10	100
Knowledge of Play (Techniques)	80	100
Knowledge of game strategy	10	100
Positive appreciation toward games and physical activities	20	90
Co-operation	50	90
Sportsmanship	50	99
Health Habits	50	99
Respect teammates, opponents	50	99
Willing to put forth effort	85	90

## CHART III

Composite scores of 35 boys in selected tests administered in September and May.

	<u>Strength Test</u>		<u>Endurance</u>		<u>Motor Skill</u>	
	September	May	September	May	September	May
1.	104	106	44	44	36	44
2.	105	138	41	42	36	55
3.	128	151	50	50	48	57
4.	121	155	50	50	56	73
5.	107	144	35	38	40	49
6.	109	116	35	36	58	73
7.	141	174	48	48	61	76
8.	130	152	52	53	57	70
9.	143	163	50	50	75	87
10.	134	135	45	44	96	111
11.	92	129	45	45	48	58
12.	232	256	34	34	92	142
13.	132	159	35	38	40	48
14.	126	162	41	42	41	68
15.	131	154	45	47	55	70
16.	122	128	45	47	47	55
17.	128	163	50	53	48	66
18.	171	217	45	46	49	68
19.	166	219	52	53	48	74
20.	161	218	48	59	64	74
21.	142	148	48	59	45	64
22.	142	145	48	59	45	64
23.	109	144	51	53	36	67
24.	128	129	51	52	35	60
25.	129	130	50	51	36	45
26.	131	132	50	51	53	63

CHART III  
(Continued)

27.	101	129	50	52	34	45
28.	110	147	50	52	34	34
29.	129	173	50	51	41	54
30.	87	114	50	51	41	54
31.	80	99	51	51	32	38
32.	85	87	50	50	28	28
33.	84	95	58	60	52	56
34.	56	68	54	55	55	55
35.	39	41	58	61	18	42

The following sample rating sheet lists the traits by which the students were measured for social efficiency.

## CHART IV

Name \_\_\_\_\_ Grade \_\_\_\_\_ Age \_\_\_\_\_ Date \_\_\_\_\_

---

 BEHAVIOR RATING SCALE
 

---

Personal Information

 Frequency  
of  
observation

---

Leadership

1. Popular with classmates
2. Seeks responsibility
3. Shows intellectual leadership

---

Positive Action Qualities

4. Quits on tasks requiring perseverance
5. Exhibits aggressiveness
6. Shows initiative in assuming responsibility in unfamiliar situations
7. Is alert to new opportunities

---

Positive Mental Qualities

8. Shows keenness of mind
9. Volunteers ideas

---

Self Control

10. Grumbles over decisions of classmates
11. Takes a justified criticism by teacher or classmate without showing anger

---

Co-operation

12. Is loyal to his group
13. Discharges his group responsibilities
14. Is co-operative in his attitude toward the instructor

---

Social Action Standards

15. Makes loud-mouthed criticism and comments
16. Respects the rights of others

---

Ethical Social Qualities

17. Cheats
18. Is truthful

---

Qualities of Efficiency

19. Seems satisfied to "get by"
20. Is dependable and trustworthy
21. Has good study habits

CHART IV  
(Continued)

- 
- Sociability
22. Is liked by others  
23. Is friendly
- 
- Hygiene
24. Offensive body odor  
25. Neat in appearance  
26. Well groomed
- 
- Sportsmanship
27. Acts like a good sport toward  
opponents  
28. Razzes, teases, or bullies  
opponents
- 

This type of measurement probably cannot be called scientific, "In the more rigorously defined sense of the word, it is primarily to be thought of as technogicial - and aid to effective teaching."





CHART V  
(Continued)

<u>Areas</u>	<u>Aycock</u>		<u>Burns</u>		<u>Petty</u>		<u>Average</u>	
	Sept.	May	Sept.	May	Sept.	May	Sept.	May
20.	3	3	3	3	3	3	3	3
21.	2	3	2	3	2	3	2	3
22.	3	3	2	3	2	3	2.3	3
23.	3	3	3	3	3	3	3	3
24.	3	3	3	3	3	3	3	3
25.	2	2	2	2	2	2	2	2
26.	2	2	2	2	2	2	2	2
27.	3	3	3	3	3	3	3	3
28.	3	3	3	3	3	3	<u>3</u>	<u>3</u>
AVERAGE FOR ALL TRAITS							2.4	2.8

Ratings are poor (1), fair (2) and excellent (3).

The following chart reflects the averages taken from the individual social efficiency ratings as in Chart V, for 35 boys. The September averages are compared with the May averages of the same academic year; poor (1), fair (2) and excellent (3).

CHART VI

<u>Students</u>	<u>September</u>	<u>May</u>
1.	2.4	2.8
2.	2.5	2.9
3.	2.4	2.9
4.	2.2	2.7
5.	2.4	2.8
6.	2.4	2.8
7.	2.5	2.8
8.	2.4	2.8
9.	2.3	2.6
10.	2.3	2.7
11.	2.4	2.8
12.	2.2	2.6
13.	2.4	2.8
14.	2.4	2.9
15.	2.2	2.7
16.	2.4	2.7
17.	2.5	2.8
18.	2.2	2.6
19.	2	2.5
20.	2.1	2.7

CHART VI  
(Continued)

<u>Students</u>	<u>September</u>	<u>May</u>
21.	2.3	2.6
22.	2.2	2.6
23.	2.2	2.7
24.	2.2	2.7
25.	2.4	2.7
26.	2	2.6
27.	2.5	2.9
28.	2	2.3
29.	2.5	2.7
30.	1.9	2.3
31.	2	2.4
32.	1.9	2.8
33.	2	2.5
34.	1.8	2.4
35.	2	2.1
<hr/>		
Class Averages	2.4	2.8

Below are actual questions taken from quizzes administered to students in order to test for:

Knowledge of Game Strategy-Rules-Techniques of Play

General physical education quiz

Underline the correct statement:

1. When losing one's balance when landing from a jump, one should (a) relax and fall forward; (b) lean backward and put a stiff arm out to prevent falling; (c) lean sideways; (d) stiffen the hips and raise the arms for balance; (e) relax the hip and keep ankles stiff.
2. Ease of catching is gained and injury to fingers or body is prevented by (a) keeping eye on ball; (b) transferring the body weight; (c) "giving" of arms and body; (d) keeping eyes on hands; (e) "giving" of hands and keeping elbows straight.

Volleyball quiz

Underline the correct statement:

1. The number of players on an official team is (a) six; (b) seven; (c) eight; (d) nine; (e) eleven.
2. The set-up is used (a) to assist the service; (b) to insure teamwork; (c) as a defensive play; (d) to make possible an effective return; (e) to use the tall player to greater advantage.

Basketball quiz

Underline the correct statement:

1. Charging occurs when (a) a player pushes another

player who has the ball; (b) a player with the ball pushes opponent; (c) a guard comes in personal contact with a forward who had possession of the ball; (d) a guard pushes a forward who is in the process of shooting; (e) a jump center pushes the other jump center in the attempt to out-jump him.

2. Of the following, the best pass for long distance is (a) chest pass; (b) two handed overhead pass; (c) bounce pass; (d) under arm pass; (e) over arm pass.

#### Baseball quiz

Underline the correct statement

1. There are two outs and a runner on third. The batter hits a fly ball. The runner should (a) hold the base until the fly is caught or missed; (b) attempt to get home before the fly is caught; (c) run the minute the ball is hit; (d) start immediately, but if the fly is caught, get back to third before the ball can; (e) keep the catcher and third baseman playing on him so batter can make more bases.
2. Ball lands just inside first base. It is said to be (a) dead ball; (b) foul ball; (c) fair ball; (d) grounder; (e) waste ball.

## CHART VII

Composite Scores of 35 Boys in Selected Tests Administered in September and May.

<u>Students</u>	<u>KNOWLEDGE OF</u>		
	<u>Techniques of Play</u>	<u>Rules</u>	<u>Game Strategy</u>
1.	70	97	98
2.	73	97	97
3.	69	87	87
4.	80	99	99
5.	79	98	98
6.	73	97	97
7.	73	97	97
8.	76	96	96
9.	75	97	97
10.	86	100	100
11.	70	97	97
12.	70	97	97
13.	71	95	95
14.	70	90	90
15.	70	91	91
16.	70	90	90
17.	66	90	90
18.	66	90	90
19.	66	99	99
20.	73	96	96
21.	70	90	90
22.	60	90	90
23.	60	90	90
24.	66	90	90

CHART VII  
(Continued)

<u>Students</u>	<u>September</u>	<u>May</u>
25.	66	90
26.	65	89
27.	65	89
28.	60	79
29.	63	79
30.	90	100
31.	60	78
32.	60	76
33.	56	78
34.	60	78
35.	50	71



## SUMMARY AND CONCLUSIONS

The adolescent has many problems, many of which can be solved through a well co-ordinated physical education program.

While all of the areas were not improved upon by each student, all of them made improvements in some of the areas.

In May, 1964, the class of thirty-five selected students in physical education of O. J. Thomas High School, had attained an average social efficiency rating of 2.8; this average showed a class improvement of 16% over the 2.4 September rating.

For knowledge of techniques of play, rules and game strategy, each student improved, giving the class a grade average of 90.5 in May; a 32.4% increase over the September class average of 68%.

In the comparison of composite scores for strength tests, the class improved 13%, endurance tests, 4.25%; motor skill tests, 29%.

In grouping the students for exercises within the class subgroups, the sociogram drawn in May showed a greater degree of inter-student relationship. The September sociogram showed that one student in the sample subgroup arbitrarily chosen was not picked as a working mate by any of the other six members. The May sociogram shows that he was chosen as a mate by two of the boys. Too, even though the same boy was chosen as a leader, the choices were more evenly distributed.

By way of conclusion, these selected boys reflect that the physical education program can aid in the total development of the adolescent. Physical education not only affects physical development, but social and psychological

development as well. The thirty-five selected boys improved in the motor skills as well as the behavior and knowledge and appreciation skills. Each skill is essential to the total development of the adolescent and the rudiments thereof may be supplied by a well co-ordinated physical education program.

Prognostic and diagnostic devices have to be administered in order to determine what students are benefiting from the program. Careful records and progress notes must be kept on each adolescent if the evaluating procedure and data are to be of any value.

Intramural sports should be offered to all adolescents in as many activities as possible in order to determine how well the skills have been mastered.

Accurate evaluation procedure, sound testing programs, opportunities for adolescent leadership, and sound teaching processes must be present in order to help the adolescent to adjust to his environment.

In the future, more equipment is needed, as mats, pads, and bars. The girls should be provided with some sort of a dance program. In short, the girls need a physical education teacher. Too, phases of muscle building, taught through isometric exercises is of prime necessity.

Other observations made are:

1. Parents need to provide better dietary conditions.
2. If the parents had better paying jobs, the students would not have to miss so many days from school in order to work to supplement the family budget.
3. More people need to know the value of a good

- physical education program.
4. Organizational forces need to provide a community physical fitness program.
  5. There is a need for the creation of other recreational facilities.
  6. There needs to be stricter laws banning the sale of alcoholic beverages to minors.
  7. The provision of minimum hygiene care in the homes needs emphasis.

The weakness of this thesis is mainly concerned with a time element. It is through extensive study over a longer period of time that the most valid records are portrayed. The writer will continue to try to solve the problems peculiar to adolescents, if any, as well as all other students, through what is recognized as a well co-ordinated physical education program.

## BIBLIOGRAPHY

1. ANDREWS, Gladys, et. al. Physical Education for Today's Boys and Girls. Allyn and Bacon, Inc., Boston, Massachusetts, 1960
2. BLANCHARD, Vaugh S., et. al., Modern Physical Education Program for Boys and Girls. A. S. Barnes and Company, New York, 1940
3. BRACE, Davis R., Health and Physical Education for Junior and Senior High Schools. A. S. Barnes and Company, Inc., 1948
4. BUCHER, Charles A., Administration of School Health and Physical Education Programs. The C. V. Mosby Company, St. Louis, 1958
5. BUCHER, Charles A., Foundations of Physical Education, St. Louis, The C.V. Mosby Co., 1960
6. BUCHER, Charles A., et. al., Methods and Materials for Secondary School Physical Education. The C.V. Mosby Company, St. Louis, 1961
7. CLARKE, Harrison, Applications of Measurement to Health and Physical Education, Prentice Hall, Inc., New Jersey, 1950
8. COMPTON'S Pictured Encyclopedia, vol. 6, F. E. Compton and Company, Chicago, 1962
9. CROW, Lester and Alice, Our Teen-Age Boys and Girls. McGraw-Hill Book Company, Inc., New York, 1945
10. DALY, Maureen, Profile of Youth. Philadelphia, Lippincott, 1951
11. Encyclopedia Britannica Inc., vol. 1, Chicago, 1962
12. Hall, Stanley C., Adolescence, Its Psychology, Appleton and Company, New York, 1931
13. Jenny, John H. ED. D., Physical Education, Health Education and Recreation. The Macmillan Company, New York, 1961

14. KINSEY, A.C., et. al. Sexual Behavior in the Human Male, Philadelphia, Saunders, 1948
15. KRAUS, Richard, et. al. Recreation Leaders Handbook, McGraw-Hill Book Company, New York, 1955
16. LANDIS, Paul H., Adolescence and the Youth. McGraw-Hill Book Comapny, New York, 1955
17. MC CLOY, Charles H., Test and Measurements in Health and Physical Education. Appleton-Century-Croft Inc., New York, 1939-42
18. MEEK, Lois H., The Personal-Social Development of Boys and Girls, Committe of Workshops, New York, 1940
19. NASH, Jay B. Interpretations and Objectives, Hill and Hill, Inc. 1948
20. RENNERS, H.H., The American Teenager, The Bobbs Merrill Company, Inc., 1945
21. RICE, Emmet A., A Brief History of Physical Education, Barnes, 1929
22. ROGERS, Dorothy, The Psychology of Adolescence, Appleton-Century-Croft Company, New York Division of Meredith Publishing Company, 1962
23. SHEPHARD, Natalie M., Foundation and Principles of Physical Education. The Ronald Press Co., New York, 1960
24. SIMPSON, Robert F., Fundamentals of Educational Psychology, New York, J. B. Lippincott Co., 1949
25. THOM, Douglas A., Normal Youth and its Everyday Problems, D. Appleton Century Company, Inc., New York, 1932
26. WILLIAMS, Jessie Feiring, MD, ScS., et. al., The Administration of Health Education and Physical Education. W. B. Saunders Company, Philadelphia and London, 1964

27. WILLIAMS, Jessie Feiring, MD, ScD., The Principles of Physical Education, W. B. Saunders Co., Philadelphia and London, 1964

#### PHAMPHLETS

1. Bulletin of the California State Department of Education, California Physical Fitness Pentathlon, 11:8, Nov., 1958
2. NATHANSON, I. T., L. E. Towne, and J. C. Aub, "Normal Excretion of Sex Hormones in Childhood", Endocrinology, Vol., 23, 1941
3. Physical Fitness Manual for High School Boys, Bulletin No. 136, 1944, Dept. of Public Instruction, State of Indiana
4. Your Guide to Physical Fitness, published in cooperation with the American Football Coaches Association, Wayne W. Haynes, President