AN ANALYSIS OF TWELVE COURSES OF STUDY IN PHYSICAL
EDUCATION FOR JUNIOR AND SENIOR HIGH
SCHOOL BOYS

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AN ANALYSIS OF TWELVE COURSES OF STUDY IN PHYSICAL
EDUCATION FOR JUNIOR AND SENIOR HIGH
SCHOOL BOYS

THESIS

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By

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# Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>I  ANALYSIS OF OBJECTIVES</td>
<td>9</td>
</tr>
<tr>
<td>II SUGGESTED FACILITIES AND EQUIPMENT</td>
<td>51</td>
</tr>
<tr>
<td>III A STUDY IN TEACHING PROCEDURE AND REFERENCES</td>
<td>94</td>
</tr>
<tr>
<td>IV A STUDY OF MEASUREMENTS, EVALUATIONS, AND RECORDS</td>
<td>96</td>
</tr>
<tr>
<td>V  ADMINISTRATIVE CONSIDERATIONS</td>
<td>107</td>
</tr>
<tr>
<td>VI SUMMARY AND SOME CONCLUSIONS</td>
<td>114</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>114</td>
</tr>
<tr>
<td>APPENDIX</td>
<td></td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>46</td>
</tr>
<tr>
<td>ACTIVITIES APPEARING IN COURSES OF STUDY LISTING SPECIFIC OBJECTIVES</td>
<td>46</td>
</tr>
<tr>
<td>II</td>
<td>47</td>
</tr>
<tr>
<td>COURSES OF STUDY LISTING FOURTEEN ACTIVITIES GIVEN FIRST RANK BY PROFESSOR LA FORTE.</td>
<td>47</td>
</tr>
<tr>
<td>III</td>
<td>64</td>
</tr>
<tr>
<td>COURSES OF STUDY LISTING INDOOR FACILITIES.</td>
<td>64</td>
</tr>
<tr>
<td>IV</td>
<td>65</td>
</tr>
<tr>
<td>COURSES OF STUDY LISTING OUTDOOR FACILITIES.</td>
<td>65</td>
</tr>
<tr>
<td>V</td>
<td>67</td>
</tr>
<tr>
<td>COURSES OF STUDY LISTING SUPPLIES FOR ACTIVITIES FOR CORRECTIVES</td>
<td>67</td>
</tr>
<tr>
<td>VI</td>
<td>69</td>
</tr>
<tr>
<td>COURSES OF STUDY LISTING EQUIPMENT AND SUPPLIES FOR CORRECTIVES</td>
<td>69</td>
</tr>
<tr>
<td>VII</td>
<td>73</td>
</tr>
<tr>
<td>COURSES OF STUDY LISTING DEVICES IN TEACHING PROCEDURE</td>
<td>73</td>
</tr>
<tr>
<td>VIII</td>
<td>86</td>
</tr>
<tr>
<td>COURSES OF STUDY LISTING REFERENCES.</td>
<td>86</td>
</tr>
<tr>
<td>IX</td>
<td>96</td>
</tr>
<tr>
<td>COURSES OF STUDY LISTING ITEMS FOR MEASUREMENTS, EVALUATIONS, AND RECORDS.</td>
<td>96</td>
</tr>
<tr>
<td>X</td>
<td>105</td>
</tr>
<tr>
<td>COURSES OF STUDY CONSIDERING VARIOUS PHASES OF ADMINISTRATION</td>
<td>105</td>
</tr>
</tbody>
</table>
INTRODUCTION

The purpose of this study was to analyze twelve courses of study in physical education for boys in junior and senior high schools, for grades six, seven, eight, nine, ten, eleven, and twelve, in terms of general educational principles of curriculum construction as shown by some of the best present practice. The writer did not attempt to set up criteria for a critical rating of the courses of study, but wished to present enough data obtained from their printed contents to make an analysis of what was being done in the field of curriculum construction in physical education.

When the subject for this study had been chosen, the first problem was to obtain the needed courses of study in physical education for boys. Thirty physical education courses of study were obtained. Of this number twelve of the best were selected according to the following criteria: (1) recency—all were 1930 or later; (2) check list for evaluating courses of study.

The check list for evaluating courses of study was not original with the writer, but was a modification of the "Check List for Evaluating the Course of Study Bulletin", and the

"Texas Curriculum Revision Movement Summary Account of Unit of Teaching Health and Physical Education", compiled by the State Committee. The courses of study selected for this analysis were referred to as Bulletin 1, Bulletin 2, Bulletin 3, etc.

The twelve high school physical education curricula bulletins selected to be analyzed were:

1. Course of Study for Junior and Senior High Schools, Department of Public Instruction, Dover, Delaware; State of Delaware, 1934.


3. Tentative Course of Study in Physical Education for Junior and Senior High Schools, Kansas City Public Schools, Kansas City, Missouri, Curriculum Bulletin No. 12, 1934.


6. A Seasonal Program of Physical Education Activities for High School Boys and Girls of Maryland, State Department of Education, Volume IV, Number 2, September, 1933.

7. A Course of Study in Physical Education for Junior and


The data obtained by this study relate to the following topics:

1. General Objectives
2. Specific Objectives
3. Facilities and Equipment
4. Steps in Teaching Procedure
5. References
6. Measurements and Evaluations
7. Records
8. Administration

The writer believed that a summary of the data obtained from the various printed pages of physical education courses of study for junior and senior high schools was of immediate interest and value because of the present trend and emphasis placed upon the need and importance of further research directed toward any phase of curriculum revision. Harap had the following to say about curriculum trends:

There is a great need for continued study in the field of curriculum making. We must preclude the development of an attitude of complacency, which unfortunately has set in. The work thus far has been largely of a pioneer nature. We have not entirely cleared the woods.

The necessity for curriculum revision was advocated by many recognized authorities. Hopkins gave a rather detailed reply to the question, "When does the curriculum need to be

---

revised?* By accepting his trend of thought, the writer was convinced that the curriculum of our secondary school system must function in a dynamic society rather than a static society. To meet this demand, it must be continuously revised and adapted to the needs of modern times. Therefore, in the light of the present general trend in curriculum research and revision, the field of physical education offers a challenge similar to other units in the school curriculum, because:

Physical education has with increasing frequency, been coming into the curricula of our public schools. This is doubtless due to the fact that our conception of the educational value of physical education is widening. Whereas, older programs of physical training were based upon a recognition of only the value of muscular strength, organic stimulation and growth, and remedial treatment, our modern progress of physical education is based upon a conception that physical education is a way of education. 4

Laura Zirbes, in her study of curriculum trends, answers the question, "What Must the Schools of Tomorrow Do?" If we accept her line of reasoning, we will advocate the progressive orientation of the student in the life of which he is a part, provide situations that challenge his intellectual interests, set up an environment through active participation that will stimulate a more complete appreciation of his part in society, face frankly the responsibility of our part in the reconstruction of school procedure, and development of individuals who will meet life with a sense of responsibility and intellectual

Some authorities believed that the field of physical education offers a greater challenge in curriculum revision than was found in other educational fields, because in physical education there was not at present a systematically organized or graded curriculum.\(^5\)

Perhaps one of the most effective means of establishing an improved program for physical education was to provide the teachers in the field with specific data relating to the following phases of the program: general objectives, specific objectives, facilities and equipment, steps in teaching procedure, references, measurements and evaluations, records, and administration. A practical or logical source of this data was in printed city and state courses of study for public schools. The courses chosen for this study represented some of the best physical education programs in the country. It was desired that the data obtained in this study would be useful in the organization of a practical physical education program.

In the past few years, much has been done to elevate physical education to the same educational plane as other school subjects.\(^7\)

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\(^5\)Laura Zirbes, *Association of Childhood Education.*

\(^6\)The Research Quarterly of the American Physical Education Association, March, 1933, p.163.

\(^7\)Eugene W. Hixon and Frederick W. Cookson, *Introduction to Physical Education*, pp.24-25.
Much valuable material had been published on content, methods, aims and objectives, measuring, correctives, facilities and equipment, administration, intramurals, interscholastics competition, and leisure time activities.

The writer was unable to find for physical education other studies of this kind appearing in printed form or in courses of study. He offered the data of this paper with the desire that data relating to the following topics might be of use to curriculum makers:

1. General objectives listed in the selected courses of study may be found helpful.

2. Specific objectives listed with their assigned activities are significant because of their appearance in recent courses of study. These objectives with high frequency in courses of study should merit further consideration.

3. A tabulated list of facilities and equipment appearing in courses of study with the minimum and maximum supplies for activities is listed.

4. A tabulated list of devices used in teaching procedure appearing in courses of study may be of value in developing a course of study in physical education.

5. The form in which references are given may be of value to those interested in curriculum revision.
6. Measurements and evaluations in the form of tests and method of grading is important in determining classification and progression; this should be of value in determining types of tests or method of grading.

7. A list of types of records kept of the pupil should be of value in determining pupil progress in attendance, pupil effort, health examination, and objectives accomplished.

8. From the administrative standpoint, the procedure found in some of these bulletins should be of invaluable information to curriculum construction committees in physical education.

No claim was made that a curriculum set up according to this analysis would be adequate for the needs of the pupils, but at least this would serve as an inventory of some of the best current opinions and best present practices in physical education as shown in recent courses of study.

In the next chapter, there will be set forth an analysis and summary of the objectives named in these courses of study.
CHAPTER I

ANALYSIS OF OBJECTIVES

After the courses of study for this investigation had been selected, it was desired to determine the objectives stated and the form in which they were stated. Williams uses the term "objective" to mean "the precise, exact, and reliable ends, and hence is not synonymous with aims."¹ The writer accepts the same meaning of the term "objective" as that given to it by Williams.

The lack of uniformity in presenting objectives in the courses of study made it difficult to distinguish the general objectives from the specific objectives. Some of the evidences relating to the lack of uniformity of presenting objectives were:

1. All courses of study did not follow definite procedure in listing general and specific objectives.

2. Statement of objectives were not uniform.

A comparison of the procedure in listing general objectives assigned to the courses of study investigated illustrated the lack of uniformity concerning the same topics in the course of study. The second example of the lack of uniformity of statements of objectives was analyzed as to the forms of statements by recalling the various forms. Harap lists four forms most commonly used: (1) the infinitive form, (2) the noun form, (3) the participle form, (4) the verb form.²

¹ J.J. Williams, Principles of Physical Education, p. 291
The following are direct quotations of the general objectives as found in the courses of study investigated:

Bulletin 1, (p. 10-11).

(1) To develop, guide and protect the mental, physical and social possibilities of the Delaware children.
(2) To provide opportunity for equal competitive participation to all boys and girls in the state.
(3) To make a positive contribution to the future citizenship of the girls and boys of Delaware.
(4) To provide wholesome activity for the wise use of leisure time.

Bulletin 2, (pp. 15-17)

The general objectives of education have been conceived from various points of view and have been as variously classified. If those presented by most educators are analyzed, they may be stated broadly in terms of "conditions of growth" as health, social efficiency, culture, and economic efficiency. For practical use in constructing and administering a physical education curriculum, they must be broken up into their component parts: general objectives must be defined in more specific terms, and those objectives should be used that are attainable through physical education activities.

Specific Educational Objectives

For health, the development and integration of

1. Optional organic growth
2. Organic vigor
3. Neuromuscular skills
4. Muscle tone
5. Functional harmony and endurance
6. Functionally efficient bodily poise
7. Emotional stability
8. General organic resistance

For social efficiency, the development and efficient application of

9. Initiative
10. Perseverance
11. Courage
18. Self-control
19. Self-reliance
20. Cooperation, including the development of
21. Group consciousness
22. Responsibility
23. Leadership
24. Fellowship
25. Sympathy
26. Loyalty
27. Fair play, including
28. Justice
29. Honesty
30. Courtesy

For culture, the development of appreciations of
25. Rhythms of music (sympathetic interpretation and expression, forms of rhythms, national moods and ideals, relaxation, harmony, etc.)
26. Nature (fields, streams, woods, skies, fresh air; forms, colors and activities and nature; man's place in nature, etc.)
27. Personality (cheerfulness, poise, manners, companionship, etc.)
28. Freedom (respect for law, emotional expression and control, joy, etc.)
29. Physical laws (reactions to physical forces, gravity, momentum, etc.)
30. Enjoyment (of effort, of accomplishment, of creative and imitative activity, etc.)
31. Value of making correct choices (discrimination, taste, judgement, etc.)
32. Bodily vigor (fullness of bodily powers, fitness, etc.)

Bulletin 3, (p. 11)

General Objectives of Physical Education

Promotion of normal growth and organic development

Contribution to the development of desirable health habits, pertinent knowledge and independent application

Discovery of growth handicaps and remedial defects and correction of them as far as possible

Development of such skills and desires as will encourage active participation in physical recreation during leisure time
Contribution to the development of desirable traits of character and citizenship

Bulletin 4, (p. 15)

General Objectives. The primary objective of physical education is to help each boy and girl achieve the maximum standard of health of which he is capable with the thought that good health is a prerequisite to the fullest realization of practically all those activities which make for complete living.

Specific Objectives. With this view to achieving this primary objective, the course outlines activities and methods which are intended

1. To contribute to the physical, mental, and social possibilities of the individual
2. To make possible the discovery of growth handicaps and remedial defects and, so far as possible, to correct them
3. To provide a program of activities that will challenge the best efforts of the individual, that will be within the range of his abilities, and that will enable him to develop organic and muscular power and to improve skill and coordination
4. By means of these activities, to provide situations in which he may achieve self-confidence, happiness, and satisfaction of accomplishment, and through them encourage the development of such traits as initiative, leadership, followership, fairness, unselfishness, and reliability
5. Through these activities and satisfactions, to encourage an attitude toward exercise that will help to normalize his life during his school years, influence his actions in adult life, and make him a worthy member of his community

Bulletin 5, (p. 9)

Major Objectives:
1. The first objective is the development of the organic system of the individual through physical education
2. The second objective is the development of the neuromuscular system in general, and
3. The third objective is the development of certain attitudes toward physical activity generally and toward play particularly.
4. The fourth objective is the development of standards of conduct.

Professional Objectives:
1. A medical examination for every school child.
2. Health habits that endure.
3. A class period in physical education each day.
4. The teacher fully trained and accredited.
5. A gymnasium and playground for every school.
6. The coach a member of the faculty.
7. A graded and scientific curriculum.
8. Standard physical efficiency tests.
9. Positive credit for physical education.
10. Education for leisure.
11. An intramural program for after-school hours.
12. A varsity program that stresses sportsmanship and ethical conduct.*

Bulletin 6, (p. 3)

Objectives:

A. Emotional control for good behavior.
B. Organic soundness and health.
C. Desirable skills.
D. A body of related knowledge.

Bulletin 7, (p. 4)

Objectives:
The objectives of physical education have been thought of in many ways, but they may be thought of in these two groups: (1) developmental objectives, (2) objectives in adjustment.

A. Developmental Objectives:
Every individual throughout life is under-

*Adapted by the American National Physical Education Association.
going changes in four fundamental phases of his being. The wise guidance of these changes constitutes the developmental group of objectives of physical education.

1. The development of organic power.
3. Intellectual development.
4. Emotional development.

B. Objectives in Adjustment:

Successful living in any social order depends not only upon the development of individuals, but upon adequate adjustment of individuals in society. This adjustment is twofold: (1) the adjustment of social standards to meet the needs of the times, and (2) the adjustment of individuals to these standards. The schools of the present social order have set up certain cardinal principles as representing the best standards of the society of today. Physical education contributes to adjustment on the basis of these principles.

1. Health
2. Worthy use of Leisure
3. Worthy Home Membership
4. Citizenship
5. Ethical Character
6. Vocation
7. Fundamental Processes

Bulletin 8, (p. 13). The objectives of the program in terms of education:

A modern program of health and physical education is essentially a force for education. Its every aspect should answer to the best educational principles and practices. Its control should rest within the educational group. Its objectives, then, will all relate in some way, to those larger aims of health, worthy home membership, development of the tools of learning, ethical character, citizenship, worthy use of leisure, and vocational training which are the aims of education as a whole. To the aim of developing individuality, self-expression, and self-realization, health and physical education gives full assent and provides a most excellent laboratory for just such teaching; and to assist
the individual in a more complete adjustment to environment has become a primary commitment of the program.

Bulletin 10, (p. v.)

General Objectives:

Physical Development

Through the participation in large muscle activity, organic reaction and muscular strength and growth are increased.

Neuro-Muscular Control

Through rational exercise neural activity and neuro-muscular control are increased and result in greater skill, accuracy, endurance and agility.

Enjoyment of Abundant, Helpful Recreation

Through wholesome participation, enjoyment of physical activity is stimulated. Opportunities to form habits of right conduct and appropriate social behavior are ever present.

Correction of Orthopedic Defects

Through participation in physical activities that develop strength and flexibility, faulty habits of posture may be overcome. Habits of good posture result in body poise.

Bulletin 11, (p. 5)

General Objectives:

The general objectives for this course are

1. To further the development of organic power or endurance by providing a varied, extensive, and controlled program of vigorous physical activities

2. To promote the development of neuro-muscular skills and the strength essential in furthering normal physical development and good body control

Note: This is important as a safety or survival factor. Good body control is also essential to economy of effort in walking, running, and the other skills involved in daily living.
3. To further the development of mental health (hygiene) by providing an opportunity for pupils to participate in activities which satisfy the emotions, thus tending to countercast such undesirable emotional strains incidental to modern living as fear, anxiety, and worry.

4. To further the development of skills in a wide range of activities which can be carried on outside of school and which may be used as means of enjoyment.

The writer presented quotations to show the lack of uniformity in stating objectives. The four forms suggested by Herep were used in the various courses of study. The infinitive form was selected as a basis for restating objectives, because this form was adopted by the State Curriculum Committee of Texas.

The writer suggested the following divisions for grouping general objectives:

1. Physiological development
2. Mental development
3. Social efficiency
4. Leisure time

The importance of listing objectives is given in the
following statement by McCloy:

An adequate selection of objectives might be classified in numberless ways. One must remember that the simple listing of objectives has no effect upon the character of the individual. It is equally true, however, that the teacher who does not have the mind the results he is seeking to accomplish is apt to miss the goal. It is, therefore, desirable to list such objectives, to think them through, keep them in mind, and from time to time review them, checking up on one's processes.3

The following is a list of objectives restated under the general divisions suggested:

Bulletin 1

Physiological development

To promote habits that endure

To promote the development of neuro-muscular skills and the strength essential in furthering physical development and body control within the range of the pupils' ability

Mental development

To encourage an attitude toward exercise and out-of-door living that will benefit the school years and influence adult habits of recreation

Social efficiency

To develop courage

To develop initiative

To develop honesty

To develop cooperation

---

To develop self-confidence
To develop leadership and "followership"

Leisure time
To provide wholesome activity for the wise use of leisure time

Bulletin 2

Physiological development
To develop neuro-muscular skills
To develop muscle tone
To develop posture
To develop vitality

Mental development
To develop appreciation of rhythm and music
To develop appreciation of nature
To develop appreciation of physical laws

Social efficiency
To develop courage
To develop initiative
To develop honesty, justice, and courtesy
To develop cooperation, sympathy, and loyalty

Leisure time
To provide pupils with knowledge and an attitude toward recreational activities for use of leisure time

Bulletin 3

Physiological development
To promote normal growth and organic development
Mental development

To contribute to the development of desirable health habits, pertinent knowledge, and independent application

Social efficiency

To contribute to the development of desirable traits of character and citizenship

Leisure time

To develop such skills and desires as will encourage active participation in physical recreation during leisure time

Bulletin 4

Physiological development

To help each boy to attain the maximum standard of development

To increase in nerve, organic, and muscular power

To develop coordination, good posture, and rhythm

Mental development

To provide the situations in which the individual may achieve self-confidence, happiness, and satisfaction of accomplishment

Social efficiency

To provide situations during the pupil's school years that will influence his action in adult life, and make him a worthy member of his community
Leisure time

To provide situations in which the student may achieve self-confidence, happiness, and satisfaction in the wise use of leisure time

Bulletin 5

Physiological development

To develop health habits that endure

To develop the neuro-muscular system in general, and particularly in its relation to control over certain fundamental skills

Mental development

To provide for the development of initiative

To provide for activities suitable to the age interests of the group

Social efficiency

To develop loyalty and whole-hearted allegiance

To develop ability to lose uncomplainingly

To develop courtesy and thoughtfulness of others

To develop modesty when winning

Leisure time

To develop a program for after-school hours in the wise use of leisure time

Bulletin 6

Physiological development

To develop organic soundness and health

To develop desirable skills
Mental development

To provide a body of related knowledge

Social efficiency

To develop emotional control for good behavior

Leisure time

(No objectives listed)

Bulletin 7

Physiological development

To practice sound health and safety habits

To appreciate feeling of fitness

To provide activities for large muscle groups

Mental development

To increase power of thought

To develop an understanding of rules of health and safety

Social efficiency

To develop loyalty and understanding of cooperation

To develop a willingness to lead or follow according to situations

Leisure time

To develop skills for recreation and an interest in sports, hobbies, and leisure time activities

Bulletin 8

Physiological development

To promote organic vigor through motor activity

To control the environment of the school so as to protect and promote the health of the individuals concerned
Mental development

To insure a school population physically and mentally fit and able to receive the instruction given

Social efficiency

To influence the conduct of an individual in matters of personal and community health

To assist the individual in making a harmonious adjustment to the social world

To educate in socialization

To teach lessons conducive to getting along better with the pupil's fellow man

Leisure time

To teach recreative skills as a contribution to education in the worthy use of leisure

Bulletin 9

No general objectives stated

Bulletin 10

Physiological development

To develop through rational exercise muscular control, skills and accuracy.

Mental development

(No objectives listed)

Social efficiency

To develop wholesome participation

To develop an appreciation of social behavior

To provide opportunity to form habits of right conduct
Leisure time

(No objectives listed)

Bulletin 11

Physiological development

To develop organic power of endurance

To provide a varied, extensive, and controlled program

for vigorous physical activities

To develop strength and such skills as agility, balance,
and flexibility

Mental development

To provide opportunity for pupils to participate
in activities which satisfy the emotions

To further the development of mental health through
activities to counteract emotional strain causing fear,
anxiety, and worry

Social efficiency

To develop desirable qualities of leadership and follower-
ship

To develop individual and group character traits

Leisure time

To acquire favorable attitudes toward the use of physical
activities as a means of using leisure time

After re-stating the objectives where necessary, the writer
next listed all objectives classified as general and specific for all
activities listed. For further information on curriculum construction,
the frequency of each objective by courses of study was listed.
All objectives classified as general objectives are listed below, along with the bulletin numbers in which they appeared.

Physiological Development

To promote health habits that endure 1 and 5

To promote the development of neuro-muscular skills and the strength essential to furthering physical development and body control within the range of the pupil's ability 1

To develop neuro-muscular skills 2

To develop muscle tone 2

To develop posture 2

To develop vitality 2

To promote normal growth and organic development 3

To help each boy attain the maximum standard of development 4

To increase in nerve, organic and muscular power 4

To develop coordination, good posture, and rhythm 4

To develop the neuro-muscular system in general, and particularly in its relation to control over certain fundamental skills 5
To develop organic soundness and health 6
To develop desirable skills 6
To practice sound health and safety habits 7
To appreciate feeling of fitness 7
To provide activities for large muscle groups 7
To promote organic vigor through motor activity 8
To control the environment of the school so as to protect and promote the health of the individuals concerned 8
To develop through rational exercise muscular control, skills, and accuracy 10
To develop organic power of endurance 11
To provide a varied, extensive, and controlled program for vigorous physical activity 11
To develop strength and such skills as agility, balance, and flexibility 11

Mental development

To encourage an attitude toward exercise and out-of-door living that will benefit the school years and influence adult habits of recreation 1
To appreciate rhythm and music 2
To develop appreciation of nature 2
To develop appreciation of physical laws 2
To contribute to the development of desirable health habits, pertinent knowledge, and independent application

To provide situations in which the individual may achieve self-confidence, happiness, and satisfaction of accomplishments

To provide for the development of initiative

To provide for activities suitable to the age interests of the group

To provide a body of related knowledge

To increase power of thought

To develop an understanding of rules of health and safety

To insure a school population physically and mentally fit and able to receive the instruction given

To provide opportunity for pupils to participate in activities which satisfy the emotions

To further the development of mental health through activities to counteract emotional strain causing fear, anxiety, and worry

Social efficiency

To develop courage

To develop initiative

To develop honesty, justice, and courtesy
To develop cooperation, sympathy, and loyalty
To contribute to the development of desirable
traits of character and citizenship
To provide situations during the pupil's school
years that will influence his action in adult life
and make him a worthy member of his community
To develop loyalty and wholehearted allegiance
To develop ability to base unreasoningly
To develop courtesy and thoughtfulness of others
To develop ability to win modestly
To develop emotional control for good behavior
To develop willingness to lead or follow
according to situations
To influence the conduct of an individual in
matters of personal and community health
To assist the individual in making a harmonious
adjustment to the social world
To educate in socialization
To teach lessons conclusive to getting along better
with his fellow men
To develop an appreciation of social behavior
To develop wholesome participation
To provide opportunity to form habits of right
conduct
To develop desirable qualities of leadership
and "followership"

To develop individual and character traits

Leisure time

To provide wholesome activity for the wise use
of leisure time

To provide pupils with knowledge, and attitude
toward recreational activities for use of leisure time

To develop such skills and desires as will en-
courage active participation in physical recreation
during leisure time

To provide situations in which the student may
achieve self-confidence, happiness, and satisfaction
in the wise use of leisure time

To develop a program for after-school hours for
wise use of leisure time

To develop skills for recreation, and interest in
sports, hobbies, and leisure time activities

To teach recreative skills so as to contribute to
education in the worthy use of leisure

To acquire favorable attitudes toward the use of
physical activities as a means of using leisure time

As evidence of what was being done in presenting specific
objectives for activities in the physical educational program, an
attempt to list all of the objectives and activities was unnecessary;
but lack of uniformity in presenting objectives was shown by a few
quotations.

All four forms appear in stating specific objectives for activities listed. The following examples are used to illustrate the forms appearing in courses of study examined:

1. Infinitive form (objective assigned to tennis; Bulletin 3, p. 79)

   To provide a means of recreation in which both sexes may participate together.

2. Noun form (objective assigned to correction; Bulletin 3, p. 60)

   Pupil knowledge of his own special problem of correction and an appreciation of the importance to improve the condition.

3. Participle form (objective assigned to tennis; Bulletin 3, p. 202)

   Alternating forehand and backhand strokes.

4. Verb form (objective assigned to rhythms; Bulletin 1, p. 67)

   Know tempo, intensity and pitch.

SPECIFIC OBJECTIVES

Bulletin 1, (pp. 80, 95, 86, 135, 69, 132, 67, 93, 56, 142.)

Corrective Physical Education for Groups

In this endeavor to adapt exercises to the group, the achievement aims should be:

1. That each pupil have a correct understanding of the difference between preventive and corrective exercises.

2. Pupil knowledge of his own special problem of correction and an appreciation of the importance to improve the condition.
5. Correct execution of all beneficial preventive and corrective exercises.

4. Ability to relax.

3. Ability to use body in best position possible to the pupil.

2. Knowledge that will carry over into adult life.

Games

1. To develop fundamental recreational knowledge, skill and attitude that will carry over as activities for leisure time in adulthood.

2. Increase organic vigor.

3. To establish nervous stability and poise by directing the restless activity of youth into the safe channels of sports and games.

4. Afford ample training in sportsmanship.

5. Create desire for participation and discourage passive spectatorship.

Intra-school Competition

1. Develop a love for sports by actively taking part in a sport program.

2. Participate in the various sports, and find the field in which to specialize, and continue participation after leaving school.

Calisthenics

Improve posture

Organic stimulation and development

Coordination, neuromuscular skill

Grace, Poise

Self-control

Conscious control of bodily movements

Group consciousness and appreciation of group action
Interscholastic Athletics

1. Participation in highly organized games where competition is highly developed.

2. Develop a high degree of skill.

3. Develop desirable social qualities:
   - Self-confidence
   - Cooperation
   - Responsibility
   - Self-control
   - Generosity
   - Courtesy
   - Fair Play

4. Develop team spirit and school loyalty.

Stunts

Stunts are a form of self-testing activity for the individual or for a group. The objectives are to:

1. Develop suppleness of body and skill.
2. Develop better co-ordinations.
3. Stimulate the development of courage, self-confidence and determination.

Marching.

For individuals: Stimulation, a warming up, without fatigue.
   - Alertness
   - Precision
   - Body control, poise.
   - Fellowship, leadership.

For the class: Facilitate management of the class thereby saving time.
   - Entrenches and exits at demonstrations, pageants, etc.
   - Class control and unity.

3. Learn appreciation of the fundamental technique of major sports.

4. Acquire ability to organize and administer a sports program.

5. Acquire wholesome social relationships and ideals.

6. Acquire group loyalty and team spirit.

7. Acquire high ideals of sportsmanship.

8. Develop leadership.
Rhythmic Activities

1. Development of rhythmic coordination and grace.
2. Development of poise.
3. Recognition of different rhythms and ability to respond by body movements to rhythm as established by clapping hands, stamping feet, beating, tom-tom, music, etc.
4. Appreciate rhythm of architecture, art, various sounds, cloth patterns, laces as well as music.
5. Know tempo, intensity and pitch.
6. Enjoyment of rhythmic expression.
7. Social grace and appreciation of social dancing as respectable and healthy recreation under proper conditions.

Tumbling and Pyramids

1. All round development of body with emphasis on suppleness rather than strength. Muscles of back, shoulders and abdomen are involved to a large extent.
2. Increased respiration and circulation without undue taxation of heart.
3. Development of greater skill, litheness, grace and agility.
4. Further opportunity to satisfy natural interest in self-testing.
5. Teach pupil how to handle body in falling to minimize injury.

For the school: Carry over value for the fire drills, civic parades and similar occasions where moving of large numbers in an orderly and easy manner is desirable.

Play Days

1. To provide an opportunity for all pupils to participate in athletic events and games under wholesome social conditions.
2. To foster better community relationships by bringing pupils, parents and faculty together in an enjoyable social event.

3. To create pupil interest in developing the maximum skill in the activities.

4. To demonstrate the results of the training in activities taught in the physical education program.

SPECIFIC OBJECTIVES

Bulletin 3. (pp. 88, 79, 115, 43, 89, 64)

Swimming and Life-saving

-To develop a healthful and pleasurable means of recreation for both present and future use.

-To develop a satisfactory exercise for those who must avoid strenuous exercise and strain as well as for those who are physically strong.

-To give knowledge of health and safety precautions affecting both self and others.

-To give knowledge and practice in life-saving methods.

Tennis

-To provide a means of recreation in which both sexes may participate together.

-To develop skill in a game for which public provision is widely made.

Rhythmic Activities

-To help develop social ease through the training offered by rhythmic activities in co-ordination, posture, poise, self-expression, courtesy.

-To furnish opportunity for pleasurable rhythmic expression in a wholesome environment, thereby helping to curtail the appeal which may come from undesirable places of recreation.

-To develop the organic and neuro-muscular system through the big muscle activity involved.
To develop a feeling for and an appreciation of beauty through motion, music, color, form.

Basket Ball

To provide vigorous exercise through the running, jumping, and throwing required by the game.

To improve bodily poise and balance through the quick movements and co-ordinations necessary to the game.

To afford practice in co-operation through group effort and team play.

To improve posture through the upward reaching and stretching necessary to the game.

Hockey

To provide vigorous outdoor activity through the running and hitting required in the game.

To afford practice in co-operation through group effort and team play.

To promote mental alertness through the different types of play required in different parts of the field.

To give knowledge and dexterity in a game which will hold interest over a long period because of the opportunity it affords for unlimited combinations of team play.

Soccer

To provide vigorous exercise through the leaping, swift running, and forceful kicking required by the game.

To improve bodily poise and balance through the quick movements and co-ordinations necessary to the game.

To afford practice in co-operation through group effort and team play.

To give knowledge and skill in a game which requires little equipment and expenditure and which is suitable for later use, especially by boys.
SPECIFIC OBJECTIVES

Bulletin 2, Pp. 203, 171, 172)

Correctives

To correct faulty body mechanics for the purpose of giving the vital organs better opportunity to perform their functions.

To build up positive physical fitness by improving muscle tone and by developing functional harmony and poise.

To correct and develop habits of and attitudes toward health and physical activity.

To improve and develop habits of individually correct body mechanics in motor activities.

Intramural Competition

The educational objectives of elective physical activities are:

1. Activity habits through interests in physical activity
2. Initiative and self-reliance
3. Self-control
4. Fair play, including honesty, justice and courtesy
5. Cooperation, including leadership and fellowship
6. Sympathy
7. Courage
8. Appreciation of personality
9. Appreciation of emotional expression and control
10. Appreciation of enjoyment in effort and accomplishment
11. Appreciation of rhythm and music
12. Normal bodily growth
13. Vitality, including endurance and resistance
14. Neuromuscular skills
15. Loyalty: for example, wholesome loyalties etc.
Bulletin 8, (p. 100)

To bring an understanding to all students concerning the cause, nature, and prognosis of all defects.

To arrest or improve the specific defect of the stunt.

To prevent existing defects from becoming worse.

To offer opportunities for prolonged treatment of certain defects wherever necessary.

Bulletin 10, (pp. 50, 73, 81)

Calisthenics

Show appreciation of value of exercise
Show improvement in organic reaction
Show improvement in muscle tone
Respond quickly to command
Show improved coordination

Marching

Keep even pace while marching and running
Respond accurately to formal commands
Maintain good posture while marching
Keep in rhythm and in step while marching and running

Stunts and Tumbling

Maintain momentarily a free support on hand (as in handstand)
Control the body movements while turning or twisting in the air
Demonstrate improvement in judgement, in timing, and in accuracy of body movement.

Be able to lead a squad in tumbling.

After listing specific objectives for activities in the various courses of study, it may be necessary to restate some of the objectives to meet the criteria for stating objectives in the infinitive form.
Specific objectives assigned to activities appearing in the courses of study investigated are listed below, classified as to type of activity to which they are assigned, along with the bulletin number in which they appeared.

Correctives

To develop in each pupil a correct understanding of the difference between preventive and corrective exercises

To develop a knowledge of the pupil's own special problem of correction and an appreciation of the importance of improving his condition

To develop ability to relax

To develop ability to use body in best position possible for the pupil

To develop attitudes and knowledge that will carry over into adult life

To correct faulty body mechanisms for the purpose of giving the vital organs better opportunity to perform their functions

To build up positive physical fitness by improving muscle tone and by developing functional harmony and poise

To correct and to develop habits of and attitudes toward health and physical activity

To improve and to develop habits of individually correct body mechanics in motor activities
To bring understanding to all students concerning the cause, nature, and prognosis of all defects
To arrest or improve the specific defect of the student to prevent existing defects from becoming worse
To offer opportunities for prolonged treatment of certain defects wherever necessary

Games
To develop fundamental recreational knowledge, skill, and attitudes that will carry over as activities for leisure time in adulthood
To increase organic vigor
"To establish nervous stability and poise by directing the restless activity of youth into the safe channels of sports and games. (Chicago Syllabus, 1932)"
To afford ample training in sportsmanship
To create a desire for participation and to discourage passive spectatorship

Intramural Competition
To develop a love for sports by actively taking part in a sport program
To participate in the various sports and to find the field in which to specialize, and to continue participation after leaving school
To learn appreciation of the fundamental techniques of major sports

To acquire ability to organize a sports program

To acquire wholesome social relationships and ideals

To acquire group loyalty and team spirit

To acquire high ideals of sportsmanship

To develop leadership

To develop activity habits through interests in physical activity

To develop initiative and self-reliance

To develop self-control

To develop fair play, including honesty, justice, and courtesy

To develop cooperation, including leadership and "fellowship"

To develop sympathy

To develop courage

To develop appreciation of personality

To develop appreciation of emotional expression and control

To develop appreciation of "enjoyment" in effort and accomplishment

To develop appreciation in rhythm and music

To develop normal bodily growth
To develop vitality, including endurance and resistance 2

To develop neuromuscular skills 2

To develop loyalty to truth as the pupil sees it 2

Rhythmic Activities

To develop rhythmic coordination and grace 1

To develop poise 1

To develop a recognition of different rhythms and ability to respond by body movements to rhythm as established by clapping hands, stamping feet, beating, tom-tom, music, etc. 1

To appreciate rhythm of architecture, art, various sounds, cloth patterns, lace, as well as music 1

To know tempo intensity and pitch 1

To enjoy rhythmic expression 1

To develop a social grace and appreciation of social dancing as respectable and healthy recreation under proper conditions 1

To help develop social ease through the training offered by rhythmic activities in co-ordination, posture, poise, self-expression, and courtesy 3

To furnish opportunity for pleasurable rhythmic expression in a wholesome environment, thereby helping to curtail the appeal which may come from undesirable places of recreation 3
To develop the organic and neuromuscular system through the big muscle activity

To develop a feeling for and an appreciation of beauty through motion, music, color, and form

Tumbling and Pyramids

To develop the body with emphasis on suppleness rather than strength. Muscles of the back, shoulders, and abdomen are involved to a large extent in tumbling.

To increase respiration and circulation without undue taxation of the heart

To develop greater skill, lithesomeness, grace, and agility

To provide opportunity to satisfy natural interests in self-testing

To gain a knowledge of how to handle the body in falling to minimize injury

To aid development of courage, initiative, perseverance, pride, self-satisfaction, and confidence

To maintain momentarily a free support on hand (as in a hand stand)

To control the body movements while turning or twisting in the air

To demonstrate improvement in judgement, in timing, and in accuracy of body movement

To be able to lead a squad in tumbling
Galisthenics

To improve posture 1
To emphasize organic stimulation and development 1
To develop coordination and neuromuscular skill 1
To develop grace and poise 1
To develop self-control 1
To develop conscious control of bodily movements 1
To develop group consciousness and appreciation of group action 1
To show appreciation of the value of exercise 10
To show improvement in organic reaction 10
To show improvement in muscle tone 10
To respond quickly to commands 10
To show improved coordination 10
To show muscular response that will demonstrate a sense of rhythm 10

Inter-scholastic Athletics

To provide for participation in highly organized games where competition is highly developed 1
To develop a high degree of skill 1
To develop desirable social qualities: self-confidence, responsibility, generosity, fair play, self-control, and courtesy 1
To develop team spirit and school loyalty 1

Basket Ball

To provide vigorous exercise through the running,
jumping, and throwing required by the game

To improve bodily poise and balance through the quick movements and co-ordination necessary to the game

To afford practice in co-operation through group effort and team play

To improve posture through the upward reaching and stretching necessary to the game

Stunts
To develop suppleness of body and skill
To develop better co-ordination
To stimulate the development of courage, self-confidence and determination

Marching
To provide a warming up without fatigue
To develop alertness
To develop precision
To develop body control and poise
To develop leadership and "fellowship"
To keep in rhythm and in step while marching and running
To keep even paces while marching and running
To respond accurately to command
To maintain good posture while marching

Play Days
To provide an opportunity for all pupils to participate in athletic events and games under wholesome
social conditions

To foster better community relationships by bringing pupils, parents, and faculty together in an enjoyable social event

To create pupil interest in developing the maximum skill in the activities

To demonstrate the results of the training in activities taught in the physical education program

Swimming and Life-Saving

To develop a healthful and pleasurable means of recreation for both present and future use

To develop a satisfactory exercise for those who must avoid strenuous exercise and strain, as well as for those who are physically strong

To give knowledge of health and safety precautions affecting both self and others

To give knowledge and practice in life-saving methods

Tennis

To provide a means of recreation in which both sexes may participate together

To develop skill in a game for which public provision is widely made

To show ability to do the various strokes in tennis
Hockey

To provide vigorous outdoor activity through the running and hitting required in the game.

To afford practice in co-operation through group effort and team play.

To promote mental alertness through the different types of play required in different parts of the field.

To give knowledge and dexterity in a game which will hold interest over a long period, because of the opportunity it affords for unlimited combinations of team play.

Soccer

To provide vigorous exercise through leaping and swift running and forceful kicking required by the game.

To improve bodily poise and balance through the quick movements and co-ordination necessary to the game.

To afford practice in co-operation through team effort and team play.

To give knowledge and skill in a game which requires little equipment and expenditure and which is suitable for later use, especially by boys.
After listing specific objectives for activities, it was found that only five courses of study contained specific objectives for activities listed. The following table lists activities by courses of study.

**TABLE I.**—ACTIVITIES APPEARING IN COURSES OF STUDY LISTING SPECIFIC OBJECTIVES

<table>
<thead>
<tr>
<th>Activities</th>
<th>Courses of Study</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Calisthenics</td>
<td>X</td>
<td>2</td>
</tr>
<tr>
<td>Correctives</td>
<td>X</td>
<td>3</td>
</tr>
<tr>
<td>Games</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Hockey</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Intramurals</td>
<td>X</td>
<td>2</td>
</tr>
<tr>
<td>Interscholastic athletics</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Marching</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Play day</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>Stunts</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>Swimming</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>Soccer</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Tennis</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
In comparing the activities having specific objectives by courses of study with the fourteen activities suggested by LaPorte, there were only three activities included in the fourteen that had specific objectives listed. However, all of the activities suggested by LaPorte appeared in two or more courses of study. The fourteen activities listed in Table II were given first rank by LaPorte in a study of the value of activities for boys in physical education.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Activity Listing Specific Objectives</th>
<th>Courses of Study Listing Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swimming and diving</td>
<td>x</td>
<td>4</td>
</tr>
<tr>
<td>Football</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Basketball</td>
<td>x</td>
<td>4</td>
</tr>
<tr>
<td>Tennis</td>
<td>x</td>
<td>4</td>
</tr>
<tr>
<td>Playground ball</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Soccer</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Speedball</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Volleyball</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Baseball</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Touch football</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Life saving</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Bowling</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Gym games and relays</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Track and field</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

This diagram appeared in Bulletin 4 (p.27).

Team Games and Their Expected Outcomes

- Agility
- Rhythm
- Alertness
- Speed
- Balance
- Coordination
- Accuracy
- Courage
- Sportsmanship
- Self-control
- Judgment
- Leadership
- Initiative
- Cooperation
- Subordination
- Loyalty
- Perseverance
- Recreation
Summary

This chapter dealt with the procedure of listing some of the general objectives and specific objectives as they appeared in the courses of study selected. All objectives were restated, where necessary, in the infinitive form to maintain a uniform method of presenting objectives for identification.

The objectives were stated clearly and in non-technical language for both the general and specific objectives listed in courses of study. The general objectives were stated in the language of the teacher and were primarily teacher goals of attainment or outcomes. The specific objectives for activities were stated in the language of the learner and were classified as pupil objectives.

Ten of the twelve courses of study listed general objectives in one of the four forms generally used in presenting objectives. Only one course of study used the infinitive form in presenting general objectives, while three courses of study use the infinitive form in presenting specific objectives for activities listed. It was of interest to note that only one general objective appeared in more than one course of study; however, there were many similarities under each division. The general objectives are restated under the criteria set up, and a total of seventy-two objectives are listed: physiological development, twenty-two; mental development, twenty-one; social efficiency, twenty-one; leisure time, eight. Two courses of study failed to list objectives for leisure time, and one did not list objectives for mental development.
There were 115 specific objectives listed for fourteen activities. Of this number, there were no duplications in any two or more courses of study. None of the courses of study list specific objectives for all activities. There were only three of the fifteen activities listed with specific objectives among the fourteen activities listed by LaPorte.

The next chapter will be an analysis of facilities and equipment suggested for carrying out objectives for activities listed.
CHAPTER II

SUGGESTED FACILITIES AND EQUIPMENT

In the preceding chapter, all general objectives and specific objectives listed for activities found in the twelve recent courses of study for high school boys were listed and restated, where necessary, to meet the criteria for stating objectives, and were tabulated by courses of study under the topics of activities for which they were stated. The next procedure in this analysis was to detect and tabulate by courses of study the suggested facilities, equipment, and supplies for activities listed. This analysis should be of value to teachers and physical education directors in the field, especially those who are revising the curriculum to meet certain standards.

No worthy program of physical education can be carried on without adequate equipment and proper supplies. . . .

Equipment and supplies are the tools of instruction in physical education and are comparable to textbooks and laboratory equipment in other fields.¹

In making this analysis, it was desirable to have a standard by which to evaluate the courses of study, listing facilities, equipment, and supplies. In view of this fact, a score card for evaluating physical education programs for high school boys² was selected as a guide in making this evaluation.

¹Bulletin 7, p. 27.
Tables for checking facilities, equipment, and supplies for in-door and out-door activities, and correctives by courses of study are found on pages 65, 66, 67, and 69. The items listed on these charts were the minimum equipment that should be possessed by all schools, according to this score card. No attempt was made to suggest the number of balls or bats, etc., or the size of exercise floor, but to merely determine whether these were included in the list of equipment suggested by each bulletin.

In making a comparison of the various courses of study, a presentation of facilities, equipment, and supplies, showed the recent trends in this phase of the physical education program.

The following is a list of quotations by courses of study:

Facilities and Equipment in Physical Education

Bulletin 1, (pp. 25-27)

1. Facilities:
   (a) Indoors:
   Gymnasium——
   Numbers: One for boys and one for girls in the larger schools;
   Smaller schools, one gymnasium and one exercise room where
   2 physical education teachers are; 1 physical education teacher
   and 1 health teacher;
   Smaller school, one gymnasium if only one physical director is assigned.

   Size:
   Minimum——

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>Width</th>
<th>Length</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-150</td>
<td>46'</td>
<td>80'</td>
<td>18'</td>
</tr>
<tr>
<td>-500</td>
<td>50'</td>
<td>85'</td>
<td>20'</td>
</tr>
<tr>
<td>-900</td>
<td>60'</td>
<td>90'</td>
<td>22'</td>
</tr>
<tr>
<td>-900 over</td>
<td>70'</td>
<td>100'</td>
<td>22'</td>
</tr>
</tbody>
</table>
Classroom—for health education classes, group discussions, club room, convenient to physical education department.
Corrective Room—use also for rest room if separate rest room is not available.
Minimum 20' x 20' x 12'.
Instructor's offices.
Supply Rooms (or cabinets).
Storage and Apparatus Room.
Dressing Rooms and Lockers.
Shower Rooms.
Toilets and Lavatories.
Swimming Pool.

(b) Outdoors
Courts: Basketball, 35' x 70' plus 5 feet of side and end spaces; for good drainage slope 2' for 50'; run north and south; permanent lines; good backstops and goals.
Handball, 20' x 36'; run north and south.
Tennis, north and south, 36' x 78' nets;
total width 50'; total length 120'; slope for drainage 2'' for 50'.
Paddle Tennis, 18' x 36' nets; total width, 28', total length 30' (60' where superimposed on tennis courts); 4 courts may be laid out on one regular tennis court.
North and south.
Quoitennis, 18' x 24' nets, total width 24' x 28'. Removable metal posts or wood posts 4' x 4' x 5' above ground; net 1' wide.
Volley Ball, north and south.
Horseshoe 40' for boys, 30 to 30' for girls.
Baseball Diamond.
Hockey, Soccer and Speedball Fields.
Archery Lanes.
Marked space for 50, 75, and 100 yd. dash.
High and Broad Jump Pits with take-off board.
Shot-put Circles.
Target Frames for Accuracy throws.
440 Yd. Goal Ginder Track.

2. Equipments
Piano
Radio-Victrola
Mats
Ropes
Rings
Horse
Parallel Bars

Jumping Standards
Balance Beams
Ladders
Corrective Room Equipment
Scales
Testing Equipment, Spirometer, etc.
3. Supplies (Minimum)

**Indoor**
- 4 Basket balls
- 6 Handballs
- 1 Soccer Ball
- 2 Volleyballs
- 3 Volley nets
- 4 Indoor Baseballs 10, 12, 14" 
- 4 Indoor Baseball Bats
- 12 Beanbags
- 1 Set Indoor Bases
- 6 Jumping Ropes
- 24 Indian Clubs

**Outdoor**
- 4 Playground Balls
- 6 Hockey Balls
- 2 Soccer Balls
- Playground Baseball Bats
- 3 Sets Playground Bases
- Hockey Sticks
- 1 Sack of Lime
- 8 Pair Horseshoes
- 2 5-Lb. Shells
- 1 12-Lb. Shot
- 2 Small Footballs
- for Jr. H. S.
- 1 Set of Goals
- Measuring Rods and Tapes

**DESIRABLE "EXTRAS"**
- Archery Bows and Arrows, Targets and Basals,
  Arm and Finger Guards
- Golf Balls
- Tennis Balls
- Hockey Equipment
- Golf Sticks: Driver, Mashie, Mid-Iron and Putter
- Badminton Set
- Croquet
- Croquet Set
- Tennis Racquets

4. Care of Equipment:

The physical education teacher should have a thorough knowledge of how to take care of all equipment and should instruct all monitors and pupil assistants in the proper care of supplies. Constant care will prolong the life of all balls, sticks, racquets, bows, and arrows and so forth.
Suggested List of Playground Equipment

<table>
<thead>
<tr>
<th>Play Supplies</th>
<th>Permanent Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport balls (rubber</td>
<td>Jump standards</td>
</tr>
<tr>
<td>Baseballs, indoor</td>
<td>Tether ball standards</td>
</tr>
<tr>
<td>Basketball</td>
<td>Handball court</td>
</tr>
<tr>
<td>Volley balls and net</td>
<td>Valley ball standards</td>
</tr>
<tr>
<td>Soccer footballs</td>
<td>Shot</td>
</tr>
<tr>
<td>Handballs</td>
<td>Hurdles</td>
</tr>
<tr>
<td>Horseshoes</td>
<td></td>
</tr>
<tr>
<td>Playground ball bats</td>
<td></td>
</tr>
<tr>
<td>Whistle</td>
<td></td>
</tr>
<tr>
<td>Paddle tennis</td>
<td></td>
</tr>
<tr>
<td>First-aid kit</td>
<td></td>
</tr>
<tr>
<td>Tape measure</td>
<td></td>
</tr>
</tbody>
</table>

The play field should provide the following:

- Jumping pits (high and broad)
- Baseball diamonds (soft ball)
- Handball and volleyball courts
- Horseshoe courts
- Tennis courts

Suggested List of Gymnasium Equipment

<table>
<thead>
<tr>
<th>Supplies</th>
<th>Permanent Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseballs 12&quot; and 14&quot;</td>
<td>Climbing ropes</td>
</tr>
<tr>
<td>Volleyballs and net</td>
<td>Adjustable flying rings</td>
</tr>
<tr>
<td>Health balls or similar</td>
<td>Adjustable parallel bars</td>
</tr>
<tr>
<td>heavy inflated rubber balls</td>
<td>Adjustable balanced</td>
</tr>
<tr>
<td>Soccer footballs</td>
<td>ladder</td>
</tr>
<tr>
<td>Playground ball bats</td>
<td>Vaulting horse</td>
</tr>
<tr>
<td>Short jumping ropes (7')</td>
<td>Vaulting box</td>
</tr>
<tr>
<td>Tug-of-war rope</td>
<td>Chinning bars</td>
</tr>
<tr>
<td>Fins</td>
<td>Gymnastics mats, size 2&quot; x 5' x 10'</td>
</tr>
<tr>
<td>First-aid kit</td>
<td>Jump standards</td>
</tr>
<tr>
<td>Ball inflator</td>
<td>Beat boards</td>
</tr>
<tr>
<td>Tape lines</td>
<td>Steel cabinets for game material</td>
</tr>
</tbody>
</table>

The playing space and courts should be properly marked. Playing surfaces and equipment (indoor and outdoor) should be inspected carefully and with reasonable frequency, and any defect discovered should be reported to the proper authorities for remedy so that the safety of the pupils may be assured.
Suggested Equipment for Corrective Activity Room

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scales</td>
<td>Full length mirror (triple)</td>
</tr>
<tr>
<td>Dynamometer</td>
<td>Individual mats</td>
</tr>
<tr>
<td>Spirometer</td>
<td>Beveled balance beam</td>
</tr>
<tr>
<td>Stall bars and benches</td>
<td>Silhouettograph or Schematograph</td>
</tr>
<tr>
<td>Wall parallel bars</td>
<td>Pedograph</td>
</tr>
<tr>
<td>Suspended horizontal ladder</td>
<td>Adjustable plinth</td>
</tr>
<tr>
<td></td>
<td>Triplex pulley machine</td>
</tr>
</tbody>
</table>

Bulletin 5, (pp. 22-23)

**Equipment and Supplies**

The school plant should be equipped with:

1. A gymnasium (43 x 66 feet or better), with the floor properly marked for boys' and girls' games, and such working equipment (accepted types of apparatus and play equipment) that aid a qualified teacher in the development of a broader program.

2. Accessory gymnasium space to provide for smaller group activities and individual programs.

3. Locker rooms and lockers of such type and quantity as to safeguard personal property and to provide sanitary and adequate dressing space for all classes.

4. Showers in sufficient numbers for the largest classes, with hot water, soap and towels available during the school day.

5. Outdoor play space or athletic fields; the size and number will depend upon the size of the school. There should be space enough to permit both boys and girls to play at the same time, particularly after school hours. Both junior and senior high schools play athletic types of games; hence the space must be ample and safe.

6. Supplies. The supplies in physical education and playground activities are the tools with which the teachers work. These tools should be supplied by school authorities. Contributions from Parent-Teacher organizations and other sources may be used as a start but should by no means be relied upon to continually provide this essential part of school equipment.
The cost of supplies for all playground and school activities for the year ranges from 25 cents per capita in the lower-age levels to 90 cents per capita in the upper-age levels.

**Minimum Essentials in Providing For:**

**Indoor Activities:**

- Four basket balls
- One set of basket ball baskets
- One extra set of basket ball baskets for practice shooting
- Two volley balls
- Two volleyball nets
- Two soccer balls
- Four indoor baseballs — size 10, 12, or 14.
- Four indoor baseball bats
- Two sets of jump standards
- Eight gymnasium mats — size 5' x 10'
- Shower baths with available hot water and soap

**Outdoor Activities:**

- Four soccer footballs
- Three footballs (small for junior high school)
- One set football goals
- Four playground balls — No. 12.
- Space marked off for 50, 75, and 100 yard dash.
- Space for broad jump with take-off board and landing pit of soft sand or sawdust
- Space for high jump with landing pit of sawdust
- Space for shot-put circle
- Baseball diamond (playground ball).
- One 50' steel tape measure

**Desirable Additions:**

- Baseball diamond and bases. Horseshoe pitching courts — 60' for boys, 30' to 30' for girls. Eight pairs of horseshoes. Soccer football field (hockey field). Two or more tennis courts. Cinder track — 440-yard oval. Two 6-lb. shot — one 12-lb. shot. High horizontal bar, parallel bars, stall bars, vaulting box. Four or more handball and walls.

**Bulletin 4 (p. 10)**

**Provision for Equipment**

In addition to the materials listed under the organization of leadership on page 7, the following equipment is suggested:
A. Balance tests—chinning bar, jumping pit, 100-yard straightaway.

B. Stunts—mats (old mattresses covered with canvas, heavy muslin—Sea Island domestic, or heavy oil-cloth). These mats can be made at a very reasonable price and are essential for good results.

C. Rhythms—Viestrola, records, piano, sheet music. The cooperation of the music department should be obtained regarding equipment, and instruction.

D. 1. Track and field events for boys—Track with the 60, 80, 70, 80, 100 yards, for relay permanently indicated by 6" pyramids staked flush with the ground. Jumping standards; cross bars; well-spaced pits with a measuring bar flush with the ground on the side target pitch (painted on oilcloth, canvas, or wood); iron shots; and other necessary equipment, including tapes.

2. Track events

   a. Run and catch relay—permanent posts about 6' 6" above ground, 35' apart; rope 7' 6" from ground.

   b. Obstacle relay—basket without backboard, movable obstacles, cross bars.

   c. Hit and run the bases—hit ball diamond.

E. Team games: Dodge balls, soccer balls, basket balls, baseballs, hit balls, volley balls, mats, horseshoes, stakes. All balls should be treated with saddle soap before being used, and from time to time. Ripped balls should be sent for repairs. The life of balls can be greatly increased by these methods. Pump, laces, laces, repair kit should be on hand.

F. Fields, floors: A well-marked field or floor greatly increases the enjoyment and general value of the game. Paint, lime or shallow trenches are used.

Bulletin 7, (pp. 6-7)

Facilities

1. Administrative Offices.

   The office of the Director is important as a consultation room and as a workshop. It should be attractive, clean, equipped with filing cabinets, first-aid kit, desk, toilet facilities, and storage cabinets.
2. The Gymnasium.

The physical education plant should provide maximum play space for students rather than accommodation for spectators. This play space is best provided for in gymnasiums of moderate size, each building having at least two (one for boys and one for girls) rather than one room of greater size.

a. Suggested dimensions:
   (1) Minimum 45' x 60'
   (2) Medium 60' x 80'
   (3) Maximum 70' x 90'

b. If partitions are used they should be sound proof. There are several satisfactory folding partitions procurable.

c. The auditorium-gymnasium combination is generally unsatisfactory. Where it is necessary to use it, the room should be planned as a gymnasium with ornamentation at a minimum and protected.

d. Whenever it is possible, the physical education plant should be equipped with a separate ventilating and heating unit, so that noises will not carry.

e. Gymnasium temperature should range from 50° to 60°.

f. Glazed brick walls without ridges are most desirable for the gymnasium and are attractively colored and easily cleaned.

g. Floors of hard maple are most desirable, but pine blocks are used quite commonly and satisfactorily.

h. Floor diagrams and equipment should be provided for the following at least:
   (1) Basketball (additional goals for practice)
   (2) Indoor baseball
   (3) Volleyball
   (4) Paddle tennis
   (5) Golf cage
   (6) Hand ball
   (7) Badminton
   (8) Tennis practice line

i. Apparatus.
   (1) For suspension—flying rings, horizontal bar, stall bars, ropes.
(2) For vaulting—bar, horse, buck, vaulting bar, parallel bar.
(3) Mats.

j. Storage room for apparatus.
k. Supplementary equipment—piano, victrola, bulletin board.

3. Athletic Fields.
   a. Size and number depend upon number of students.
      Recommended:
      (1) For junior high school 5-8 acres or more
      (2) For senior high school 10 acres or more.
   b. Play areas to be considered for other than the games requiring large areas.
      (1) Volley ball
      (2) Golf putting green
      (3) Track and field
      (4) Tennis
      (5) Ring tennis
      (6) Croquet

4. Service Unit.
   Locker, shower and dressing room facilities.
   a. Types of lockers.
      (1) Individual storage lockers with interchangeable locks best. Size 7' x 12' x 36'.
      (2) Enough large lockers to accommodate largest class.
   b. Showers.
      (1) Individual showers centrally controlled
      (2) Individually controlled showers
      (3) Maze showers.
   c. Towels.
      (1) Commercial towel and laundry service
      (2) Towels owned and laundered by the school
      (3) Pupil owned towels

5. Health Unit.
   a. Examination room.
   b. First-aid room.
   c. Room for individual activities — 20' x 30', well lighted, heated and ventilated, and equipped with stall bars, mats, high ladder, suspended rings, wands, Indian Clubs, full length mirror, and table.
BULLETIN 10, (pp. 155-160)

EQUIPMENT AND FACILITIES

I. Teacher's office
A. Equipment - The office should be equipped with at least:
   1. Desk and chair
   2. File - Refer to stencil "Abridged Filing System for Senior High School Health Education Teachers."
   3. Dressing room and shower.

II. Gymnasium
A. Equipment - Gymnasium should be equipped with at least:
   1. Game box. This should be equipped with:
      a. Balls: Indoor baseballs
cage balls
soccer balls
volley balls
basketballs
   b. Bats: indoor
c. Beanbags
d. Laces
e. Laces
f. Rope for jump standards
g. Bases
h. Volley ball net
i. Measuring tape, 50 ft.
j. Tennis net
k. Pumps
l. Tennis balls
   Game box should be locked except when in use.
   2. Basketball goals
   3. Bulletin board
   4. Thermometer or thermostat
   5. Box or hangers for dumb-bells
   6. Dumb-bells
   7. Box or hangers for Indian clubs
   8. Indian clubs
   9. Box or rack for wands
   10. Wands
   11. Field hockey sticks (senior high only)
   12. Mats
12. Jumping standards
14. Floor clearly marked: circle, square, etc.
15. Screens for windows.

III. Swimming pool
   A. Equipment
      1. Spring board
      2. Bamboo poles (at least four)

IV. Locker room or Basket Room

   Locker room or basket room should be equipped with a sufficient number of lockers or baskets so that there is one for each pupil in the school. The room should be kept clean and well ventilated and locked when not in use or under supervision.

Bulletin II, (pp. 27-28)

EQUIPMENT

A. Gymnasium (for self-testing activities, athletic games, and apparatus exercises)

   Note: The starred items may be used for outdoor work in schools where gymnasium facilities are not available.
   
   Balance beams
   Basketball goals*
   Climbing ropes*
   Climbing poles*
   Horizontal bars*
   Horse
   Mats for tumbling
   Parallel bars
   Stall bars and benches
   Volleyball standards and net*
   Vaulting box or buck

B. Outdoor (for athletic games and sports)

   Note: All playing courts and areas should be marked off in accordance with official rules for the various athletic games.
   
   Bases for baseball diamond,
   3 to a set
   Football goal posts
   Frames for target, baseball accuracy throw
   Home plate for baseball diamonds
   Shot (8-lb., 12-lb.)
   Tennis post and net
   Iron pegs for horseshoe courts
Jumping standards
Pits (for high and broad jumps)
Pole (pole vault for senior high school)

SUPPLIES
Baseballs (playground 12-inch or 9-inch)
Baseballs (league or hard ball)
Baseball bats (playground)
Baseball bats (regulation)
Basket balls
Charts: weight, posture, achievement tests
Crossbars, bamboo for high jump
First-aid supplies
Footballs (Rugby for boys)
Gloves, boxing, boys
Lines for marking courts
Tape lines
Tennis balls
Tennis rackets
Volley balls
Archery bows and arrows
Archery targets
Whistles

The flexibility of the courses of study depends largely upon the training of the teacher in organizing and in administering a program in physical education. The Connecticut course of study suggested a plan for solving small high school problems.

Many small high schools find that their program, equipment, room space or finances allow only limited facilities for the teaching of physical education. Some of these schools do not have gymnasiums; some do not have special teachers. It is suggested that these schools try out some definite arrangement of time schedule, program content and lesson plan that will best fit local conditions. The following suggestions may be useful:

1. Make a careful study of possible facilities in the community.
2. The town hall, Grange hall, or church recreation hall may lend itself to a worthwhile program.
3. Adjust the schedule to allow for going to and from the place providing facilities.
4. The organization of classes may necessitate having two grades together, but boys and girls should be separated.

5. Trained leadership is essential to a worthwhile program. To insure a minor in physical education a program of "in service" may be advised.3

The need of some equipment was evident in all activities listed in the various courses of study; however, some of the courses of study did not suggest equipment.

One course of study suggested standards for facilities, equipment, and supplies for each activity listed.4

The lack of uniformity in presenting facilities and equipment made it difficult to detect all of the suggested items in the various courses of study in relation to the criteria selected.

3 Bulletin 5, p. 25.

4 Bulletin 8.
The list of items in Tables III, IV, V, and VI were taken from the score card selected for evaluating courses of study. The asterisk indicates that standards were suggested in the course of study; the "x" indicates the frequency by course of study.

**TABLE III.—COURSES OF STUDY LISTING INDOOR FACILITIES**

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Courses of Study</th>
<th>Total Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
</tr>
<tr>
<td>Exercise floor</td>
<td>x x x x x x x x</td>
<td>7</td>
</tr>
<tr>
<td>Bleachers</td>
<td>x</td>
<td>1</td>
</tr>
<tr>
<td>Apparatus or activity room</td>
<td>x x x x x x x x</td>
<td>4</td>
</tr>
<tr>
<td>Kitchen or kitchenette</td>
<td>x</td>
<td>1</td>
</tr>
<tr>
<td>Glass room</td>
<td>x</td>
<td>3</td>
</tr>
<tr>
<td>Corrective room</td>
<td>x</td>
<td>3</td>
</tr>
<tr>
<td>Rest room</td>
<td>x</td>
<td>2</td>
</tr>
<tr>
<td>Health unit room</td>
<td>x x x x x x x x</td>
<td>4</td>
</tr>
<tr>
<td>Instructor's office</td>
<td>x x x x x x x x</td>
<td>5</td>
</tr>
<tr>
<td>Supply room</td>
<td>x</td>
<td>2</td>
</tr>
<tr>
<td>Store room</td>
<td>x</td>
<td>3</td>
</tr>
<tr>
<td>Dressing room</td>
<td>x x x x x x x x</td>
<td>4</td>
</tr>
<tr>
<td>Extra dressing room</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Lockers</td>
<td>x x x x</td>
<td>5</td>
</tr>
<tr>
<td>Drying room (suits)</td>
<td>x x x</td>
<td>1</td>
</tr>
<tr>
<td>Shower room</td>
<td>x x x x x x x x</td>
<td>6</td>
</tr>
<tr>
<td>Swimming pool</td>
<td>x</td>
<td>3</td>
</tr>
<tr>
<td>Sanitary fixtures</td>
<td>x</td>
<td>2</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Courses of Study</th>
<th>Total Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Basketball courts</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Handball courts</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Tennis courts</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Paddle tennis courts</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Quoit tennis courts</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Volley ball courts</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Baseball diamonds</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Playground baseball diamonds</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Football field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soccer field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speedball field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Pole vault pits</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Broad jump pits</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>High jump pits</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Bleachers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archery lanes</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Croquet courts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Golf driving cages</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Golf putting greens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horseshoe courts</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Picnic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE V—COURSES OF STUDY LISTING SUPPLIES FOR ACTIVITIES

<table>
<thead>
<tr>
<th>Supplies</th>
<th>Course of Study</th>
<th>Total Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archery arm and finger guard</td>
<td>1 2 3 4 5 6 7</td>
<td>3</td>
</tr>
<tr>
<td>Archery arrows</td>
<td>1 2 3 4 5</td>
<td>3</td>
</tr>
<tr>
<td>Archery bows</td>
<td>1 2 3 4 5</td>
<td>3</td>
</tr>
<tr>
<td>Archery targets and cases</td>
<td>1 2 3 4 5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Balls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseballs (hard)</td>
<td>x</td>
<td>3</td>
</tr>
<tr>
<td>Playground</td>
<td>x</td>
<td>5</td>
</tr>
<tr>
<td>Basketball</td>
<td>x</td>
<td>7</td>
</tr>
<tr>
<td>Football</td>
<td>x</td>
<td>3</td>
</tr>
<tr>
<td>Golf balls</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Handballs</td>
<td>x</td>
<td>3</td>
</tr>
<tr>
<td>Soccer balls</td>
<td>x</td>
<td>3</td>
</tr>
<tr>
<td>Sport balls 24&quot;</td>
<td>x</td>
<td>2</td>
</tr>
<tr>
<td>Tennis balls</td>
<td>x</td>
<td>6</td>
</tr>
<tr>
<td>Volley balls</td>
<td>x</td>
<td>6</td>
</tr>
<tr>
<td><strong>Bases</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseball sets</td>
<td>x</td>
<td>5</td>
</tr>
<tr>
<td>Playground baseball</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Baseball bats</td>
<td>x</td>
<td>6</td>
</tr>
<tr>
<td>Bean bags</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Cambrics, various colors (yards)</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Catcher's outfit (crossbars)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Gloves</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseball</td>
<td>x</td>
<td>2</td>
</tr>
<tr>
<td>Boxing</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Golf clubs</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Indian clubs</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Inflators (ball)</td>
<td>x</td>
<td>3</td>
</tr>
<tr>
<td>Supplies</td>
<td>Courses of Study</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------</td>
<td>---</td>
</tr>
<tr>
<td>Laces (rawhide)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Lime (air slacked)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Mending kits</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Needles (lacing)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Nets:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tennis</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Volley ball</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Pistols</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Score books:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseball</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Basket ball</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Football</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Sets:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Croquet</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Horseshoe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shots (9 and 12)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Tape, (50' and 100' lines)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Vaulting poles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matches (game timer and stop)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whistle</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Yarn (white, ball)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities</td>
<td>Courses of Study 1</td>
<td>Courses of Study 2</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Plane</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Mats</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Horizontal bars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parallel bars</td>
<td></td>
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TABLE VI.—COURSES OF STUDY LISTING EQUIPMENT AND SUPPLIES FOR CORRECTIVES
Summary

Eight of the twelve courses of study suggested some facilities, equipment, and supplies for activities listed. Only one course of study listed facilities, equipment, and supplies for all activities to meet the criteria for standards. Some standards are suggested in other courses of study. The following list of facilities appeared in four or more courses of study: exercise floor, apparatus or activity room, health unit room, instructor's office, dressing room, lockers, and shower rooms. The following list of facilities appeared in four or more courses of study: basketball courts, handball courts, tennis courts, playground, baseball diamonds, track, broadjump pits, high jump pits, and horse-shoe court. The following list of supplies appeared in four or more courses of study: playground balls, basketball balls, soccer balls, tennis balls, volley balls, baseball bases, baseball bats, racquet laces, volley ball nets, horse-shoe sets, eight and twelve pound shots, tape, whistle. Only three courses of study suggested facilities for correctives. There was a lack of uniformity in presenting facilities and equipment in the courses of study.

The next chapter deals with steps in teaching procedure and references with the application of objectives, and the use of facilities, equipment, and supplies in the physical education program.
CHAPTER III

A STUDY OF TEACHING PROCEDURE AND REFERENCES

In the foregoing chapter, standards for facilities, equipment, and supplies were suggested for activities to carry out the proposed educational and specific objectives for physical education. The lack of uniformity in the method of presenting items according to the criteria selected for this study is shown by a comparison of quotations and tables. A further analysis of this study presents an important phase of the physical education program: the steps, devices, and references used in teaching procedure. These phases of the physical education curriculum are the key to successful attainment of general and specific objectives through group and individual activities and their outcomes. The following quotations voice the opinion of recognized authorities in the field of education:

All of life's activities are motivated. We accomplish most when we have a good reason for doing. We are able to determine satisfactory results in their apparent outcomes. We do well the things we most enjoy.1

A well planned physical education program should contain those steps that conform to the general objectives of education and to the more specific aims of physical education. A physical education teacher should possess the qualifications and have the ability to meet all situations that may arise in conducting any normal physical education class.

1Theodore Cromlet and Russell C. Hinote, Physical Education Activities, Dodd Mead Company, p. 3.
In order to develop effective procedures to meet the day-by-day situations as they arise, it is necessary that teachers not merely know a method, but that they know many methods, and that they be able to choose activities appropriate to pupil needs at the moment.\(^2\)

There is probably no "best method". Different types of activities and different situations call for different methods.\(^3\)

In order to show what types of teaching devices were being used, exact quotations from some of the courses of study were presented. The lack of uniformity of devices and the method of their use was apparent in the various courses of study. No attempt was made to present all quotations from each course of study or from all courses of study, but merely enough to show the trends in this phase of the physical education program. Each device in Table VII and each item for reference given in Table VIII was taken from the check list for physical education bulletins (p. 118, Appendix), and is listed by course of study.


\(^3\) Bulletin 6, p. 26.
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*"x" indicates "Yes".*
The following is a list of quotations by courses of study:

**Demonstrations**

**Bulletin 2, (p. 37)**

The elements in teaching specific activities are: explanation and demonstration; trial and criticism; and practice and suggestions; the selection and adaptation of activities to insure a reasonable degree of success. In effect, the application of the laws of learning—readiness, exercise and effect.

**Bulletin 4, (p. 79)**

Demonstrate or have demonstrated points in question.

**Bulletin 7, (p. 34)**

Frequent demonstrations by instructor or qualified students will make clear many situations.

**Bulletin 11, (p. 10)**

Teachers demonstrations of activity to be performed.

**Discussions**

**Bulletin 1, (p. 41)**

Procedures in the presentation, discussion and practice of the activities.

**Bulletin 8, (p. 44)**

**Games and Sports**

The following items are offered as suggestive lines of procedures:

- Stimulation of interest in the game either through preliminary play or recall of previous experience.
- Discussions regarding the game and the value of preparatory exercises.
- Short demonstrations of specific skills.
- Practice in open formation without equipment.
- Practice in squads with equipment.
- Special formations, relay races, and preparatory
games involving combinations of skills.
Opportunity for playing the game under conditions
which favor equality of competition.

Bulletin 6, (p. 13)

The discussion periods are centered around class
projects.

Competition

Bulletin 4, (p. 73)

Group Games

Teaching suggestions for group games. The
following suggestions may be of help to instructors in
teaching group games:

- Explain use and care of equipment.
- Have equipment ready before class time.
- Group may be mechanically obtained as by
counting off, and so on.
- Choose games which all have an equal chance to
take part.

- Explain the game.
- Start playing as soon as possible.
- Stop game to explain mistakes.
- Stop game before interest begins to lag.

Bulletin 4, (p. 80)

Contests

Teaching suggestions for contests and combat.
Contests and personal combat are those activities in
which one individual is usually pitted against another.
A few aids to teaching these activities are listed
below.

The elimination method to determine the champion
of a squad or group may be used to an advantage.

Bulletin 6, (p. 6)

Competition

Any class having 15 or more boys can form its own
league. (For example, a freshman class of 50 can be
organized into a league of 4 teams. The team games of
the class league can be conducted at noon, before school,
or after school.) The winner of each class league then
plays in a tournament against the winners of other classes.
Lead up Games

Bulletin 1, (p. 56)

Games programs should be arranged and taught in progression. Games of simple techniques lead to the Complex and then to the Compound techniques. Games of low organization precede those of high orga-
nization.

Bulletin 3, (p. 82)

Lead up Games—Preparatory Games

The following games may be used to give practice in skills in simple game situations:

| Circle Ball | Keep away       |
| Round Ball  | Twenty-one      |
| Pass Ball   | Basket Ball     |
| Pin Ball    | Golf            |

Bulletin 8, (p. 220)

Boxing may be taught individually or in mass formation.

Mass Instruction

Bulletin 11, (p. 59)

Mass Combat Activities for Boys (Winter)

Note: Every boy should be taught the elements of wrestling and boxing. It can be done through mass instruc-
tion in connection with the regular physical education class work.

Bulletin Boards

Bulletin 6, (p. 8)

A well-kept bulletin board promotes interest. The classes in industrial arts will usually cooperate in constructing a suitable one from beaver board.

Bulletin 10, (p. 155)

The bulletin board should be artistically arranged and should display interesting, up-to-date material.
It is advisable, at first, for the teacher to be in charge of the bulletin board so that the students may get an idea of the type of material and its suitable arrangement. Later, a committee from the senior class may be made responsible for changing the news items each week or each class may take turns in being responsible for new material.

Pupil Leaders

Bulletin 1, (p. 35)

Class Organisation for Pupil Leaders:

Determine according to the size of the class and equipment the best number of squads and number of pupils in each squad. If there are 49 in the class, 5 groups of 8 each would be organised. Seven or eight candidates are nominated as group leaders, from which 8 are elected by the class. Captains choose sides for permanent groups. (The captain who chooses last gets two choices each time) or use the shuttle choice method. Each group may organize with a name, captain and secretary. Definite instructions will be given as to duties of each and materials specified or supplied for keeping of records, posting reports, etc. The groupings should remain permanent through the term but new captains may be elected at definite intervals.

Bulletin 2, (p. 42)

Pupil Leadership.

Junior and senior high school boys should have opportunities for the full exercise of initiative, leadership and responsibility under guidance. The various phases of the physical education program offers a wide variety of such opportunities.

The teacher should detect ability to lead and should develop the power of leadership by careful instruction. In this way qualified pupils may obtain through experience valuable information concerning activities by directing them. Through wise guidance they may learn to take responsibilities. Through efficient leadership they may initiate and develop programs.

The following are some of the opportunities for which provision should be made:

1. Teaching and directing activities.
2. Captaining and managing sports’ activities.
3. Planning and directing activities' clubs.
4. Officiating
5. Keeping records and making reports
6. Initiating and developing intramural programs.
7. Assisting with the administration of physical capacity and other tests and examinations.
8. Leadership in a recreation or athletic association.
9. Assisting in the corrective program.

Bulletin 5, (p. 12)

Leadership

Qualified leadership is the keynote of the whole organization from the choice of activities to the result of those activities.

Pupil Leadership

The development of pupil leaders is essential to a good program. The use of pupil leaders serves as an excellent opportunity for one of the objectives in education, i.e., training in leadership. Captains, squad leaders, club leaders, are some examples of leadership opportunities.

Bulletin 6, (p. 7)

Leaders

Organization of Pupil Leaders:

Pupil leaders play an important part in every successful physical education program. The training of leaders through special meetings tends to make the program function more effectively.

A large percentage of the pupils should receive training in leadership.

1. Every unit must have pupil leaders:
   a. Class—team leaders, assistants, officials, secretaries.
   b. Intramural—team captains, managers, teachers, officials.
   c. Inter-school—team captains, teachers, managers, reception committees.

Bulletin 10, (p. 150)

Formation of Squads

The class should first be divided into squads of 16 members each, determined by such indices as age, height or weight. Each one of these squads then should be divided into two squads determined by athletic proficiency and skill.
The teacher should appoint different members of each squad to act as temporary leaders and at the end of a given time, each squad should elect a permanent leader.

Methods of Instructing Squads

By teacher—There are certain activities that may be performed by all squads. It is possible then for the teacher to present new subject matter to the class as a whole. This permits every pupil to have the advantage of the teacher’s personal knowledge and coaching. Each squad may later practice the activity under the guidance of its own leader.

Clubs

Bulletin 1, (p. 144)

Types of Clubs;

The physical education and health programs afford so many activities that contribute ideally for club work. Each department should encourage formation of as many of these clubs as can be given proper supervision and time.

Participation: In clubs activity should be encouraged and the value that it will carry through to adult years should be recognised.

Bulletin 5, (p. 83)

Club Organisation

The participation of children in physical education activities during their free time can be vitalized by the organisation of school clubs or color groups, the purpose of which shall be to make more effective certain phases of the program.

Crippled or incapacitated children may be organised to compete against one another in games suitable for their needs, such as horseshoes, croquet, target toss and others. They need the discipline of games quite as much, if not more, than other more active children.

Bulletin 7, (p. 13)

Clubs

"This is the age of organisation and activity. In every phase of group life the organisation, association, and club is present. Both boys and girls possess tendencies which cause them to gather in groups and gangs." School clubs properly conducted and guided offer
a very effective means of contributing to the objectives of secondary education. Clubs should develop from conditions and activities within and without the school, and should furnish a means of acquiring new interests and hobbies. Clubs also offer an excellent opportunity for the teacher and student to meet on an equal basis. Many physical education activities offer excellent material for extra curricular clubs: Dancing, archery, swimming, riding, bowling, hiking, winter sports clubs, and outing clubs.

**Nimetics**

Bulletin 2, (p. 46)

**General Type of Activity 1. Nimetics.**

Athletics and game actions presented as mimetic exercises should be conducted in a natural way and in a manner designed to teach the correct form of sport activities. In selecting elements involved in athletics and game activities, it is well to choose the kind of activity with which the pupil is already familiar. Many athletic activities adapt themselves readily to this form of teaching. Starts for sprinting, certain methods of throwing a baseball, football, soccer ball or basketball, certain methods of kicking a football or soccer ball, throwing a shot put, certain methods of swimming and life saving, certain elements involved in basketball, volleyball, etc., are examples.

Bulletin 4, (p. 84)

**Nimetic drills.**

Nimetic drills are natural movements set to music, mimicking some activity.

**References to Description of Activity**

Bulletin 12, (p. 59)

Symbols used in the Section on Physical Activities.

Example: Crossing the Brook—1-90, 3-76, 4-15, 1-90 indicates that this game may be found on page 90 in Neilson and Van Hagen, on page 74 in Bancroft and on page 15 in Forbush and Allen.

In the preceding list of references books on physical education, each book is given a number. In the list of physical activities beginning below, each activity is followed by a book number and a page number. It will
be noted that each book has been given a number. Following the number which refers to the book, is one which indicates the page number.

Methods of Classification

Bulletin 2, (p. 21)

Classification of pupils:

Examinations and tests:
1. Health examinations (medical, physical, orthopedic etc.)
2. Tests (New York State physical fitness tests)
3. Tests used to determine social efficiency and cultural needs.
   (See Chapter VII on Tests and Measurements.)

The results of these procedures should be used to:

1. Classify pupils
   a. According to their organic and developmental needs
   b. In homogeneous groups for recrea-tional activities.

2. Measure pupil progress.

Bulletin 2, (pp. 25-26)

Procedures for Classifying Pupils.

The first procedure for determining individual needs in physical education is health examination. On the basis of this examination children must first be divided into two groups. One group will include all those pupils who are unfit for participation in the normal activities of the age because of functional or other irregularities which make it necessary to give them individual corrective physical education. The other group will include all other pupils who are able to participate in the normal, vigorous activities of the age level.

The teacher of physical education should use the health examination records, posture tests, footprints and other devices in determining individual needs for activity or rest. These findings should be used as a guide to the improvement of functional (respiratory, circulatory, digestive and eliminative) conditions, correction of malnutrition and functional defects etc.

The physician’s examination is important and helpful in indicating the presence or absence of defects.
It may give little information, however, concerning the pupil's endurance or his physical activity habits and skills. These are of vital importance to the teacher of physical activities since the important objectives of physical education are to increase fitness, to develop essential safety skills, and to instill healthful habits and attitudes of physical activity which will continue to function in adult life. The pupil with high physical fitness and good activity habits needs a different program from that of the pupil with low fitness and sedentary habits. Therefore, the second step in grouping children for physical education according to needs should be the determination of the physical fitness and physical activity needs of all pupils. This may be accomplished by Physical Fitness Tests, supplemented by individual conferences and other examinations. (Procedures for conducting and using these tests are described in chapter VII.)

Guided by the pupils' physical fitness indexes and the physicians' examination records, the teacher of physical activities should assign individuals to different classes. In the small schools there should be at least two groups on the basis of the P. F. I., namely, the "low P. F. I. and medical cases" and the "all others". Chart 1 illustrates the division of pupils. In larger schools it is advisable to have three or four groupings (A, B, C, D) depending on the registration. The teacher of physical education should never lose sight of the fact that the physicians' examination and the P. F. I. constitute the fundamental basis for grouping pupils for activity programs.

Bulletin 3, (p. 16)

Classification of pupils.

To obtain the best results from the program in physical education, great care should be taken in the classification of pupils. Homogeneous groups are as important in this program as in other departments of the school organization. Physical capacity, grade, and teachers' judgments are important items of consideration.

Bulletin 4, (p. 19)

Classification.

The Rogers' physical capacity tests are used as a basis of classification in the senior high school of
Dwyer. In some cases the classification is modified by motor ability tests, physical examinations, and the teachers' judgment as to the program which will be best suited to the needs of the individual. The tests are given twice each year, at the beginning or at the end of each semester.

Bulletin 4, (p. 21)

Classification

Procedure for classifying after the tests have been administered.

A tabulation is made of all Physical Fitness Indexes, and points are established for the division of pupils into four groups. The following is suggested for a large high school:

- Group A — 115 and above
- Group B — 100 to 114
- Group C — 85 to 99
- Group D — Below 85

Fifteen per cent of all pupils usually fall into group A, fifteen per cent into Group D, and the remainder are divided about equally between groups B and C. The instructor should divide the groups at such points as seem most desirable for a practical working plan.

Lesson Plans

Bulletin 1, (pp. 40-41)

The physical education teacher must prepare each lesson with the following factors in mind:

1. Class—each class is an individual unit and presents its own problem.
2. Variety—the lesson should provide an interesting variety and well-rounded activity.
3. Progression—in the selection of material, the point of progression at which each activity should be started should be determined.
4. Intensity—should be regulated for each class according to the needs.
5. Time allowance—the content of the program will be well balanced if the time allowance for each activity is carefully planned and fulfilled. Class and team organization will economize time.
Outline for the lesson plan should include:

1. Objectives.
2. Activities to be taught.
3. Procedures in the presentation, discussion, and practice of the activities.
4. Method of measurement to determine knowledge and skills growth.

Bulletin 4, (p. 56)

Social Dancing

Lesson 1.
Boys always start forward on the left foot.
Boys form a circle and master each step before trying it with a partner.

1. Walk single file, boys always starting with the left foot, girls with the right.
2. On signal turn and walk backward, using four steps for the turn.

Beginners usually walk with the feet apart. This should be corrected at once. The back step should be a long reach.

3. Have boys and girls assume standard dancing position, standing squarely in front of each other, and practice walking, boys forward, girls backward. (Circle formation)
4. Four steps forward, four steps to turn, four steps backward. Repeat.
5. Using same steps, walk forward, turn and try moving in various directions.

Bulletin 11, (p. 14)

Sample Lessons.

Outline suggested for lesson plan.

1. The objectives to be achieved.
2. A list of the activities to be taught.
3. The procedures to be used in the presentation, discussion, and practice of the activities.
4. The method of measurement to determine the effectiveness of the learning.

It seemed that in order to use the devices effectively in teaching procedure, the teacher should have at his disposal a sufficient number of professional magazines and books to keep him
informed on the latest and best methods being used; and the school should provide for adequate library facilities, either in the general library or the physical education departmental library of the school for pupil use.

Books and magazines contain ideas of people in written form. Professional growth of the teacher in the field depends partly upon his desire and ability in his work. To be of the most help, the books and magazines should be available either at the general library of the school or in the school's physical education departmental library.

A list of professional magazines and books is listed in Bulletin No. 22, The California State Department of Education.

The lack of uniformity in listing references was evidenced in the various courses of study. Some of the courses of study listed references and page numbers with each activity or at the end of a group of activities, while other courses of study listed references in the bibliography.

In view of this fact, however, the courses of study listing references presented them in such a manner as to make them easily referred to. All courses of study, except one, listing references listed them under topics in the bibliography. All courses of study, except one, listing references placed them in alphabetical order.

As to recency, each course of study listing references is fairly uniform in selecting material later than 1920. Table No. VIII shows frequency by courses of study. No attempt has been made to quote any of the reference material printed in the courses of study.

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The topics for Table VIII were taken from the check list for evaluating physical education bulletins, which was given in the Appendix (p. 118). The letter "x" indicates an answer of "yes" to the question under the columnar heading "Topics".

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<td>Are they easily referred to?</td>
<td>x x x x x x x x x x</td>
<td>10</td>
</tr>
<tr>
<td>Are they grouped under topics?</td>
<td>x x x x x x x x x x</td>
<td>8</td>
</tr>
<tr>
<td>Are they alphabetically arranged?</td>
<td>x x x x x x x x x x</td>
<td>7</td>
</tr>
<tr>
<td>Are they recent?</td>
<td>x x x x x x x x x x</td>
<td>10</td>
</tr>
</tbody>
</table>
In the analysis of the steps in teaching procedure, the writer wished to present a short summary of each device used, and to call the reader's attention to direct quotations from the courses of study and to the charts for comparison by course of study. The devices used were taken from the check list for evaluating physical education bulletins, and will be summarized in order of appearance.

Summary

Five courses of study suggested demonstrations by the teacher to clear up situations or problems arising in the class. Practically all courses of study suggested demonstrations for special days and before organizations, but not in the sense of teaching devices.

Only one course of study suggested individual practice.

Five of the courses of study suggested discussions of the rules for games and problems of organization of clubs, etc.

All courses of study suggested group activities in some form. Games of low organization and games of skill were listed in all bulletins.

There seemed to be an overlapping of the meaning of competition and intramurals in the steps of teaching procedure. Only three courses of study suggested specifically competition within the class as a teaching device.

Only two courses of study listed lead-up games as much.

Eleven courses of study listed charts of various forms as teaching devices. Some were in the form of records, others in programs, etc. Three courses of study listed pictures of various activities: swimming, boxing, and wrestling, etc.
None of the courses of study suggested free practice for activities.

Mass instruction involved a number of activities, but only five courses of study suggested mass instruction. These were principally boxing and wrestling.

Five courses of study suggested the bulletin board as a teaching device.

Pupil leadership and club organization are rather closely related, but the value is present in both. An attempt was made to segregate the two with the following results: Ten of the courses of study suggested pupil leadership, while six suggested club organizations.

Five of the courses of study suggested mimetics, principally in the athletic activities.

None of the courses of study gave a detailed description of all activities listed. Six courses of study gave a detailed description of some of the activities listed, and seven courses of study referred to the page in references for detailed description of activities.

The procedure in classification was more uniform by courses of study than any other topic, with the probable exception of bulletin boards. Nine of the courses of study suggested methods and procedure of classification for activities.
None of the eight courses of study suggested the same type of lesson plan.

References were given in eleven of the twelve courses of study, and eight courses of study listed references under topics, while seven courses of study arranged references alphabetically.

The next chapter deals with the study of measurements, evaluations, and records as applied to the steps in teaching procedure, in testing, and in recording outcomes.
CHAPTER IV

A STUDY OF MEASUREMENTS, EVALUATIONS, AND RECORDS

In the foregoing chapter, an analysis of the steps in the teaching procedure and the methods of listing was made, and tables were tabulated to show the present trends, by courses of study, in this phase of the physical education program. The next step in this investigation was a study of measurements, evaluations, and records in relation to group and individual outcomes and progress. Tests are the tools of measuring; every game of ball is a form of testing; therefore, it is a form of measurement. The thrill of matching skill against skill, whether competitive or individual, is satisfying if improvement is being made. Any number of questions may arise as to the cause of winning or losing; the answer to these questions and its application leads to progression in that particular field of education. Something has been achieved, and can be measured.¹ There are numerous tests in the field of physical education, and no one test is sufficient to give a complete index of an individual. A battery of tests would have wider significance.

¹Irane Palmer, Tests and Measurements, p. 5.
than a single ability test and, at the same time, give the teacher a chance to locate the difficulties confronting the student.

Some form of record should be kept, preferably an accumulative record card for each pupil. This card should follow the pupil through his school career and should be available to all people concerned with his education.\(^2\)

In evaluating the program of physical education, the teacher should keep in mind the results of physical examinations and make use of the information derived from tests to adjust the individual to some phase of the program. Tests in the physical education program determine the physical condition and needs for purposes of classification. They also determine progress in the curriculum activities, as well as social efficiency and cultural appreciations. References of recognized authorities on tests and measurement were included in the bibliography of this study, all of which were listed in one or more courses of study selected for this investigation. The field of tests and measurements in physical education is equally as great or greater than that in the general educational field, and it is practically new. The physical educators have the advantage of the general educational experimentation and achievements.

Reports and records greatly facilitate the administration

\(^2\) J. B. Nash. Administration of Physical Education, pp. 221-25.
of the physical education program. An accumulative record card is probably the best for recording all phases of the examination or of the results of the tests. There should be no attempt to rely on memory for information in regard to student progress. The card should be used and not just filled and forgotten; for in this way valuable assistance and guidance will be rendered the pupil.

A few quotations from some of the courses of study were listed to show the trend in this phase of physical education. A table showing the courses of study suggesting measurements, evaluations, and records is found on page 96.

The following are quotations by courses of study.

Tests and Evaluations

Bulletin 1, (pp. 29-30)

Methods: Subjective judgment should augment the objective tests and measurements:

(a) Teacher's judgment based on experience, a subjective basis of grouping.

(b) Objective tests and measurements supplemented by teacher judgment. This is preferred because it is more scientific and makes classification of pupils possible before they participate in the instructional and practice periods. The tests in addition to the teacher's opinion are considered as an aid to the teacher. In some special cases where the classification of the pupil effects an emotional upset, the teacher's personal judgment can make the necessary adjustment possible.

(c) Types of Tests:
   1. Health examinations.
   2. Strength Index as measured by Frederick Hand Rogers, in his "Physical Capacity Test."


8. Achievement Tests in motor skills of Bovard and Cozens.

Smaller schools will find the achievement tests for the motor skills or the age-grade-height-weight methods more practical for classification purposes in the smaller groups.

Bulletin 1, (p. 33)

Skill Tests:

Junior High Schools:

1. Successfully complete fundamental tumbling exercises. (A chart for each grade, showing minimum number and names of exercises to be achieved helps to create interest in progress and achievement.

2. Show improvement in development of initiative in creating new individual and couple exercises in tumbling.

3. Build an original pyramid with use of mounts learned in the grade; use at least 8 pupils in the pyramid.

Senior High School:

1. Successfully complete tumbling exercises prescribed for each grade.

2. Create an original pyramid, using at least 12 pupils.

3. Create an original group tumbling exercise.

4. Contribute an original entrance or exit by use of tumbling exercises for the demonstration or play day program.

Bulletin 3, (p. 23)

Evaluation of the Program

The instructor will find the use of standardized tests a help in evaluating his physical-education program.
Physical Capacity Tests may be used for classifying pupils for instruction and for measuring teaching efficiency. They are also valuable for showing individual progress of pupils and are effective as a basis for participation in the intramural program. When used as a means of measuring efficiency of the program, they should be given early in the school year and repeated possibly at the middle and at the end of the year. Among the tests suitable for these purposes are Rogers' Physical Capacity Tests and Brace's Motor Ability Tests.

Bulletin 5, (p. 24)

Evaluation of the Program

When evaluating the program in physical education, the teachers should employ not only results of physical examinations and standard achievement tests, but should set up some self-made criteria more comprehensive in scope. A few examples are suggested below. Others more pertinent and applicable to special or local situations will occur to the instructor.

1. Do my pupils show evidence of radiant health by increased physical energy, endurance and skills?
2. Does the program which I am offering have both present and future values for the individual?
3. Are there indications that some activities have value for recreational use in the future as well as in the present?

Bulletin 5, (p. 41)

Achievement Tests

Achievement tests measure skills, information and attitudes which are objectives of the work given. The purpose of testing pupils for activity skills attained should be primarily to determine individual improvement rather than for comparisons with performances of other pupils. In such tests the competition should be between the pupils' past and present records, each measured by an adequate scoring scale

Athletic Badge Test
Physical Ability Test
Testing

The physical education program is incomplete if it does not test its own product. Without testing there is no measure of achievement, and, therefore, no measure of progress.

Leaders in education assert that to date there is no one satisfactory set of tests or system of testing which completely measures progress or learning. There are, however, many fine standard tests which measure achievement or ability. In the field of physical education the best known of these are the Bovard and Cessna, the Rogers Test, and the National Physical Achievement Standards, which are included on pages 71 and 72.

Swimming Test

1. Swim 100 yards in fair form using any one or more strokes.
2. Tread water 30 seconds.
3. Float one minute in deep water or else assume the correct position and hold it even though sinking.
4. Enter the water either head or feet first.

Types of Tests

1. Physical Capacity Tests.
2. Achievement Tests.

Time and Rating of Tests.

Pupils should be tested for posture at stated intervals throughout the year, particularly during the winter months and should be rated as follows:

Very Good—A; Good—B; Poor—C; Very Poor—D.

It is interesting to note the lack of uniformity in stating items under topics. This lack of uniformity has prevailed throughout the various courses of study.
### TABLE IX.—COURSES OF STUDY LISTING ITEMS FOR MEASUREMENTS, EVALUATIONS, AND RECORDS

<table>
<thead>
<tr>
<th>Items</th>
<th>Courses of Study</th>
<th>Total Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the bulletin include tests?</td>
<td>XXXXX</td>
<td>10</td>
</tr>
<tr>
<td>Does it suggest the type of test?</td>
<td>XXXXX</td>
<td>10</td>
</tr>
<tr>
<td>Does it suggest methods of grading?</td>
<td>XXXXX</td>
<td>6</td>
</tr>
<tr>
<td>Does it suggest forms of records?</td>
<td>XXXXX</td>
<td>6</td>
</tr>
<tr>
<td>Does it suggest: Attendance records?</td>
<td>XX</td>
<td>2</td>
</tr>
<tr>
<td>Records of objectives accomplished?</td>
<td>XX</td>
<td>2</td>
</tr>
<tr>
<td>Pupil effort records?</td>
<td>XX</td>
<td>1</td>
</tr>
<tr>
<td>Test scores records?</td>
<td>XX</td>
<td>2</td>
</tr>
<tr>
<td>Classification records?</td>
<td>XXXXX</td>
<td>6</td>
</tr>
<tr>
<td>Health examination records?</td>
<td>XXX</td>
<td>4</td>
</tr>
</tbody>
</table>

*"X" indicates an answer of "Yes".*

The items included in Table IX were taken from the check list for evaluating twelve courses of study in physical education for junior and senior high school boys (p. 118, Appendix).
Summary

Ten of the twelve courses of study included tests, and ten that suggested type of tests to be used. Six suggested methods of grading. Six suggested forms of records; and under types of records, two courses of study listed attendance records. Two courses of study listed objectives accomplished; one listed pupil effort; two listed tests scores; six listed classification records, and four listed health examination.
CHAPTER V

ADMINISTRATIVE CONSIDERATIONS

The preceding chapter presented an analysis of measurements, evaluations, and records. The purpose of this chapter is to present the administrative phases of the physical education program.

Administration refers to the entire program with all its parts that combine to produce the outcome. Nash suggested for clarification the division of administration into four parts: setting objectives, clearing the path, routine administration, and checking results. In selecting the objectives, the administration takes the lead and every one is taken into the planning and the objectives become "ours" instead of "yours." Growth comes from planning, and from planning comes the thrill of accomplishment.

The next step was clearing obstacles and providing for facilities and equipment, selecting leaders, and the delegation of responsibilities.

The routine administration has to do with the procedures necessary to operate the entire program such as, the care of the

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plant, the relationship with pupils and the teaching personnel, and the operation of a program of activities.

The administrator must devise a means of checking results, not only of his work, but the work of the teaching personnel to verify progress.

The phases of administration to be discussed and analyzed in this study are listed in Table No. X, p. 105, and are analyzed in order of appearance on the table.

All physical activities for grade placement should be selected upon the basis of such character as will satisfy the demands of the growth of the individual. As the normal child passes through successive stages of growth, he shows preferences for activities which satisfy his capacities and needs. All activity programs should be based upon the educational objectives and the child's nature at particular age levels. A greater portion of the program should be devoted to the specific learning of the more natural informal activities; such as, games, sports, dancing, and stunts. The more formal or invented type of activity may be included for corrective value, or when the inadequate space, limited time, or unfavorable weather restricts natural activity.

In a program of physical education, where time allotment for each unit is given, the relative emphasis is placed on each activity or group of activities, and a more definite teaching procedure is provided for.

—J. B. Nash, Administration of Physical Education, p. 5.

—Bulletin 2, p. 82.
Where there is a grade placement of activities, there is usually definite grade progression.

The aims of intramural programs are the same as those for the entire physical education program: education in leisure time, neuromuscular and organic development, and social adjustment. The entire school enrollment should have opportunity to take part regularly during the whole school year. The program should be full of interest and enthusiasm, and inviting enough to bring individuals out of the grandstand into the game, rather than out of the game into the grandstand.

The intramural method can be expanded to the point of almost universality. It is applicable to school situations from the fifth grade through the high school.4

The corrective or remedial program in physical education should prescribe exercises that will prevent or correct minor defects, for those pupils who do not require special classes for correction. Individuals having serious structural defects should be referred to a regular orthopedic clinic for correction.

The corrective program should be carried out in three phases. First, the introduction of the general scope of the work to the subject; second, a review of the findings in the orthopedic examination; third, the organization and teaching of the exercise system.5

Interscholastic athletics is generally recognized as a part of the regular physical education program and as an advanced type

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5Winthrop Morgan Phelps and Robert J. E. Kiphuth, The Diagnosis and Treatment of Postural Defects, Springfield, Illinois: Charles C. Thomas, p. 120.
of activity. Administrative duties are much more complicated than is apparent to the average observer. Nash lists the administrative organization of physical education of a large high school as follows: budget committee; faculty athletic manager; faculty advisor; high school games committee representatives; sportsmanship brotherhood; awards; field day; medical supervisor and examiner; publicity committee; booster's club; board of athletic coaches; and intramural program. No attempt is made to list the duties of the various departments. It is desired to compare the method of presentation and printed content of some of the courses of study as to the recent trends in this phase of the physical education program. The following is a list of quotations from some of the courses of study.

Method of Grading

Bulletin 5, (p. 39)

Measuring Results

As long as grades and marks are used in the general field of education to denote success or failure in a subject and as a basis for promotion, health and physical education should attempt to grade student progress. The following suggestions will be helpful in grading physical education:

1. Organic Strength
   a. Strength index
   b. Motor abilities such as vaulting, rope climbing, stunts, jumping, running, swinging the bar, etc

2. Motor Skills
   a. Tests of motor abilities such as running,

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throwing for accuracy and distance, serving, batting.

b. Proficiency in games, sports and apparatus.

3. Attitudes toward Physical Education.
a. Attendance.
b. Participation in sports.
c. Cooperation in fostering program.

4. Social conduct.
a. Sportsmanship, courtesy, etc. Estimated by squad leaders, squad members, captains, instructors.

5. Health practices.
a. Personal cleanliness, regularity of showers, neatness of uniform.
b. Cleanliness of locker and towel.

Bulletin 3 (p. 9)

Grading

A fair estimate of the student’s grade can be gained through tests of:

1. Improvement in skill.
2. Knowledge of and about the activity.
3. Actual performance in events.

Specific tests to determine ability and improvement in each activity, and factual true and false tests to determine knowledge of rules and principles will help materially to eliminate guess work from grading.

While effort and attitude, as indicated by such things as being suitably costumed and punctual to class are important and are often used as elements in grading, it is best to keep two marks—one the record of actual achievement affected as little as possible by opinion, and a second mark which includes effort and attitude so far as may be judged.

Grade Progression

Bulletin 11, (p. 40)

Self-Testing Activities

Individual Stunts:

1. Activities.
Seventh Year  Eighth Year  Ninth Year
a. Walrus Walk  Jump stick  Ankle throw
b. Balance Bend  Under the Bridge  Knee mark
c. Chicken Walk  Cut the cane  Hopping over
d. Double-heal  (click) knock  One leg
e. Corkscrew  Push up  Seal slap

Intramurals

Bulletin 1, (p. 132)

Its appeal is to the inexpert many rather than to the expert few.

Methods for groupings for competition.

1. Natural divisions.
   a. Physical Education sections
   b. Home-room or study room teams
   c. Clubs
   d. Classes or grades

2. All students assigned to leagues.
   a. By physical education departments
   b. Based on skill records
   c. Drawing by lot

Bulletin 6, (p. 3)

Activities

The program for the school must provide for class, intramural, and inter-school activities for boys and for girls.

Bulletin 7, (p. 42)

Competition

Group contests not only satisfy the natural craving for competition on the part of the student, but also encourages him to strive for self-improve-
ment along many varied lines in order to become a factor in his group. The quality of group loyalty, which is so important a factor in team work, becomes the possession of all students rather than of the few usually involved in team games. The term group contest here is to be interpreted as grouping both events and contestants.
The group of contestants may consist of divisions within the class, or similar classes of varying schools, or of the different classes of club organizations within the school. The prime motive should always be to match the strength of large groups against each other, in order to insure the benefit of the individual, whose effort no matter how modest, counts toward the group result.

Bulletin 8, (p. 75)

Intramural Program

Intramural teams should be kept as balanced in skill and excellence as possible.

Intramural sports need not always be competitive between individuals or teams. Activities such as hiking, fishing, winter sports, tumbling, and water sports may be used to advantage.

No intramural program is complete unless 100 per cent of the school population has every opportunity to participate regularly and throughout the year. Teams of experts competing to the exclusion of the mass are no closer to achieving the ends in view than interscholastics.

Bulletin 9, (p. 76)

Competition

The following units of competition are available:

1. Competitive groups based on natural divisions already present such as:
   a. Physical Education sections.
   b. Home rooms, study rooms, or departments.
   c. Organizations such as Civics Club, Geography Club, social groups.
   d. Classes (Senior, Junior, Sophomore, Freshman)
      1. Class teams—first, second, third, etc., teams, according to skill, from each class.
      2. Any number of teams of comparable skill from each class.
      3. Teams made up equally of Seniors, Juniors, Sophomores and Freshmen.
   e. Residential districts.
The list of administrative considerations in Table I is taken from the checklist for evaluating twelve courses of study in physical education for junior and senior high school boys, (p. 118, Appendix).

**TABLE I.—COURSES OF STUDY CONSIDERING VARIOUS PHASES OF ADMINISTRATION**

<table>
<thead>
<tr>
<th>Administrative Considerations</th>
<th>Courses of Study</th>
<th>Total Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1    2    3    4</td>
<td>5    6    7    8</td>
</tr>
<tr>
<td>Does it provide grade placement of activities?</td>
<td>X X X X X</td>
<td>7</td>
</tr>
<tr>
<td>Does it suggest grade placement within narrow limits?</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Does it suggest time allotment for each unit?</td>
<td>X X</td>
<td>2</td>
</tr>
<tr>
<td>Is there definite grade progression?</td>
<td>X X X X X</td>
<td>7</td>
</tr>
<tr>
<td>Does it provide for intramural activities?</td>
<td>X X X X X X X X</td>
<td>10</td>
</tr>
<tr>
<td>Does it include corrective or modified programs?</td>
<td>X X X</td>
<td>5</td>
</tr>
<tr>
<td>Does it include interscholastic athletics?</td>
<td>X X X X X</td>
<td>8</td>
</tr>
</tbody>
</table>

* indicates "Yes".
Summary

Seven of the twelve courses of study suggested grade placement of activities. None suggested grade placement of activities within narrow limits. Only two suggested time allotment for each unit. Seven suggested definite grade progression.

Ten of the twelve courses of study provided for intramural activities. Five suggested corrective or remedial programs. Eight of the twelve courses of study suggested or provided for interscholastic athletics.

The next chapter will present a general summary and some conclusions reached in this study.
CHAPTER VI

SUMMARY AND SOME CONCLUSIONS

The purpose of this study was to analyze and summarize twelve recent courses of study in physical education for boys in junior and senior high schools. The following topics were considered: General Objectives, Specific Objectives; Facilities and Equipment; Steps in Teaching Procedure; References; Measurements and Evaluations; Records; and Administration.

Preliminary to the analysis of the items under the selected topics, the criteria for selecting the course of study was set up. The first step in the procedure was the selection of twelve courses of study.

Prior to listing general and specific objectives appearing in these courses of study, it was discovered that there was a lack of uniformity in the technique of presenting general and specific objectives. Because of this lack of uniformity, it was necessary to set up some general divisions which were used as a guide in presenting the general objectives; Divisions selected were as follows: Physiological development; Mental development; Social efficiency; Leisure time; To conform to standards set up, it is necessary to restate some objectives in the infinitive form.

All general objectives and specific objectives for activities listed were taken from the bulletins in the original form and restated under topics of activities to which they were assigned. The next
procedure was to tabulate the frequency by courses of study. From this tabulation, summaries were made regarding the general and specific objectives found. There were fourteen activities with definite specific objectives assigned, appearing in the twelve courses of study examined. Only five courses of study listed objectives for activities. None of the courses of study listed objectives for all activities; two listed objectives for five or more activities; two listed objectives for two activities; one listed objectives for one activity. A total of 115 specific objectives for activities were listed. Of this number, there were no duplications. Ten of the twelve courses of study listed general objectives. Only one listed general objectives in the infinitive form. Of the seventy-two objectives listed, only one objective appeared in more than one course of study. It seemed that the lack of uniformity in presenting objectives was sufficient evidence to warrant a more definite procedure in organizing the physical education program.

Suggested facilities, equipment, and supplies for activities were analyzed. In making this analysis "A Score Card for Evaluating Physical Education Programs for High School Boys" was used as a standard to evaluate the selected courses of study. The next step was to set up a tabulation sheet for checking facilities, equipment, and supplies for activities. From these tabulations, summaries were made regarding suggested facilities, equipment, and supplies found. Eight of the courses of study suggested some facilities, equipment, and supplies for activities.
Bulletin 8, listed facilities, equipment, and supplies to meet the suggested standards. The following list of facilities appeared in four or more courses of study. Facilities for indoor activities were exercise floor; apparatus or activity room; health unit room; instructor's office; dressing room; lockers, and shower rooms. Facilities for outdoor activities appearing in four or more courses of study were as follows: Basketball courts, handball courts, tennis courts, playground, baseball diamonds, track, broad-jump pits, high jump pits, and horseshoe courts. Seven listed supplies for activities. The following list of supplies appeared in four or more courses of study: playground balls, basketballs, soccer balls, tennis balls, volleyball balls, baseball bases, baseball bats, rawhide laces, volleyball nets, horseshoe sets, eight and twelve pound shots, tape and whistle. Three suggested facilities for correctives.

The courses of study listing equipment for activities were fairly uniform with some exceptions as to standards. Probably the adoption of standard facilities, equipment, and supplies would help to stabilize the physical education program from the teacher's standpoint and assure greater individual outcomes.

The teaching procedure and references were analyzed. This was done by setting up a table for checking the frequency of the procedure found in the courses of study. Tabulations were made. From these tabulations, a summary was made regarding the devices and ref-
references found. Of the twelve courses of study, five suggested demonstrations by the teacher; one, individual practice; five, discussion; three, competition; twelve, group activities; two, lead-up games; eleven, tables; none, free practice; five, mass instruction; five, bulletin boards; ten, pupil leadership; six, club organizations; five, mimicry; six, detailed description of some activities; seven referred to page in reference; nine, classification; eight, lesson plans; eleven, references; eight, references under topics, and seven arranged references alphabetically.

The lack of definite procedure and uniformity in teaching devices appeared to be the weakest part of the physical education program.

Suggested measurements, evaluations, and records were analyzed by courses of study. A table was set up for checking the frequency of the suggested topics by courses of study. From this table, a summary was made regarding the suggested measurements, evaluations, and records. Ten courses of study suggested tests; ten, type of test; six, methods of grading; six, forms of records; two, attendance records; two, objectives accomplished; one, pupil effort; two tests scores; six, classification cards; and four, health examination.

Merely mentioning or suggesting types of measurements, evaluations, and records does not mean that they were always used. There was very little definite information given that would help a teacher in measuring and evaluating results or recording progress. There was no uniform method of procedure in any two of the courses of study examined. A more definite agreement on standards for measurements, evalua-
tions, and records would greatly strengthen the physical education program.

Administrative considerations were analyzed and tabulated according to frequency by courses of study. This tabulation was summarized regarding administrative policies found. Seven of the twelve courses of study suggested grade placement for activities within a wide range, but none favored grade placement within narrow limits. Two courses of study suggested time allotment for each unit. Seven courses of study suggested some grade progression. Ten courses of study suggested provisions for an intramural program. Five courses of study suggested correctives or remedial programs. Eight courses of study suggested or provided for interscholastic athletics.

Administration of physical education seemed to be one of the major problems confronting the physical education curriculum builders. Perhaps a uniform method of determining grade placement of activities and time allotment to each unit would help to solve many administrative problems. It seemed that a wider use of the intramural program and more control of interscholastic athletics would provide for greater participation and satisfaction for the masses.

The findings of this study were summarized as a possible aid to curriculum makers. It was pointed out that these phases of physical education curricula were in much need of research to determine more definitely the procedure for the best approach relating to these matters.

No attempt was made in this study to justify or to criticize
the materials found, but merely to attempt an analysis of a cross section of some recent courses of study in physical education. Perhaps much trouble and time could be saved by those engaged in curriculum building if a careful study of present practices of this type was made.

Regardless of the lack of uniformity in stating objectives, it was apparent that physical education had its objectives better established than its program.

Perhaps the weakest link in the program as represented in these bulletins was in the teaching procedure. Rather information as to the technique for teaching the skills was found. Instruction technique suggested was of a general nature. Items were mentioned, but little or no explanation as to use of types of devices at the various stages of learning was included. The more recent courses of study seemed to be getting away from the idea of giving a detailed description of the activities listed, and instead, referred to the page in the reference where it can be found. Methods of classification were fairly well agreed upon. Perhaps a uniform method should be adopted that would assure more equal competition and more wholesome participation.

Probably the next weakest link as suggested in these bulletins was the method of evaluating and grading. Definite agreement on standards and methods of grading would be a big help in establishing a better physical education program. Types of measures were almost entirely missing from the bulletins, and little or no inform-
nformation was obtainable. A standard form for records would be of
great value in determining the progress of pupils and the eval-
uation of the physical education program.

The evidence as presented substantiates the lack of uni-
formity of the essential phases of the physical education pro-
gram, therefore responsibility of future curriculum builders
would be to establish the curriculum on a sound, scientific, and
educational basis.
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# APPENDIX

## CHECK LIST FOR EVALUATING TWELVE COURSES OF STUDY IN PHYSICAL EDUCATION FOR JUNIOR AND SENIOR HIGH SCHOOL BOYS

<table>
<thead>
<tr>
<th>Items Considered in Evaluating</th>
<th>Courses of Study</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>I. GENERAL OBJECTIVES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Are the objectives stated in non-technical language?</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>2. Are they stated clearly?</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td><strong>II. SPECIFIC OBJECTIVES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Are specific objectives for activities listed?</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>2. Are they pupil objectives?</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>3. Are they teacher objectives?</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td><strong>III. FACILITIES AND EQUIPMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Is the course of study flexible, i.e., can it be used in platoon or one-teacher schools?</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>2. Is equipment needed to carry on the activity listed?</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>3. Does it suggest standards for facilities?</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td><strong>IV. STEPS IN TEACHING PROCEDURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Does it provide for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Demonstration</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>b. Individual Practice</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>c. Discussion</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>d. Group activities</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>e. Competition</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>f. Lead-up games</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>g. Charts and pictures</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>h. Free practice periods</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>i. Mass instruction</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>j. Bulletin boards</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>k. Pupil leadership</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>l. Club organization</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>m. Kinetics</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

*"x" indicates that the question is answered 'yes'.
### CHECK LIST—CONTINUED

<table>
<thead>
<tr>
<th>Items Considered in Evaluating Courses of Study</th>
<th>Courses of Study</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. Is a detailed description of each activity given?</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>3. Does it refer to page in references?</td>
<td>x  x</td>
<td>x</td>
</tr>
<tr>
<td>4. Is the emphasis primarily instructional?</td>
<td>x  x  x  x  x  x  x  x  x  x  x  x</td>
<td>12</td>
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<tr>
<td>5. Are methods of classification for activity suggested?</td>
<td>x  x  x  x  x  x  x  x  x  x  x  x</td>
<td>9</td>
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<tr>
<td>6. Are sample lessons given?</td>
<td>x  x  x  x  x  x  x  x</td>
<td>8</td>
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</tbody>
</table>

### V. REFERENCES

1. Are they easily referred to? | x  x  x  x  x  x  x  x  x  x  x  x | 11 |      |       |       |       |       |       |       |       |
2. Are they grouped under topics?  | x  x  x  x  x  x  x  x  x  x  x  x | 10 |      |       |       |       |       |       |       |       |
3. Are they alphabetically arranged?  | x  x  x  x  x  x  x  x  x  x  x  x | 8 |      |       |       |       |       |       |       |       |
4. Are they recent (1920 or later)? | x  x  x  x  x  x  x  x | 4 |      |       |       |       |       |       |       |       |

### VI. MEASUREMENT AND EVALUATION

1. Does the bulletin include tests? | x  x  x  x  x  x  x  x  x  x  x  x | 10 |      |       |       |       |       |       |       |       |
2. Does it suggest the type of tests? | x  x  x  x  x  x  x  x  x  x  x  x | 10 |      |       |       |       |       |       |       |       |
3. Does it suggest method of grading? | x  x  x  x  x  x | 6 |      |       |       |       |       |       |       |       |

### VII. RECORDS

1. Does it suggest forms of records? | x  x  x  x  x  x  x  x  x  x  x  x | 6 |      |       |       |       |       |       |       |       |
2. As to types, does it suggest |       |       |       |       |       |       |       |       |       |       |
   a. Attendance records | x  x | 2 |      |       |       |       |       |       |       |       |
   b. Objectives accomplished | x  x | 2 |      |       |       |       |       |       |       |       |
   c. Pupil effort | x | 1 |      |       |       |       |       |       |       |       |
   d. Test scores | x  x | 2 |      |       |       |       |       |       |       |       |
   e. Classification | x  x  x  x  x  x  x  x  x  x  x  x | 4 |      |       |       |       |       |       |       |       |
   f. Health examination | x  x  x  x  x  x | 4 |      |       |       |       |       |       |       |       |
### CHECK LIST—CONTINUED

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<thead>
<tr>
<th>Items Considered in Evaluating Courses of Study</th>
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<th>Total</th>
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<tbody>
<tr>
<td>VIII. ADMINISTRATION</td>
<td></td>
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<tr>
<td>1. Does it provide grade placement of activities?</td>
<td>x x x x x x x</td>
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<tr>
<td>2. Does it suggest grade placement within narrow limits?</td>
<td>x x x x x</td>
<td>0</td>
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<tr>
<td>3. Does it suggest time allotment for each unit?</td>
<td>x x x x x x</td>
<td>2</td>
</tr>
<tr>
<td>4. Is there definite grade progression?</td>
<td>x x x x x x</td>
<td>7</td>
</tr>
<tr>
<td>5. Does it provide for intra-mural program?</td>
<td>x x x x x x x</td>
<td>10</td>
</tr>
<tr>
<td>6. Does it include interscholastic athletics?</td>
<td>x x x x x x</td>
<td>9</td>
</tr>
<tr>
<td>7. Does it include corrective or remedial programs?</td>
<td>x x x x x</td>
<td>6</td>
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</table>