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The Ohio State University, Ph.D., 1965
Education, physical

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DEVELOPMENTAL VALUES INHERENT IN
SELECTED CHILDREN'S GAMES

DISSERTATION
Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
Idella Louise Graves, B.S., M.A.

******
The Ohio State University
1965

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For this study Holt, Rinehart and Winston, Inc. very kindly gave their permission to copy twenty-six games from Leonard A. Larson's and Lucille F. Hill's *Physical Education in the Elementary School*, 1957.
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CHAPTER I

INTRODUCTION

Play in Our Culture

In this study play was considered a cultural phenomenon and one of the main bases of civilization. Throughout the ages play has been analyzed and studied, yet no completely acceptable definition of it has been written. A thought-provoking explanation of play by Huizinga could serve as a definition:

Summing up the formal characteristics of play we might call it a free activity standing quite consciously outside "ordinary" life as being "not serious", but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means.¹

He stated further:

Genuine play possesses besides its formal characteristics and its joyful mood, at least one further very

essential feature, namely, the consciousness, however latent, of "only pretending".2

Play often has been referred to as "the work of children." When they are absorbed completely in playing, they are intense and serious about it. In addition, young children's pretenses of work are sometimes direct imitations of adult work and their ways of absorbing the different cultural roles leading to mature adulthood. As children develop, the pretenses are found in their playing and games but are not always as apparent, and by adolescence the pretenses are often highly abstract and very diverse.

The Children's Bureau of the United States Department of Health, Education, and Welfare pointed out that "happy group experiences are basic to the development of well-balanced personalities. Through being part of a group, children learn lessons in living which they learn in no other way."3

Thus, through childhood play, as individuals and in groups, children grow and mature. Erikson in his book, Childhood and Society, stressed that

The growing child must, at every step, derive a vitalizing sense of reality from the awareness that his

2Ibid., p. 22.

individual way of mastering experience (his ego synthesis) is a successful variant of a group identity and is in accord with its space-time and life plan. 

Need for This Study

The authorities cited previously and other individuals in such fields as philosophy, psychology, sociology, and education have asserted the many and varied potentials that play and games hold for children; yet only a small percentage of them have substantiated their statements by research. Authorities outside the field of physical education who have used play activities or games as media for research seldom have considered the results in the light of their implications for elementary school physical education. Even when this has been done, the results have not been publicized and utilized in the teaching of children's games. Thus, the subject of children's low-organization games has been relatively unexplored.

Classroom teachers and physical education specialists include games of low-organization in the well-balanced physical education program and have claimed that these games help children learn a system of values.

Since children are playing games continuously, with and without supervision, it seemed important to examine the games, to study

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their structures, to relate them to children's developmental values, and, as a result, provide better planning for children's development.

The values found in the structure of games were stressed in this study because the games and their properties were felt to be relatively constant factors, whereas children and teachers change. It was recognized, however, that the games were but one of the many media through which teachers have endeavored to assist children in their development.

Statement of the Problem

The purpose of this study was to examine the theory that low-organization group games affect the social, emotional, and mental growth of children. Developmental values were identified, the approximate degree to which these were found in games was ascertained, and relationships of the values found in the games were stated as these applied to children.

Hypotheses and Assumptions

It was hypothesized that--

1. The structure of third-grade and fourth-grade group games contained developmental values relevant to the social, emotional, and mental growth of children and that the important values could be identified.
2. The thirty games found most frequently in the current literature could be compiled and then could be ranked by a jury as to the degree to which they contained these social, emotional, and mental values.

3. The games could be altered or created to meet specific social, emotional, or mental needs of the child and that this medium of learning was unique in the school environment.

4. The teacher had a specific function in game situations.

5. The various interpersonal relationships of the individual pupil and of the group were related to the child's total development.

6. The effect of the environment in a game situation and the influence of competition upon the child and the group in game situations had an important influence upon the child's total growth.

Procedures and Operational Definitions

This study was a survey of a select population--in this instance, people known to be outstanding in the field of elementary school physical education. This group of eighteen persons composed the jury.

A survey of the current literature in elementary school physical education textbooks and game books was made, and the thirty games most frequently found were established as those to be used in the study.
The jurors then were asked to rate the twenty-seven developmental values in each of the thirty games by using a list of the values and a rating scale sometimes referred to as a questionnaire.

The term "developmental values" was used in this study to refer to the twenty-seven factors previously identified as those values found most frequently in children's games at the third- and fourth-grade levels. These factors were categorized as social, emotional, or mental. There were two exceptions to this—"Degree of physical activity" and "Degree of rules complexity."

The term "total-involvement" was used in this study to describe the complete participation of the child in all of the values in a game situation—that is, the total involvement of the child in the game.

The terms "social," "emotional," and "mental" were selected for use in the study since these terms appeared frequently in the literature pertaining to the elementary school child.

Jersild used the term "emotion" to mean "a vast range of psychosomatic states" in his chapter on emotional development in the Manual of Child Psychology, edited by Carmichael. He further

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delineated it as involving feeling, perception, impulse, visceral activities, skeletal muscles, disorganized or organized, positive or negative, and moving against or toward. 6

The term "mental development" was used frequently in the literature with the connotation of growth in some or all aspects of intelligence as commonly found in intelligence tests.

Concerning a definition for social development, Anderson and Anderson have stated:

The treatment of social development needs to be consistent with... [broad] areas of overlapping, i.e., it must be consistent with knowledge of the general principles of science, with the facts of the biological sciences and the social sciences, and with the principles of values, of ethics, and of harmonious living. 7

Although the terms mental, social, and emotional are noted and discussed here as if they were individual entities, it must be remembered that

Scientific research fully documents the socio-psycho-somatic unity of organism and environment. We know there is no separate physical, mental, social, but a moving, feeling, expressing, experiencing organism. 8

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6Ibid., pp. 833-917.


In a subexperiment of this study, twelve interviews with persons in physical education and other fields related to children were analyzed for content pertaining to the developmental values found in games and to the total learning situations in which children's group games are played. The interviewees considered the environment, the teacher's role, the children as individuals and as a group, the effects of games upon the children, the effects of competition, and the creation of games to meet special needs of children.

Limitations of the Study

The largest and most readily apparent limitation was that of omitting the physical aspects of games. This was done because the physical aspects of children's games have been exploited, not to their fullest extent, but at least more than the other areas. The physical aspects were not omitted completely but were brought into focus only when they related directly to another aspect of the study under consideration. It was remembered that they were an integral part of the whole.

It was also believed that in the past those leading groups of children in games have placed so much emphasis on the physical aspects of games that they have not placed enough emphasis on the other values. There were, of course, many exceptions to this last statement. It was believed that a balance was needed in planning
and that teachers must be concerned with the whole child and what was happening to him as he played games. An example of this lack of ability to observe thoroughly was apparent in a small study done earlier by the author that involved thirty-five classroom teachers, several of whom were not aware of the different roles that children assumed as they played games. These same teachers did notice many of the physical aspects of the games.

A second major limitation was the lack of depth in any one area. This was due to the breadth of the field covered. An example of this would be noticed in the area of emotional aspects of the games. The subconscious and other less apparent psychological phenomena were, for the most part, not treated in this thesis, and when they were discussed, they were not couched in psychological terms.

A third limitation was caused by the breadth of the study. There were so many developmental values that they were grouped and, therefore, not all were readily apparent in the list of values. Some values had to be omitted.

The review of the literature was necessarily limited because a complete review of even one aspect of this type of study would be

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8Idella L. Graves, "Role, Status and Social Learnings in Children's First-Grade and Second-Grade Games" (unpublished study, The Ohio State University, Spring 1959). (Typewritten.)
quite lengthy. "In 1960 alone, Psychological Abstracts listed about 8500 items and Sociological Abstracts about 2000." 10

A fourth major limitation was the absence of an experimental follow-through with children using these particular games. The jurors for both parts of the study were in contact with children, and the majority of them had taught most of the games under consideration in the study but not as a part of this study.

CHAPTER II

REVIEW OF THE LITERATURE

Basic Assumptions

From his background of years of experience in education and child study, Dr. Daniel Prescott, Director of the Institute for Child Study at the University of Maryland, set forth a series of basic assumptions in three broad areas—religious and philosophical, social, and scientific. In the religious, philosophical, and ethical area the assumptions were as follows:¹

1. Every person in life is valuable and has potential.
2. Every person has a right to strive for maximum development and maximum usefulness within society.
3. Promoting development is moral; and blocking development is evil.
4. Every person has the right to be treated with dignity.
5. The Golden Rule is the most sound ethical principle.

The social assumptions were as follows:2

1. Every child internalizes the culture into which he is born through his family and social groups.

2. Every person has certain inalienable rights, such as those of the Bill of Rights in the Constitution.

3. The democratic process is, thus far, the most workable procedure formulated to permit decision making in social living and yet guarantee self-realization.

4. Each person must assume the responsibilities that go with a democracy.

5. The scientific method is the best method for separating fact from fallacy.

The scientific assumptions were:

1. Behavior is caused and is meaningful. . . .
2. The causes which underlie behavior are always multiple. . . .
3. Each individual is an indivisible unit. . . .
4. The human individual develops. . . .
5. Every human individual is a dynamic energy system. . . .
6. Dynamic self-actualization is made possible to an individual by the existence of an organizing core of meanings (values) at the center of the personality. These meanings govern the interaction between the individual and the succession of situations in which he finds himself. . . .
7. Each individual is different from every other.3

2Ibid., pp. 28-29. 3Ibid., pp. 29-30.
Background Information for This Study

Within the structure of this thesis, consideration was given to the whole child and his development; therefore, Gesell and Ilg's\textsuperscript{4} work from The Yale Clinics was considered. They have divided the field of child behavior into ten major areas and have detailed descriptions of behavior in these areas.

Let us consider the child's motor and social characteristics at eight and nine years of age. The eight-year-old was said to be at an "expansive age" and was considered speedy, expansive, and evaluative of what was happening to him. The child was healthier than in previous years and fatigued less easily.

There was more rough-and-tumble play and there were more boisterous games. The "psycho-motor" tempo was speeded up. The sexes were drawing apart. "His sense of self was becoming a sense of status and he was constantly re-defining his status relationships with comrades, sibs and elders."\textsuperscript{5}

The child at this age was considered close to his mother attempting a psychological interchange and hence to learn more about adult life.

\textsuperscript{4}Arnold Gesell and Frances L. Ilg, \textit{The Child from Five to Ten} (New York: Harper & Brothers, Publisher, 1948), pp. 159-60.

\textsuperscript{5}Ibid., p. 161.
At school the child was not as dependent as formerly and was acquiring social aptitudes and insights, yet could not discuss abstract virtues, such as cooperation, loyalty, and sportsmanship. The child learned to lose and liked to challenge himself. Through impersonation he assumed roles and appraised them. He did not understand complex rules in games and there was much improvisation on the rules.

At this age the child was exploring family problems and had a general inquisitiveness about all human relationships. He had begun to doubt the infallibility of adults.

The nine-year-old was considered to be at an intermediate age and considered "to have a better hold upon himself"; he was more self-dependent and this changed his relationship to his family. He was characterized as having "self-motivation." Nine-year-olds, also, have a persistence about perfecting skills and like to plan ahead.

At this age hero worship was begun; a great deal of social criticism and self-criticism was exhibited. The child also showed new refinements in his emotions and attitudes. The child has a sense of fair play and an emotional and intellectual interest in rules. 6

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6Ibid., pp. 188-97.
Piaget echoed this in his study of the rules of the game of marbles. Concerning this he said:

Children's games constitute the most admirable social institutions. The game of marbles, for instance, as played by boys, contains an extremely complex system of rules, that is to say, a code of laws, a jurisprudence of its own. Only the psychologist, whose profession obliges him to become familiar with this instance of common law, and to get at the implicit morality underlying it, is in a position to estimate the extraordinary wealth of these rules by the difficulty he experiences in mastering their details. 

Havighurst listed and elaborated nine developmental tasks for middle childhood (six to twelve years of age):

1. Learning physical skills necessary for ordinary games.
2. Building wholesome attitudes toward oneself as a growing organism.
3. Learning to get along with age-mates.
4. Learning an appropriate masculine or feminine social role.
5. Developing fundamental skills in reading, writing, and calculating.
6. Developing concepts necessary for everyday living.
7. Developing conscience, morality, and a scale of values.
8. Achieving personal independence.
9. Developing attitudes toward social groups and institutions.

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Research with Implications for the Physical

The child and his physical growth and skills have been the subject of many experiments.

One of these was at the University of Michigan's Child Development Laboratories. It was a longitudinal multi-discipline investigation by Govatos entitled "Relationship between Physical Skills and Growth in Elementary School Children." This investigation was concerned with the relationship between measures of growth and performance in physical skills. The growth measures, such as height, weight, grip, dental, carpal, reading, and mental aspects were described in age units. The physical skills included the jump and reach, standing broad jump, soccer kick for distance, twenty-five-yard dash, over-and-underhand ball throw for distance, and the over-and-underhand ball throw for accuracy. The subjects were forty-five girls and fifty-six boys, between the ages of six and eleven years old, who were enrolled in the University Elementary School at the University of Michigan in 1951-1952.

The results showed progression in mean performances for both boys and girls at each higher age level. The boys showed superiority in the events involving kicking, throwing, and broad

---

jumping, while the girls performed equally as well on the twenty-five-yard dash.

High and positive correlations between chronological age and each of the various physical skills and growth aspects were obtained. It was concluded that various aspects of physical growth were more related to performance in gross motor skills than were mental growth measures.

Glassow and Kruse\textsuperscript{10} in a study of 125 elementary school girls measured running ability, jumping ability, and throwing ability. These were compared with the same tests "within-day" and were correlated. Since this was part of a longitudinal study, the investigators were able to check a particular child to see if that child stayed in the same position in the group and also to compare the child with her past records. It was indicated that during childhood motor performance scores improve and that the girls tended to maintain the same relative position within the group.

Dohrmann\textsuperscript{11} tested 200 eight-year-old boys and girls in a thirty-six-week study of throwing and kicking for distance. The


findings showed that those with practice in these skills did not do better than those children in regular physical education programs and that eight-year-old boys were superior to the girls of this age group.

In an experiment of physical maturity, physical strength, and motor performance of second-grade boys, Rarick and Oyster's results showed that "skeletal maturity was a factor of little consequence in accounting for individual differences in strength and motor proficiency." 12

Research with Implications for the Emotional

Dr. Harry F. Harlow's famous infant monkey who was deprived of mother love developed even more abnormal behavior patterns when also deprived of play contact with peers.

Another indication that play is a "necessity" in life is as follows:

Children of similar ages share problems in regard to the anxiety associated with the inability to master specific situations. In an attempt to solve these problems, they collaborate in playing specific games which in a symbolic way master anxiety at the same time keeping it out of awareness. 13


Erikson in his studies referred to a similar situation in which the ego found "recreation and self-cure in the activity of play."\(^{14}\)

Sutton-Smith stated that "the play media frees the child from all other accommodative problems."\(^{15}\) The accommodative component in games is the manner of the rules. The younger child will argue what the rule is, whereas the older child argues whether he did or did not break it.\(^{16}\)

Sutton-Smith also pointed out that insecure youngsters may find more satisfaction in a circle game or ring game than a line game. These attitudes about spatial relationships are not determined by any sense of objective measurement, but they are derived from the youngsters' recognition of the emotional value these spaces have for them. Line formations express conflict while capture games reflect both a child's desire and fear of independence.\(^{17}\)

Older youngsters prefer couple formations on the periphery of the circle whereas younger children prefer the center of the circle for security.\(^{18}\)


\(^{15}\)Brian Sutton-Smith, "The Historical and Psychological Significance of the Unorganized Games of New Zealand Primary School Children" (unpublished doctoral thesis, Victoria University Library, College Wellington, University of New Zealand, 1950), p. 376.

\(^{16}\)Ibid., p. 375. \(^{17}\)Ibid., pp. 450-66. \(^{18}\)Ibid., p. 471.
Some games allow the child to express ambivalent feelings toward his mother or other adults. A child will dramatize the character and work through this feeling while growing in the group relationship. 19

Another Sutton-Smith study that has furthered our knowledge of games and showed a relationship between games and emotional-social background was entitled "Cross-Culture Study of Children's Games." The thesis considered was that "games do have a dynamic relationship to other aspects of human culture." 20

Thirty-six tribal societies with complete game descriptions and twenty-one societies with partial information were studied and significant relationships were found between child-training ratings and game types. In summary these were as follows: 21

1. Fewer games were found in the cultures where children are indulged in infancy and then given early responsibility.

2. The author believed that "games are culturally provided ways of assuaging the conflicts regularly induced by the socialization processes in particular cultures." 22

19 Ibid., p. 467.


3. Games have two functions in the area of "anxiety over achievement." Games help relieve children's anxiety over achievement when they cannot normally achieve, and games help provide simulated experiences of the usual ways of achieving.

4. Simplest games were of pure physical skill and these games were associated only with anxiety of achievement.

5. The largest number of relationships with child-training variables occurred with games of strategy. As an example, children were trained and socialized earlier and their parents used the denial of love-type disciplinary techniques in tribes which played games of strategy.

6. Games of chance were associated with many socialization conflicts. Conflict over achievement, over responsibility, and severity of sex training showed relationships to games of chance.

"Game Involvement in Adults" dealt with conflict encultra-
tion. 23

Bandura and Walters stressed the results of rewards or punishments used for aggression when they stated:

Children who observe an aggressive model rewarded display more imitative aggression than children who see a model punished for aggression. Similarly, rewarding

and punishing consequences to a model who violates a prohibition influence the extent to which his transgression will be imitated. In addition, models who are rewarding, prestigious, or competent, who possess high status, and who have control over rewarding resources are more readily imitated than are models who lack these qualities. Such factors also determine in part which models will be selected as major sources of exemplary social behavior patterns.24

"What Play Tells You about Children" was a clinical-type observation study of play. It pointed out that high achievement occurred when children are rewarded for winning and punished for failing, that children learned a lot about life's competition through playing, and that games represented certain systems of motivation through which children learn.25

In relationship to competence and the play of contented children, White26 stressed that children have a need to deal with the environment. This means the child's discovering the effects he can have on the environment and the effects the environment will have on him.


25Brian Sutton-Smith, "What Play Tells You about Children" (New Zealand Education Department, n.d.), pp. 1-9. (Mimeographed.)

Research pertaining to role and status was exploited by Gump and Sutton-Smith. They pointed out that games provide many roles for children to play and that some roles have higher status positions than others. A child can lose or gain status by the position he has (or gains or loses) in the game. Three things affected this: (1) social power, (2) skill, and (3) game controls over position assignment.

A game classification was given as follows:

**Dramatic Games:**
- Ritual Dramatic Games
- Skill Dramatic Games

**Skill Games:**
- "It" Games
- Pack Team Games
- Individual Skill Games
- Team Sports

The "It" role was discussed in relationship to specific games and also in relationship to those children in "It" roles. The generally unskilled player had more success in games of chance than in games of skill.28

A continuation of the aspects of games mentioned above was found in "The Impact of Game Ingredients on Children's Play"

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Behavior, " by Redl and also in Gump's "The Ingredients of Games and Their Impact upon Players." The "It" roles were discussed again after they had been observed over one hundred times.

The theory which stimulated the research of "A Revised Conception of Masculine-Feminine Differences in Play Activities" was the consensus that sex roles in American society are in a fluid state and that women seem to view their role as more active than they did formerly.

A second aspect of this theory was a re-examination of some commonly found male-female differences in games; and a third point was to examine the game preferences of children.

A game list was composed from a survey of children's preferences and from previous lists by experts. A list of 181 games was compiled by Rosenberg and Sutton-Smith and was tested on fourth-, fifth-, and sixth-grade children. The results indicated a shift by females to what formerly had been male activities. This


30Paul V. Gump, "The Ingredients of Games and Their Impact upon Players" (School of Social Work, Wayne State University, n.d.), pp. 1-11. (Mimeographed.)
was in the form of an expansion and not a convergence of the two groups' activities. 31

Rosenberg and Sutton-Smith constructed and validated a scale of masculine and feminine play interests. They had 183 fourth-, fifth-, and sixth-grade children check a list of 181 games. The final list of 115 items remaining was analyzed and yielded sixty-seven items that differentiated male from female. The scale was administered to two subsequent samples to determine its validity.

The results were similar to Terman's results in 1926. 32

A third study on sex differences was preceded by administering a 180-item inventory to 1,900 third- to sixth-grade children in twelve Midwestern townships.

The results of the study indicated that girls were more responsive to the items on this inventory than were the boys and also showed an increasing interest in masculine items throughout these grades. The major part of these changes occurred between the third and fourth grades. Boys then showed an increasing interest mainly for the more mature items whereas girls showed an increased


interest in both immature and mature masculine and feminine items. There was no evidence of a change back to the female items in the fifth grade. 33

Sutton-Smith compared children's responses to the masculine and feminine items in a play inventory with ratings of the masculinity and femininity of their free play behavior. "Systematic but indirect relationships are reported." 34

A study which encompassed many aspects of play was done by Taylor, and it considered emotional problems in reference to establishing, maintaining, and accepting relationships within the group. Participation at the level of their maturation and different patterns for boys and girls at specific ages also were discussed. Over protection and rejection were considered. Respect for each individual's personality in planning was said to help in creating a satisfying emotional tone. 35


Research with Implications for the Social

Human personality cannot be developed apart from the social group and since our children are destined to live in a highly organized social order, the physical activities of children and youth should be used progressively from kindergarten through high school to develop social learnings and a gradual intensification of social consciousness. 36

Emmerich, at Purdue, conducted a short-term longitudinal study using thirty-eight middle-class nursery school children. He investigated the dimensionality, continuity, and stability of early social behavior. Factor analysis successfully ordered the individual differences in each of four successive semesters of nursery school attendance. The most continuous and stable dimension throughout this period was Interpersonal vs. Impersonal Orientation. Interpersonal children tended to be negative whereas impersonal children were likely to be positive and active. There was evidence for a developmental transformation during the fourth semester when previously impersonal-positive counterpart became socially insecure.

The observational method was used and twelve five-minute samples were taken each semester. These were classified in seven categories and thirty-four subcategories.

The essential question is "whether distinctiveness of the individual relative to others is maintained throughout development." 37

Clearly, the preschool-age child's goal directed behavior in a free play setting has a definite organization which is predictable, at least in the short run. These findings also suggest that the present factor analytic procedure offers promise as a method by ordering personality variances in longitudinal samples. 38

They did "support the view that certain basic interpersonal orientations become established early in life and are sustained over time in either their original or transformed forms." 39

Two of Cowell's and Ismail's studies were investigated using different age groups but with similar results. The study using ten- to twelve-year-old boys reported that

Those engaged in team sports are likely to be accepted at closer personal distance than those in more individual programs of motor fitness. . . . Apparently, each player tends to accept his colleagues at closer personal distance when all are members of a group working toward a common goal. 40


38 Ibid., p. 323. 39 Ibid., p. 323.

Research with Implications for the Mental

Cowell and Ismail's other study\textsuperscript{41} involved football players and their selection for the varsity squad. It further considered that the social integration of the team increases according to the length of time the players play together. The conclusions also stated that football and academic abilities are independent, yet football ability and social acceptance are related.

At Purdue University's Department for Physical Education for Men and Achievement Center for Children a study entitled "Utilization of Motor Aptitude Tests in Predicting Academic Achievement for High, Medium, and Low Achievers" was made by Ismail, Kephart, and Cowell. They stated, "Real education is a motor, emotional, and social as well as intellectual experience.\textsuperscript{42}"

They proposed that the performance of children is related to certain factors which are highly related to the total motor, emotional, intellectual, and social development. The purpose of their study was


\textsuperscript{42}A. H. Ismail, Newell Kephart, and Charles C. Cowell, "Utilization of Motor Aptitude Tests in Predicting Academic Achievement for High, Medium, and Low Achievers," study sponsored by the Indiana State Board of Health (PU 879-84-838) (Lafayette, Ind.: Dept. of Physical Education for Men and Achievement Center for Children, Purdue University, n.d.). (Mimeographed.) P. 1.
to develop a motor aptitude test battery for pre-adolescent children
for predicting academic achievement for low, medium, and high
achievers.

The data was obtained for thirty-nine variables from sixty
boys and sixty girls between ten and twelve years of age, inclusive.
They were ranked for high, medium, and low achievers. The
Doolittle Method of Multiple Correlation and the Pearsonian "r"
were used to select the best predictions for I.Q. and Stanford Aca-
demic Achievement scores independently. Regression equations
were used.

Comparing the $R^2$ associated with the regression equa-
tions for estimating I.Q. and Stanford Achievement scores
for high, medium, and low achievers and the total group,
the following conclusions are drawn:
1. Motor aptitude test batteries associated with high,
medium, and low achievers accounted for adequate amount
of variance for prediction purposes.
2. In low achievers, I.Q. scores can be predicted by
motor aptitude test scores more accurately than in either
high or medium achievers.
3. In high achievers, Stanford Achievement scores
can be predicted by motor aptitude test scores more
accurately than in either low or medium achievers.
4. Prediction of I.Q. or Stanford Achievement scores
for the total group utilizing motor aptitude test items was
unsuccessful. Consequently, classification of subjects
into sub-groups according to their level of achievement
is of considerable importance for accurate prediction of
either I.Q., or Stanford Achievement scores.43

43Ibid., pp. 3-4.
Research Involving Other Areas Related to This Study

Greenacre's study stated:

Markedly creative people seem to be not only playful but restless and responsive to the new to an unusual degree.  

The role of anxiety in connection with the artistic product varies according to the special nature of the interlocking relationships between the personal self and the artistic self in each creative individual.

Through play, the child's anxiety lessens as he gains illusory mastery enough to meet these disturbances in reality, later.

In a longitudinal study of the assimilation of the new child in a group Ziller and Behringer found that a child is more readily assimilated in grades one to three than in grades four to six.

Two studies on the difference in leadership in physical education classes are reported. Ross's study of 240 fifth- and sixth-grade boys and girls showed the physical education specialists taught classes superior only in the thirty-yard dash and that

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45Ibid., p. 79. 46Ibid., pp. 61-80.

sixth graders were superior to fifth graders and boys superior to girls. 48

The AAHPER Physical Fitness Test was used by Zimmerman to test whether or not boys and girls in grades five through eight were better in performance when taught by the specialists or by the classroom teacher. Out of the thirty-five group-classification events, twenty of the thirty-five boys were superior in thirty-one events and fourteen of the thirty-five girls were superior in thirty of the events when taught by the specialist. 49

Sutton-Smith's and Rosenberg's study of "Sixty Years of Historical Change in Game Preferences" is a very complete study and assumed that certain games were group games and certain ones boy or girl games. Check lists were used, and comparisons made from the past were presented with cautions given concerning the interpretations. The order of treatment was developmental and a long games list was included, and changes in game preferences were discussed in detail. 50


CHAPTER III

DEVELOPMENTAL VALUES IN THE STRUCTURE OF GAMES

Procedure Used

Statement of Problem

This study was undertaken to examine the theory that low-organization group games affect the social, emotional, and mental values of children. Developmental values were identified, the approximate degree to which these values were found in games was ascertained, and relationships of the values found in the games were stated as these applied to children.

Development of the Instrument

The fields of child development and of children's games were considered, and within these fields three broad areas for concentration were selected—social, emotional, and mental. It was decided not to include the physical aspects of growth, as this area has been studied most often by investigators from the field of physical education; furthermore, several aspects of the physical are more readily
apparent to the classroom teacher when observing and teaching children's games than are the other categories.

Lists of what games purport to do were composed from a review of the literature and research, from interviews with elementary physical education teachers and with classroom teachers who were nonspecialists in physical education. These were compared, condensed, and applied to specific game situations. They were discussed with general educators, psychologists, and physical educators before refining them and compiling a list of twenty-seven values.

These developmental values were written in nontechnical language and applied to very general game situations. One of these values, "Practice good sportsmanship," for example, might imply a certain amount of emotional control in winning and losing, some degree of self-control in situations during play, taking turns being the leader, taking turns with equipment, and the like.

The words and phrases used in the list were left very open-ended so that they could include a wide range within the category and still be useful. A listing of more specific values would have had to be much longer to include all the situations that were hoped to be covered and, thus, would have been too long to use in this study. Since these values were stated in general terms, the list of values
or questionnaire was more difficult to answer; yet undoubtedly more situations were covered by the answers. Several values might be considered to be overlapping; however, an attempt had been made to keep this to a minimum.

The listing of values was checked by three physical educators, a college student in sociology, and a psychometrist for understanding of terms as they applied to games in the study. Revisions and simplifications were made. A final list\(^1\) of twenty-five values, together with two questions pertaining to categorizing the game, was formed. For ease of reading and discussion, all twenty-seven items were called "developmental values." Three persons--two physical educators and one advanced student in sociology--each read the entire listing and rated the values using selected games, but no one of them rated all of the games. Therefore, the length of time required to complete the instrument was not established by the pre-test.

Reliability, Validity, and Objectivity

Reliability was tested by using the same game twice in the questionnaire. It appeared as the second game under the name Pom-Pom-Pull-Away and again near the end as Hill Dill. The rules were identical, but they appeared with different wording. The

\(^1\)Appendix, pp. 99-100.
coefficient of correlation for these two games was .93, which was sufficiently high that the test was considered reliable.

The instrument had "face" validity and no other validity check was applied.

The test was objective as the respondents checked a five-point attitude scale to rate the twenty-seven values for each game. A definition of the word attitude may make the nature of this scale clearer.

An attitude is a personal disposition common to individuals, but possessed to different degrees, which impels them to react to objects, situations, or propositions. . . . The underlying basis in motivation is responsible for the bipolar nature of an attitude continuum. 2

The Scale

A five-point Likert-type scale was selected that had verbal degrees instead of numerical degrees, because it was believed that better results would accrue if respondents had quantitative phrases to gauge against. A verbal-type scale helps the respondent view the categories geometrically.

The categories selected for use with this instrument were--"Not at all," "A little," "Some," "Quite a bit," and "Very much." These best suited the language of the instrument as a whole.

A five-point scale was used instead of a three-point scale so that the results would be more accurate and have a wider range. A five-point scale could have been condensed, whereas a three-point scale could not have been extended. Persons answering tests often supply qualifiers if there are not enough categories given and thus make accurate tabulating impossible.

This instrument and its scale were applied to each of thirty games.

Games Selection, Problems, and Limitations

The decision to use thirty games was based on the desire to rate a variety of frequently used third- and fourth-grade group games to see if a jury composed of physical education experts would agree that the games contained the structures needed so that their rules would create situations through which children could exercise their use of these values and that social, emotional, and mental growth would take place.

Various procedures of game selection, such as a survey of games used in selected Midwestern elementary schools, were debated. It was decided that a survey of the games in fifteen currently used game books (copyrighted after 1950)³ would be the

³Appendix, pp. 101-102.
method used to select the games because the games found would be those most readily available to all teachers. Those experts acting as jurors probably would have had previous experience teaching the games in the survey. 4

The books selected covered many types of games, and the majority of the books were designed for teachers of elementary school physical education classes. Of the 550 games in the survey, those most frequently occurring were the thirty games used in this study. 5

The game most frequently listed was Dodge Ball; the three next frequently found were Hill Dill, Still Pond (also called Still Water, Stop), and Three Deep.

The games were categorized according to the amount of activity, formations used or type of game, and grade level as found in the literature and shown in Table 7. 6 There were five quiet games, ten semi-active, and fifteen active ones. Fifteen games were for third grade and fifteen games for the fourth grade. The

4With thirty games and eighteen jurors, there were 540 possible teaching-of-games situations. When the results were tabulated, 446, or 79 per cent had occurred; and ninety-four, or 21 per cent had not been taught.

5Appendix, pp. 103-112.

6Appendix, p. 113.
formations or types of games were in six broad groupings. Four games were team-type games, three were lines-and-teacher games, four were goal games with taggers, five were scatter formation and a tagger, six were relays, and eight were circle games. These groupings were all very subjective as evidenced by the way the source books varied in their classification of the games. The formations and game categories used here were a combination of what was found in the literature and the author's opinion.

It was interesting to note that thirteen games used equipment or properties. Two of the games used blindfolds, several used balls, Indian clubs, beanbags, and one, a "jump shot."

There seemed to be a discrepancy between the types of games recommended for use in a third- and fourth-grade physical education games program as found in this survey and the number of such games offered in the textbooks. Many different sourcebooks suggested the following types and percentages of games for use at third- and fourth-grade levels in teaching units on games in physical education programs. The suggestions were as follows:

- 5 to 15% of class time on relays
- 10 to 20% of class time on athletic team games (lead-up)
- 10 to 25% of class time on low-organization games
- 25 to 60% of the total physical education class time.
In the fifteen books surveyed there appeared to be more relays and games of low organization and fewer elementary lead-up games (to team games) than recommended for this age group.

Other limitations and problems were numerous. Game titles were not standardized and often the same game would appear with different names or the same name would be used but with different rules. There was no one standard as to types or categories of games and, as a result, the same game was often classified in several different ways.

The games were not always alphabetized and they were not always indexed. Thus, it was difficult to obtain a complete or an accurate survey.

The games were not always listed for a specific grade level (perhaps to encourage teachers to use games appropriate for their classes); however, a logical progression should have existed in the literature. The games used in the survey were listed most frequently for the grade level shown in Table 7, yet the same game could be found listed from first through sixth grades depending on the source book and how the game was written or what rules were included in the game.

The games represented here do offer some range in the degree of difficulty. However, the majority would be marked less
complicated on a continuum of games ranked from simple to difficult, as should be the case for the third and fourth grades.

The games found in most of the books published during the last five years were often games created or composed recently, and so were found only in one or two source books, thus automatically excluding them from the survey even though these games were often considered to be "good" games.

Despite these limitations, the thirty games most frequently found by this survey were compiled and sent to the jury to be rated.

Criteria, Selection, and Qualification of Jurors

The jurors were men and women carefully selected from elementary physical education and related fields. Part of the jury was selected because they were "practical" people--those directly teaching children, and part were "theoretical" people--such as physical education supervisors and teacher-educators. When selecting the jurors, the following criteria were established and eventually fulfilled:

1. They were especially interested in children and their total growth and development through the medium of physical education.

2. The jurors' positions related directly to children's growth and learning, or related indirectly to children through
supervision of teachers or teaching of prospective teachers. The jurors who were supervising had taught previously.

3. They had a general perceptiveness in understanding children and they had a knowledge of games.

4. They were highly experienced teachers.

5. They were or had been working with children from a wide range of socio-economic backgrounds.

6. They were or had been residing in Midwestern United States.

7. They were from cities, towns, suburbs, and the country.

8. They were of both sexes, married and single.

Thirty persons were selected, and a letter with a return postal card was sent April 23, 1964, to contact them. Twenty-four replied, "Yes"; two replied, "Yes, if it arrives early in June"; two replied, "No, previous plans"; one did not reply; and one person was not located.

Approximately June 10th the questionnaire and materials were sent to twenty-five persons asking them to return the answer sheets by July 3rd. Of the twenty-five sent, eighteen were completed and used. Individual follow-up letters were sent to

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8 Appendix, pp. 116-18.
the seven whose questionnaires were not returned by July 18th, asking for their return by August 16th. Thank you letters were sent to everyone.

Of the seven not in the study, three could not be tabulated. Two persons went to Europe and so did not have time to rate it; one disagreed with the emphasis of the study, and one did not reply.

There were eighteen people participating; nine were in teacher-education at colleges or universities, one was a physical education college administrator, one was a director of a motor therapy laboratory for children, three were in laboratory schools and two of these were also directors of their physical education departments, three were city directors, and one was head of an elementary school department of physical education. The teaching backgrounds of these jurors are shown in Table 1.
### TABLE 1

**TEACHING BACKGROUNDS OF THE EIGHTEEN JURORS**

<table>
<thead>
<tr>
<th>Grades and Class Levels Taught</th>
<th>Number of Jurors</th>
</tr>
</thead>
<tbody>
<tr>
<td>First grade</td>
<td>16</td>
</tr>
<tr>
<td>Second grade</td>
<td>16</td>
</tr>
<tr>
<td>Third grade</td>
<td>17</td>
</tr>
<tr>
<td>Fourth grade</td>
<td>18</td>
</tr>
<tr>
<td>Fifth grade</td>
<td>18</td>
</tr>
<tr>
<td>Sixth grade</td>
<td>18</td>
</tr>
<tr>
<td>Seventh grade</td>
<td>17</td>
</tr>
<tr>
<td>Eighth grade</td>
<td>17</td>
</tr>
<tr>
<td>Ninth grade</td>
<td>16</td>
</tr>
<tr>
<td>Tenth grade</td>
<td>15</td>
</tr>
<tr>
<td>Eleventh grade</td>
<td>15</td>
</tr>
<tr>
<td>Twelfth grade</td>
<td>15</td>
</tr>
<tr>
<td>Freshman year</td>
<td>13</td>
</tr>
<tr>
<td>Sophomore year</td>
<td>13</td>
</tr>
<tr>
<td>Junior year</td>
<td>13</td>
</tr>
<tr>
<td>Senior year</td>
<td>13</td>
</tr>
<tr>
<td>Graduate school</td>
<td>10</td>
</tr>
</tbody>
</table>

Eight jurors had taught at all levels, fifteen had administrative responsibilities, thirteen had worked in camps, eleven had done recreation work, and fifteen had taught workshops on elementary school physical education. Two jurors were authors of entire texts and one had contributed a chapter to a book, three had written curriculum guides, and eight had written articles. Several of this group
had done research. Thus, the jury was an exceptionally talented group and although they were a small sample, they had great depth and breadth of experience.

Materials Sent to Jurors

Envelopes containing the following mimeographed and other materials were sent to the jury: (1) a cover letter,9 (2) a personal data sheet,10 (3) descriptions of thirty games, (4) an instruction sheet,11 (5) a questionnaire or list of values to be rated, (6) thirty small answer sheets and a Manila paper heading with the rating scale on it,12 (7) an electrographic pencil, and (8) a self-addressed, stamped envelope.

Mechanics of the Instrument

The juror rating the list of values first read the description of the game and then on the appropriate answer sheet marked to what degree each of the twenty-seven values applied to that game. To illustrate, the game of Blindman's Buff was read first; then the juror used the questionnaire and read, "1. This game's degree of

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9 Appendix, pp. 119-20.
10 Appendix, p. 121.
11 Appendix, p. 122.
12 Appendix, p. 123.
physical activity is:—. Next the juror checked "A," "B," "C," "D," or "E" on the answer sheet to indicate his choice on the rating scale. The individuals' answers for each degree of the scale were tallied, given a numerical value, and then summed, thus yielding one total score for each value of a particular game. If the reader uses the first value of Blindman's Buff as an example, Table 2 illustrates the method used to obtain a "total score."

**TABLE 2**

PROCEDURE USED TO OBTAIN A TOTAL SCORE

<table>
<thead>
<tr>
<th>Answer Sheet</th>
<th>Rating Scale</th>
<th>Tally of Jurors</th>
<th>Numerical Values</th>
<th>Scores per Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Not at all</td>
<td>2 x</td>
<td>0</td>
<td>= 0</td>
</tr>
<tr>
<td>B</td>
<td>A little</td>
<td>15 x</td>
<td>1</td>
<td>= 15</td>
</tr>
<tr>
<td>C</td>
<td>Some</td>
<td>1 x</td>
<td>2</td>
<td>= 2</td>
</tr>
<tr>
<td>D</td>
<td>Quite a bit</td>
<td>0 x</td>
<td>3</td>
<td>= 0</td>
</tr>
<tr>
<td>E</td>
<td>Very much</td>
<td>0 x</td>
<td>4</td>
<td>= 0</td>
</tr>
</tbody>
</table>

Total No. of Jurors = 18  Total Score = 17
Analysis of the Data

Total Scores for Values

The total scores had a possible range from zero points to seventy-two points and an actual range from three points to sixty-seven points, as indicated in Table 3. There was a total of 191 "high" scores of the 810 total scores.

The jurors gave a "high" rating to the value, "Be alert and anticipate," in 80 per cent of the games, or twenty-four of them. The highest total score was given this value in the game of Dodge Ball. This seemed especially interesting as children like "suspense" and "excitement" in games and these factors seemed to be corrolaries of "Be alert and anticipate."

The lowest total score was three for "Learn athletic team strategy--offensive and defensive" in the game Blindman's Buff. "Be involved" was rated high in about 70 per cent of the games (twenty-one games), and this seemed to relate to the fact that "Be

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13Total scores were referred to as "high" if they were rated forty-three points or higher. This line of demarcation was arbitrarily chosen as these scores were in the top 40 per cent of the range.

14Appendix, p. 124.

15It would seem that the raters might have considered this game one of pure chance or luck as compared with games of strategy.
<table>
<thead>
<tr>
<th>Volume</th>
<th>Game Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Degree physical activity.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>2. Degree rules complexity.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>3. Be creative.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>4. Be honest.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>5. Be courageous.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>6. Be alert and anticipate.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>7. Be persevering.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>8. Be responsible.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>13. Appreciate one's own abilities and others.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>14. Be egoistic or feel self-important.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>15. Be aggressive or release frustrations acceptably.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>16. Become leader and practices being one.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>17. Change rules or lose leadership.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>18. Practice role of group member as follower.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>21. Identify with group or team.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>22. Make decisions and choices.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>23. Learn the vocabulary and rules of the game.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>24. Learn athletic team strategy—offensive, defensive.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>25. Practice good sportsmanship.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
<tr>
<td>27. Learn and practice safety rules.</td>
<td>59 47 27 54 59 34 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47 59 47</td>
</tr>
</tbody>
</table>

Notes—following page.
Notes for Table 3:

(1) Blindman's Buff  
(2) Pom-Pom-Pull-Away  
(3) Pinch-Oh!  
(4) Bull in the Ring  
(5) Bombardment  
(6) Automobile Relay  
(7) Jump the Shot  
(8) Bronco Tag  
(9) Stride-Ball Relay  
(10) Three Deep  
(11) Simple Dodge Ball  
(12) Fetch-and-Carry Relay  
(13) I Say "Stoop"  
(14) Spud  
(15) Walking Relay  
(16) Circle Stride Ball  
(17) Still Pond  
(18) Red Light  
(19) Indian Club Snatch  
(20) Crows and Cranes  
(21) Numbers Change  
(22) Squat Tag I  
(23) Poison Circle  
(24) Animal Relay  
(25) Boundary Ball  
(26) Boiler Burst  
(27) Over-and-Under Relay  
(28) Hill Dill  
(29) Dodge Ball  
(30) Cross Tag

Maximum range 0-72. Actual range 3-67.
alert and anticipate" was found so frequently and ranked so high in this group of thirty games.

"Be competitive" was rated high in 53 per cent (or sixteen) of the games, and "Degree of physical activity" was rated high for half of the games. These four values seem as a group to parallel the values so often stressed in our culture--alertness and anticipation, involvement, competition, and physical activity.

Another grouping of values was present in about one-third of the games--not necessarily the same third. This group included "Appreciate one's own abilities and others'," "Identify with group or team," "Be co-operative," and "Learn and practice safety rules." These values which stressed the self, others, co-operation, and safety are also emphasized in present-day living.

Other values being learned by this eight- and nine-year-old age group were shown when one-fourth of the games were high in "Be courageous," "Be persevering," "Be aggressive or release frustrations acceptably," and "Observe game and social etiquette."

Two values were rated high in only one game each; they were "Be creative" and "Be responsible." This was not too surprising as these games were for third- and fourth-grade children. Although these values were not found to any high degree in the structure of games, they could be found outside of the structure of the games,
that is, creativity could be shown through changing or altering the rules of the games to meet the needs of the group. Responsibility could be shown by those youngsters who care for the equipment, help to organize the games, and serve as leaders in various ways.

Three values were not rated high in any game; they were "Become leader and practice being one," "Change roles or lose leadership," and "Practice role of group member as a follower." These three values which were concerned with leadership, followership, group membership, and their reciprocal roles had a range from fourteen points to forty-two points. This indicated that the jurors saw these values in each game but not to the same extent as other values. Since only one or two youngsters were leaders at one time, it was not surprising "Become leader and practice being one" did not rate high scores. However, several games contained the value of changing roles and it was surprising to the author that this was not rated higher. It was also expected that "Practice role of a group member as a follower" would be rated higher since a youngster must be following if he is not leading.
Total Scores for Games

Those games which were most like lead-up games (to team sports) were highest in values.\textsuperscript{16} Dodge Ball, Bombardment, Boundary Ball, and Simple Dodge Ball all showed more value-involvement and, therefore, more total-involvement than the other games in the study. These same games, with the exception of Simple Dodge Ball, were rated within the top third for "Degree of physical activity" and were rated three of the top four places for "Degree of rules complexity," and had at least fourteen high values (approximately half). Simple Dodge Ball was fourth in a ranking of the thirty games for high value-involvement. From the above observations the author would have expected this game to rank near the median for high value-involvement; however, it was ranked much higher.

Further observation showed that these thirty games were not, as a total group, especially high in value-involvement. With the exception of the first five games in Table 9, no game had more than eight high total scores for values (or 30 per cent of its values rated high); but this might be appropriate as these games were intended for third and fourth grades.

\textsuperscript{16}Appendix, p. 125.
It was interesting to note that Blindman's Buff and Numbers Change each had only one high value and Still Pond had no high values. In the books surveyed these games were often listed for the lower grades, as well as for the third and fourth grades, but perhaps they were really too elementary to be considered for third and fourth grades. Blindman's Buff and Still Pond both used blindfolds and this would account for some lack of value-involvement.

Of the thirty games used here, the relays, as a group, fell approximately in the middle one-third for high total scores. They each had from three to six high values.

Games Ranked for Physical Activity

Table 10, 17 "Games Ranked for Physical Activity," showed the activity levels from the survey of the textbooks, the ratings given by the jurors in the form of total scores, the rank order according to total scores, and, thus, a comparison between the textbook ratings and the jurors' ratings. Approximately one-half of the games were rated by the jurors forty-three or higher for "Degree of physical activity" indicating these games were fairly active. Again, this is appropriate when the age group and grade levels were considered. Of all the games Pom-Pom-Pull-Away

17Appendix, p. 126.
and Hill Dill were rated the highest, followed by Bombardment and Jump the Shot. With the exception of Bombardment, these games were in the lowest one-third for "Degree of rules complexity."

Still Pond and Blindman's Buff were the two games rated lowest for "Degree of physical activity." Since blindfolds were used in these games, this rating was not surprising.

The survey of textbooks and jurors' total scores were in approximate agreement on two-thirds of the games for the value "Degree of physical activity." The jurors' total scores could be considered more reliable than the textbooks, because the textbooks were sometimes vague and often did not specify the activity level.

Games Ranked for Rules Complexity

When the thirty games were rated for "Degree of rules complexity," their total scores ranged from nineteen to fifty-three, or a thirty-four-point spread, which was not considered very large. This range covered approximately one-half of the total range; no games scored in the lower nineteen points or the upper nineteen points of the range.

The team-type games were rated highest. Relay games were ranked from fifth place to the twenty-ninth; they were not

18 Appendix, p. 127.
rated particularly high, and they were not grouped. Blindman's Buff ranked lowest, yet Still Pond was at the median.

Histogram for Each Game

A histogram for each game19 was drawn, based on the total scores; thus, a profile of each game was illustrated graphically. When comparisons of the histograms were made, some profiles were found to be similar and the histograms seemed to form groups. The groupings are discussed briefly here.

Bombardment, Boundary Ball, and Dodge Ball, the three team-type games, were all quite similar in their profiles and they all possessed many high total scores. A group of circle games not quite as closely related and with moderately high total scores was Simple Dodge Ball, Bull in the Ring, and Poison Circle.

A third group composed of Bronco Tag and Crows and Cranes was somewhat related to Squat Tag I and Red Light. Bronco Tag and Red Light did not have similar profiles; however, Bronco Tag did seem related to Bull in the Ring and Cross Tag—both found in other groups. Indian Club Snatch had a unique profile; the only profile that resembled it was that of Crows and Cranes.

19Appendix, pp. 128-58.
The profiles of three highly active games—Hill Dill, Pom-Pom-Pull-Away, and Jump the Shot—were similar and somewhat related to Spud and Cross Tag.

The relays were a very closely related group and are mentioned here in order of their relatedness—Over-and-Under Relay, Stride-Ball Relay, Automobile Relay, Animal Relay, Fetch-and-Carry Relay, and Walking Relay.

Pinch-Ohl was somewhat similar in profile to Over-and-Under Relay.

Three other slightly similar groups were Circle Stride Ball, Numbers Change, and Three Deep; Boiler Burst and I Say "Stoop"; and Blindman's Buff and Still Pond.

Simple Coefficients of Correlations for Values

The jury's ratings of the developmental values for all of the games were compared by a simple correlation analysis, by taking two values at a time. This procedure yielded the degree of association between the two different values for all thirty games. Table 4 shows these intercorrelations.

A t score of .38 was significant at the .05 level of confidence.20 This table had 351 correlations, and, of these, 193 correlations (or

| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 1.00 | .34  | -0.02 | .36  | .60  | .52  | .45  | .55  | -0.48 | .51  | .34  | .72  | .74  | .40  | .76  | .60  | .20  | .20  | .37  | .57  | .24  | .11  | .23  | .42  | .68  | .54  | .71  |
| 2  | 1.00 | .25  | .10  | .30  | .49  | .37  | .59  | .05  | .40  | .54  | .32  | .48  | .17  | .48  | .22  | .18  | .21  | .40  | .43  | .44  | .55  | .64  | .84  | .56  | .59  | .10  |
| 3  | 1.00 | 1.00 | 1.00 | .39  | .17  | .11  | .13  | -0.36 | .23  | .11  | .41  | .28  | .50  | .33  | .41  | .36  | .17  | .09  | .06  | -0.01 | .25  | .52  | .22  | .10  | .37  | .37  | .25  |
| 4  | 1.00 | .60  | .83  | .28  | -.15 | .50  | .23  | .38  | .56  | .57  | .77  | .39  | .58  | -.24  | .03  | .13  | -.19 | .02  | .37  | .44  | .59  | .50  | .50  | .66  |
| 5  | 1.00 | .34  | .63  | -.22 | .60  | .64  | .61  | .54  | .48  | .48  | .46  | .08  | .26  | .30  | .08  | .05  | .44  | .59  | .58  | .59  | .47  |
| 6  | 1.00 | .31  | -.14 | .55  | .39  | .33  | .34  | .48  | .77  | .31  | .47  | -.20 | .14  | .22  | -.10 | .05  | .38  | .55  | .50  | .52  | .60  |
| 7  | 1.00 | 1.00 | .62  | .20  | -.55 | -.87 | -.20 | -.33 | -.47 | -.06 | -.00 | .12  | -.11 | .12  | -.06 | -.04 | .04  | -.03 | .04  | .04  |
| 8  | 1.00 | .76  | .26  | .67  | .45  | .75  | .25  | .41  | .17  | .63  | .34  | .10  | .44  | .35  | .65  | .73  | .79  | .77  |
| 9  | 1.00 | .65  | .33  | .51  | .64  | .22  | .34  | .30  | .50  | .20  | .00  | .30  | .67  | .46  | .41  |
| 10 | 1.00 | .53  | .81  | .43  | .19  | .24  | .43  | .71  | .40  | .38  | .53  | .72  | .83  | .69  | .77  |
| 11 | 1.00 | .50  | .62  | .93  | .52  | .05  | -.01 | .06  | -.14 | .43  | .53  | .28  | .33  | .47  | .37  | .41  |
| 12 | 1.00 | .47  | .37  | .02  | .28  | .50  | .15  | .52  | .49  | .71  | .82  | .74  | .68  | .68  |
| 13 | 1.00 | .61  | .30  | .07  | -.07 | -.10 | .38  | .28  | .48  | .35  | .25  |
| 14 | 1.00 | -.07 | -.00 | -.28 | -.44 | -.91 | .15  | .16  | -.27 | .37  | .25  |
| 15 | 1.00 | .59  | .47  | .62  | -.03 | .20  | .34  | .38  | .33  | .17  |
| 16 | 1.00 | .54  | .68  | .11  | .36  | .52  | .65  | .67  | .57  |
| 17 | 1.00 | .83  | .04  | .42  | .55  | .72  | .58  | .53  | .41  | .37  |
| 18 | 1.00 | .52  | .38  | .55  | .33  | .53  | .41  | .37  |
| 19 | 1.00 | .71  | .48  | .59  | .40  |
| 20 | 1.00 | .78  | .06  | -.71 | .50  |
| 21 | 1.00 | .84  | .84  | .74  |
| 22 | 1.00 | .87  | .84  | .84  |
| 23 | 1.00 | .80  |
| 24 | 1.00 | 1.00 |

1. Degree of physical activity
2. Degree of rules complexity
3. Be creative
4. Be honest
5. Be courageous
6. Be alert and anticipate
7. Be persevering
8. Be responsible
9. Be patient
10. Be considerate
11. Share
12. Be Involved
13. Appreciate one's own abilities and others'
14. Be egocentric or feel self-important
15. Be aggressive or release frustrations acceptably
16. Become leader and practice being one
17. Change roles or lose leadership
18. Practice role of group member as a follower
19. Be co-operative
20. Be competitive
21. Identify with group or team
22. Make decisions and choices
23. Learn the vocabulary and rules of the game
24. Learn athletic team strategy—offensive, defensive
25. Practice good sportsmanship
26. Observe game and social etiquette
27. Learn and practice safety rules
55 per cent) were significant. Only four of the significant correlations were negative, and three of these correlated with "Be patient." This value had a -.65 correlation with "Be involved," a -.49 correlation with "Degree of physical activity," and a -.47 correlation with "Become leader and practice being one." For most eight- and nine-year-olds, involvement, leadership, and "lots" of physical activity are of prime importance, while patience is a value yet-to-be learned.

An arbitrary line of demarcation was drawn at .60 because it was felt that correlations at or above that figure were relatively "high" and merited more consideration than the other lower, yet significant, correlations.

The highest single correlation for values was .87 between "Practice good sportsmanship" and "Observe game and social etiquette." This correlation was probably high because these two values are both related to "proper" behavior.

The three values that had high correlations with approximately one-half of all the values were "Be aggressive or release frustrations acceptably," "Practice good sportsmanship," and "Learn athletic team strategy--offensive and defensive," as seen in Figure 31.\(^{21}\) It is interesting to note that these values represented the three main categories of values--emotional, social, and mental,

\(^{21}\) Appendix, pp. 159-60.
respectively; that the value representing the emotional area correlated highly with "Degree of physical activity"; that the value representing the social area correlated highly with "Degree of physical activity" and "Degree of rules complexity"; and that the value representing the mental area correlated highly with "Degree of rules complexity." Figure 31 portrays graphically those values having high correlations.

"Be creative," "Be honest," and "Be patient" had no high positive correlations; however, the significant correlations they had were interesting. "Be creative" had a .58 correlation with "Make decisions and choices" and had lower significant correlations with "Be courageous," "Be egocentric or feel self-important," and "Learn the vocabulary and rules of the game." "Be honest" had low significant correlations with "Be courageous" and "Be involved." "Be patient" had no significant positive correlations but had three significant negative correlations as discussed previously.

Simple Coefficients of Correlations for Games

Simple coefficients of correlations between the games were computed across all the developmental values; that is, the jury's ratings from all of the developmental values for one game were compared with the jury's ratings from all of the developmental
values for a second game. Thus, games which required similar
degrees of competence in each value had high correlations and games
which required different degrees of competence had low correlations.
Table 5 shows these intercorrelations.

A t-score of .36 was significant at the .05 level of confi-
dence. Two hundred sixty-nine correlations (or 62 per cent) were
significant of the total 435 correlations. There were no significant
negative correlations.

The highest single correlation was .97 between Stride-Ball
Relay and Over-and-Under Relay. There were five other correla-
tions of .90 or higher between relays. Hill Dill had a correlation
of .93 with Pom-Pom-Pull-Away (the reliability check) and .90
with Jump the Shot. These three games are quite active games
and the profiles of their values are all very similar. Dodge Ball
and Bombardment also had very similar profiles and had a corre-
lation of .91.

Figure 32 shows all the correlations of +.60 and higher
for the games and portrays a succinct picture of these high corre-
lations.

22Fisher, p. 209.

23Appendix, pp. 161-62.
<table>
<thead>
<tr>
<th>Legend</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Blenkins' Ball</td>
</tr>
<tr>
<td>2. Post-Post-Pull-Away</td>
</tr>
<tr>
<td>7. Automobile Relay</td>
</tr>
</tbody>
</table>

| 8. Jump the Shot |
| 9. Trench Tag |
| 10. Simple Dodge Ball |
| 11. Red Light and Curry Relay |
| 12. Spike and Change |

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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>16. Three Deep</td>
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<td></td>
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<tr>
<td>17. I Say &quot;Stoop&quot;</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>18. Red Light</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>19. Over-and-Under Relay</td>
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<tr>
<td>20. Boiler Burst</td>
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</tr>
</tbody>
</table>

| 21. Squat Tag I |
| 22. Numbers Change |
| 23. Under and Over Tag |

| 24. Cross Tag |
| 25. Hill Dill |
| 26. Over-and-Under Relay |
| 27. Over-and-Under Ball |

| 28. Boundary Ball |
| 29. Hill Dill Ball |
| 30. Blanks' Ball |

### Table 5: Correlation Among Games Across Values

The table shows the correlation values among various games. Each cell represents the correlation coefficient between two games. The values range from -1 to 1, indicating the strength and direction of the relationship. Positive values indicate a positive correlation, while negative values indicate a negative correlation.
Crows and Cranes, Pinch-Ohl, and Squat Tag I had fifteen or more high correlations with other games. This indicates that these games and the games with which they correlated all had similar amounts of value-involvement.
CHAPTER IV

INTERVIEWS CONCERNING CHILDREN'S

GROUP GAMES

Procedures Used in Interviews

This aspect of the study was concerned with the total learning situation found in children's group games, especially those at the third- and fourth-grade level. It contains many facets of games which were not included in the main experiment, augments some ideas, and states some that only were implied previously.

Statement of the Problem

The primary purpose of this subexperiment was to consider the social, emotional, and mental aspects of children's group games as found inherent in the game's structure. The physical aspects of games were omitted deliberately except when they had a direct bearing on the other factors because they have been, in many respects, adequately exploited. It was assumed that many of the physical skills are obvious to a teacher leading games. It also was assumed that the physical aspects of games are extremely
important to children and that innumerable benefits accrue directly and indirectly from them.

Other purposes of this subexperiment were concerned with the proposition that the structure of a game could be created, modified, or altered to meet specific social, emotional, or mental needs of a child or a group of children.

The part the environment plays, the effects of competition, and the function of the teacher in game situations were discussed. Interpersonal relationships and interactions within the group as they occur within the game's structure were considered.

These purposes were accomplished through semistructured interviews with twelve qualified persons.

Criteria Interviewees Fulfilled

The persons were carefully selected to be interviewed because--

1. They were considered to be very interested in children's growth and development and in the potentials for such growth and development through the medium of physical education.

2. They were engaged in an area of work which had a direct relationship to children, their growth, their development, and their learning; they also were involved in work with students in teacher-education programs in these areas.
3. They were well qualified and were exceptional in their area of work.

4. They were, as an aggregate group, working with children from a wide range of socio-economic backgrounds.

5. They were representing a wide range in ages and many years of varied experience.

6. They were residing in Midwestern United States yet representative of many more regional areas.

7. They were representative of rural, urban, and suburban backgrounds.

8. They were of both sexes.

There were twelve persons interviewed altogether—two persons in the area of city supervision of elementary school physical education; two university professors in the areas of child growth and development and human development; two university professors in teacher education of elementary school physical education; two laboratory school teachers, both department chairmen in elementary school physical education; two physical education teachers in elementary school teaching; two classroom teachers who had not majored in physical education but were very interested in it and had taught their own classroom pupils physical education.

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1Appendix, pp. 163-64.
Of the twelve persons interviewed, three were married men, three married women, and six single women. They had taught at many levels, as indicated in Table 6.

**TABLE 6**

**TEACHING BACKGROUNDS OF THE TWELVE INTERVIEWEES**

<table>
<thead>
<tr>
<th>Grades and Class Levels Taught</th>
<th>Number of Interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>First grade</td>
<td>9</td>
</tr>
<tr>
<td>Second grade</td>
<td>10</td>
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<tr>
<td>Third grade</td>
<td>11</td>
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<tr>
<td>Fourth grade</td>
<td>11</td>
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<tr>
<td>Fifth grade</td>
<td>11</td>
</tr>
<tr>
<td>Sixth grade</td>
<td>11</td>
</tr>
<tr>
<td>Seventh grade</td>
<td>10</td>
</tr>
<tr>
<td>Eighth grade</td>
<td>10</td>
</tr>
<tr>
<td>Ninth grade</td>
<td>5</td>
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<tr>
<td>Tenth grade</td>
<td>6</td>
</tr>
<tr>
<td>Eleventh grade</td>
<td>6</td>
</tr>
<tr>
<td>Twelfth grade</td>
<td>7</td>
</tr>
<tr>
<td>Freshman year</td>
<td>6</td>
</tr>
<tr>
<td>Sophomore year</td>
<td>6</td>
</tr>
<tr>
<td>Junior year</td>
<td>7</td>
</tr>
<tr>
<td>Senior year</td>
<td>7</td>
</tr>
<tr>
<td>Graduate school</td>
<td>4</td>
</tr>
</tbody>
</table>
More than half of the interviewees had administrative duties, nine of the twelve had worked in summer camps, and eight had done recreation work. Half of the group had led workshops or taught teacher education courses in the area of elementary school games. Two had written chapters of books in this area and four had written articles. Several of this group had done research. These twelve persons ably represented the many varied fields directly related to children and directly or indirectly to elementary school physical education.

The Semistructured Interview

As previously stated, it was decided to use the semistructured interview technique to gain the information sought.

Berelson stated:

This form gives greater control to the interviewer. It specifies not only the major topic to be stressed but also the questions to be asked and usually their order. Questions are of the "open-ended" type, ... in which the wording of the question is specified but the wording of the response is left to the respondent.

The semistructured interview is a compromise: as it acquires some of the advantages of reliability, precision, and control associated with the more structured techniques, it sacrifices some of the scope and depth of response obtainable by the less structured interviewing methods.²

Eight different topics were covered in the interviews. They were (1) the emotional, (2) the social, and (3) the mental learnings in games, (4) the alteration or creation of games to meet needs of the group, (5) the teacher's role, (6) the environment in relationship to children's games, (7) the personal and interpersonal relationships, and (8) the effects of competition. These topics were put in the form of rhetorical questions to be used in the interviews.³

Mechanics of the Interview

The mechanics involved in the interview were to secure the names of persons to be interviewed, to make the appointment, to set up the tape recorder, and to fill in a personal data sheet (p. 121) prior to the one-half to three-quarter hour interview. Later the tape-recorded interview was typewritten in rough form and then proofread while listening to the tape recording. A copy was sent to the person interviewed.

The results of the interviews were tabulated and, in general, compared to the questionnaire. Since the data was not statistical in nature, general statements were made in the summary and conclusions.

³Appendix, p. 165.
Limitations of the Interview

Two limitations to this method of interviewing were mechanical problems and the accuracy of interpretation of the interviews. Unfamiliarity with the mechanics of the tape recorder and its maintenance presented problems at the beginning of the work.

The accuracy of the interpretation was difficult at times because many of the statements assumed basic information that was not stated and it was difficult to tabulate implied material with any degree of accuracy. The data was not easily categorized because the areas overlapped. To partially avoid this problem, the interview could have been more structured or could have been confined to fewer topics.

At the onset of the interview, often the interviewee seemed self-conscious and too deliberate in his manner of speaking, so he was reassured that he could remain anonymous if he wished. Three persons desired to do so. The interviewee was encouraged to use colloquialisms if he wished since the interviews were not to be published.

Some of the persons interviewed seemed to have many ideas early in the interview but fewer ideas as it progressed. Others seemed to become more expressive in their later responses. All
of the interviewees were enthusiastic and quite absorbed in the topics as they spoke.

Analysis of the Data

Emotional Learnings

Allenbaugh stated and the other interviewees implied that through children's games "the youngster is actually helped to achieve to some degree self-actualization,"4 or a clearer self-image and that the child's perception of others is also clarified.

Rashid thought that "they learn psychologically all kinds of tolerances, controls, restraints, and emotional expressions, as well as freedom of emotional expressions."5

Approximately one-half of the interviewees stressed that it is of primary importance to plan deliberately for emotional or psychological learning. They further stated that teachers must be aware of conditions which permit these learnings to take place and that when the situations occur spontaneously, the teacher must be ready to capitalize on these situations.

4Interview with Naomi M. Allenbaugh, Professor, Teacher Education, Department of Physical Education, The Ohio State University, Columbus, Ohio, Summer 1964.

5Interview with Martha Norman Rashid, Associate Director, Special Program in Elementary Teacher Education, The George Washington University, Washington, District of Columbia, Summer 1964.
Those interviewed expanded on the definition and application of self-actualization in game situations. As a group they expressed or implied that the child should be helped to achieve self-actualization through understanding of the self in games. Such understandings—as the child's perception of himself in movement, the child's feelings about his own body, his understandings of his present and future limitations, his understanding of his own self-discipline, self-control, and patience—could be learned.

Every interviewee stressed the importance of helping the child build a positive self-image and an acceptance of self. About one-third of the group suggested doing this through planning for successful experiences in games, whereas others suggested removing the negative experiences in games. Repeated failures at a skill, not receiving a turn at being "It," not being chosen until last were some of the situations to help a child avoid or overcome. Rashid said that the extent of the effects of these negative and positive experiences would depend upon the child's degree and kind of involvement in the game.

The child's perceptions of others and his reactions to others as a result of his perceptions also were stressed as important emotional aspects of games. In understanding others the child should learn to appreciate the accomplishments of others and have

6Interview with Rashid.
an understanding of the relationship between his own and others' accomplishments.

Success and failure were mentioned again, this time in relationship to abilities, in relationship to emotional control, and in relationship to setting goals.

The persons interviewed also stated that games were an outlet for children's emotions and stressed channelling these emotions into "good fun" and other positive emotions. The interviewees further stated that the group should be helped to understand itself and its members in relation to these emotions. Dramatization in games was given as an illustration of a form of emotional release and also served as an example of role playing.

It was interesting to note that all of the developmental values pertaining to the emotional area on the questionnaire were mentioned at least once and most of the values were mentioned more often.

Mental Learnings

The twelve persons interviewed approached the question concerning the potential for mental or intellectual learnings in games in several different ways and at several different levels.

Allenbaugh\(^7\) suggested a series of kinesthetic understandings which the child should acquire through planned learning. These

\(^{7}\)Interview with Allenbaugh.
understandings included using the various axes of the body, understanding the use of the center of gravity, production of force, and generation of energy. Other basic elements of physics, such as spatial relationships and sensory perceptions were mentioned by another interviewee. Several persons stressed that skills or movements must be understood by the child so that the child can analyze his own movement and thereby help himself improve. A variety of concepts that might be learned through games were those involving the rules of the games and the various strategies used in games. Numerical concepts were mentioned most often.

Self- and social understandings were mentioned as large areas of intellectual understandings that were acquired through games. Moral values such as honesty, social values, and good sportsmanship could be learned if planning were done carefully.

Games involving skills in spelling, reading, and arithmetic were mentioned as the media for helping the child to understand and review his skills in these other fields. It also was suggested that the classroom teacher use games for observing the child, to learn his potentials, to use games as media for testing, and as a means of motivation. The reasons given for using games as the media were that the child enjoys games, is relaxed while playing, and is involved or concentrating on "the game." Skills which might
cause a child to worry in another situation do not seem as threatening in a game.

Finally, Rashid said that games can be used to gain insights into the learning process itself. This must be done through skillful guidance by the teacher in helping the child become aware of how he best "learns to learn the rules." The teacher also acts as a summarizer and evaluator when guiding children in these and other discussions.

Social Learnings

Social learnings frequently were referred to when the first two questions were asked concerning emotional and intellectual learnings. Certain categories in these three areas are really inseparable with the largest overlap occurring in the social and emotional areas. However, since the questions were asked separately, the results of the interviews were organized separately.

The social skills in games often were subsumed under the term "good sportsmanship." It also included how to win, how to lose, and how to compete. The social skills of politeness (such as being quiet while listening), special courtesies in connection with game skills (such as tagging), and safety factors were stressed.

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Interview with Rashid.
Moral values were referred to as social expectations of the group. Honesty in relationship to the game's rules was stressed. The rules of the game were likened to the laws of this country by Petty. Cheating and poor sportsmanship, while not emphasized, were mentioned as occasionally being problems.

Social groups were stressed as the structure through which the child learned to know people better and learned how to get along with people. The self-discipline and control needed by the child to be a group member and to associate with everyone were mentioned by the majority of those interviewed.

One-fourth of the experts mentioned that the child learns about the structure of the group itself, and another quarter of the interviewees discussed various effects the different social classes of the group had on the individual. Some thought the lower-class child copied the middle-class child's actions and reactions and that the teachers serve as models for their pupils. The group was said to be a "leveller" of classes.

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9Interview with Dolores L. Petty, Assistant Professor, Women's Physical Education, Chicago Teacher's College--North, Chicago, Illinois, Summer 1964.
Zarvis\textsuperscript{10} and Heitler\textsuperscript{11} felt that games could be informal and relaxed, therefore, have a great potential for all teaching.

Creating Games

When the interviewees answered this question, the emphasis was placed upon game selection to suit the group's and individual's needs. They felt the games should be selected carefully and could be revised, altered, or created to fulfill specific problems. Furthermore, the program of games should have a definite progression throughout the elementary years and throughout any one year of that program. The progression should be not only in the area of the physical skills but also in the areas of the social, emotional, and mental skills. The teacher should be the person responsible for a planned progression; however, the children could be directed or taught how to alter games and solve problems that occur when playing existing games. Those persons interviewed noted that inexperienced teachers and insecure teachers will probably not vary the games as much nor will they be as apt to create new ones.

\textsuperscript{10}Interview with William Kostas Zarvis, Chairman, Physical Education, Laboratory School, University of Chicago, Chicago, Illinois, Summer 1964.

\textsuperscript{11}Interview with Florence P. Heitler, Chicago, Illinois, recent third- and fourth-grade classroom teacher in Rockville Centre, New York, Summer 1964.
The men who wish to remain anonymous cautioned that modifications of the game could detract from it and spoil the fun. Too much emphasis on "learnings" in conjunction with the game and not enough playing can also spoil a game for many youngsters. Play should be started quickly and rules or alterations added at propitious moments.

Additional specific reasons for creating games included creating them for the physically handicapped and creating games that complement classroom teaching. Reasons for altering games were to give the unsuccessful child a chance to win and to have a feeling of success and to give every child at least one turn at being "It" in each game, if possible. The backgrounds and needs of each youngster in the group should be considered when creating or altering the games.

Role of Teacher

The role of the physical education teacher in the elementary school was likened to the role of other teachers. He, too, should serve as a model; should understand and guide the individual child toward his greatest potentials; should know the skills and knowledges involved in movement and help the youngster acquire these; should possess insight into the socialization factors of the group and guide the children in the group toward an understanding of these on the
conscious level; and should be able to plan for these experiences, teach them, summarize, evaluate, and implement the evaluations.

Specific suggestions as to how the physical educator should carry out his role were given by the interviewees. These have been summarized here.

In serving as a model, the teacher could play the game with the youngsters occasionally. By playing with the group, the teacher can engender enthusiasm, add prestige to the situation, and motivate the children to play. (Three teachers said that sometimes youngsters needed urging to participate.) The teacher's manners and reactions to others, such as praising them, are often imitated by the youngsters.

The individual child may need help in analyzing his own capabilities and in improving and augmenting them. It was suggested that the teacher help the youngster gain satisfaction and see that the child does not encounter too many failures. This latter suggestion was stressed particularly by a male instructor who teaches in a lower economic area but, of course, it is applicable to those teaching anywhere.

An anonymous interviewee stated:

The happy person is a person who likes himself. You are in no position to like someone else unless you like yourself, and you are the last person in the world you can fool. You like yourself only if you can do certain
things well. You've got to have a basis for liking yourself. It seems to me that physical educators, and the recreation people in a broader sense, have an outstanding opportunity to help the person to like himself and, consequently, to like others better if they will accentuate the positive and point out the particular skills and strengths in which the person excels.

Three persons said that when encouraging leadership from the group, certain games such as circle games were better to use than games such as relays.

Skills, knowledges, and methods were said to be germaine to the situation and the teacher must be informed so that he will feel secure and not fear losing control of the group. It is the teacher's duty to introduce and organize the game, to teach safety, to teach and utilize democratic group procedures and problem-solving methods, and to teach the child an understanding of the basic skills. This was stressed since some teachers and supervisors felt the basic skills are neglected too often. The interviewees said the children need to understand the rules but that the children and the teacher should be jointly responsible for following the rules. Three persons warned about guiding too much or over-teaching instead of pacing the game so that it is smooth running and, most important of all, so that it is enjoyable.
The socialization factors involved are many, and Rashid said that the understanding of these on the conscious level by the youngster depends largely on "the insightfulness of the teacher in terms of all the broad learnings which can take place in game situations." She further stated that these understandings will not take place "unless the teacher is an expert in helping children to identify them and to discuss them." 

Influence of Environment

If the school situation is such that physical education is considered important; it is a planned activity, the teacher is enthusiastic and interested in it; she makes time for it, and so on, then, I think children learn a great deal more, simply because the status and prestige given by the school has set the stage for children's learning.

The school and the teacher must set the social-emotional climate; however, the children and other factors modify it. If the teacher is insecure, the children will notice this and react, often causing the teacher to lose control. Control may also be lost if the children are required to wait too long before beginning play, or if there are too many interruptions in their play, or if an unpopular

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12 Interview with Rashid.
13 Interview with Rashid.
14 Interview with Rashid.
or unsuitable game is selected. Lambert\(^{15}\) suggested that with
groups difficult to control, a teacher should use a game such as
Steal the Bacon, which has definite rules and very little freedom.
With groups that have a lot of self-control, a game such as Barrage,
a type of tug-of-war, could be used.

Too much stress on winning, competition too advanced for
the group, and cliques or individuals who will not become part of
the group can cause problems. Rashid\(^{16}\) said none of these factors
are irreversible in their effects if the teacher can help the group
see what is happening and help the group solve its problem.

A relaxed and happy social-emotional climate usually results
if each individual within the group is accepted, if the children are
willing to listen and co-operate, if they like to perform, and if they
have a well-planned program.

The physical environment was mentioned by most of the
interviewees as setting limits on what a group could do but not
appreciably "making or breaking" a program.

\(^{15}\)Interview with Edna K. Lambert, Assistant Director,
Health and Physical Education, Columbus Public Schools, Columbus,
Ohio, Summer 1964.

\(^{16}\)Interview with Rashid.
Lewandowski\(^{17}\) was concerned that many of the teachers she supervises do not make full use of the space available, do not fully utilize the sports equipment, nor do they fully utilize the audio-visual equipment. Through better usage of space and equipment, she felt these teachers would have an improved program.

Temperature, fresh air, and light were mentioned by several interviewees as influencing the program. Rainy days and the ensuing problems were recalled by the two classroom teachers interviewed.\(^{18,19}\) They felt noise caused by restlessness was the main problem to be coped with when remaining in the classroom.

**Pupil and Pupil-Group Relationships**

In a group situation there are many interactions and as a result many types of interpersonal relationships. One of the simplest, yet involved, is a one-to-one relationship. The interviewees said that in a game situation the teacher should help to see that friends and not enemies are made and that the children interact well.

\(^{17}\)Interview with Diane M. Lewandowski, Supervisor, Physical Education, Chicago Public Schools, Chicago, Illinois, Summer 1964.

\(^{18}\)Interview with Heitler.

\(^{19}\)Interview with Linda S. Hill, Long Grove, Illinois; second-grade classroom teacher in Albuquerque, New Mexico, Summer 1964.
Another one-to-one relationship occurs between the teacher and the child. Stevens\textsuperscript{20} and others suggested in working with the child to praise him frequently but to be sparse with criticism. When necessary, Stevens' criticisms are usually in private and very subtle. She asks the youngster to try to think of another way of solving the problem and helps him think through the situation.

A third type of relationship discussed by the interviewees was the group effects upon the individual. The group can have a very positive or negative effect, depending upon the individual's relationship to the group. The group acts as a stimulus on some individuals and has a quieting effect on others. All of the persons interviewed said that the child of this age is learning to subordinate his personal desires for the betterment of the group or team and that he is learning to function as part of a group.

The group is exerting more influence upon the child than in earlier grades, and peer approval is gradually becoming more important to the child than teacher or parental approval. Thus, in a game situation it is particularly important to the child that he perform well or at least not fail too often, follow the rules, and try to fulfill group expectations in order to win peer approval.

\textsuperscript{20}Interview with Helen E. Stevens, Assistant Professor, Elementary School Physical Education, University School and Center for School Experimentation, The Ohio State University, Columbus, Ohio, Summer 1964.
Leadership and followership was a fourth category of relationships mentioned by those interviewed. A leader's influence upon the group can be either positive or negative and can be strong or weak. The position of leader can be acquired by skill or by being popular or can be ascribed by the game. Several interviewees thought that "too often leadership just emerges" and that instead teachers should help all youngsters take turns practicing their leadership skills. It was suggested by Lambert\textsuperscript{21} that the shy child practice by leading a small group or squad of a few youngsters and master that situation before attempting to lead the entire group.

At the third- and fourth-grade levels the youngsters are becoming more aware of the culturally determined sex roles and, as a result, a girl may take the role of a follower if she perceives the leadership role to be too "tom-boyish."

Effects of Competition

Competition is considered an important part of our cultural pattern and many aspects of it can be learned through games. One of the main effects is to achieve a high level of skill or perfection.

There are several kinds of competition found in games, and these are found in various amounts.

\textsuperscript{21}Interview with Lambert.
One type of competition takes place when the child competes against his own record to improve a skill, and another type of competition takes place when the child competes against a standard to improve a skill or to measure it.

Skills are also "compared" when several are competing in a game. The teacher must plan in this situation to see that the rules of the game do not penalize the less skilled youngster too much. The teacher can do this with the help of the group by altering the rules if necessary.

The interviewees pointed out that through repeated failures in games the less skilled child would learn to dislike games and seek to avoid this type of activity. With careful planning and supervision, this will not occur.

Competition by pitting team against team permits a youngster to judge his abilities against the rest in the group. Caution must be exercised lest the youngster judge himself too harshly and/or draws incorrect conclusions or inaccurate conclusions about himself or others.

Team competition also involves co-operation or teamwork within the group. Hill noticed that when her class played among themselves, the individual youngster wanted her recognition and

22Interview with Hill.
often boasted to her how well he personally did, but when this class played the other fourth-grade class, they were quick to tell her how well their teammates had performed.

The interviewees stressed good sportsmanship and defined it as the gracious acceptance of winning or losing.

Lambert\textsuperscript{23} pointed out the importance of having a desire to play for the sake of playing, yet competing to win.

Rashid\textsuperscript{24} stated that not only do individuals show reactions to competition but groups have a character and could be placed somewhere on a continuum from very competitive to very co-operative.

\textsuperscript{23}Interview with Lambert.

\textsuperscript{24}Interview with Rashid.
CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

This study examined the theory that low-organization group games affected the social, emotional, and mental values of children. Developmental values were identified, the approximate degree to which these were found in games was ascertained, and relationships of the values found in the games were stated as these applied to children.

This purpose was achieved by using a list of developmental values with a five-point rating scale that was designed to determine the social, emotional, and mental values inherent in the structure of the games. The values were rated by a jury of eighteen experts from the field of physical education for each of the thirty games selected and the tallied responses were summed. Thus, a total number for each value was found, histograms were drawn, and intercorrelations were computed.

Two games, Pom-Pom-Pull-Away and Hill Dill, whose rules meant the same but were worded differently, were used to test the reliability of the list of values and the rating scale. Their coefficient
of correlation was .93, which was significant at the .05 level of confidence.

The rating scale was assumed to have "face validity" because the jurors were a select population instead of a random sample. It was presumed, therefore, that the jury determined the validity.

**Summary of the Total Scores**

A table of these total scores (pp. 48-49) showed that the jurors rated the value of "Be alert and anticipate" in Dodge Ball as being present to a higher degree than any other value in any game. It scored sixty-seven points out of a possible seventy-two. "Be alert and anticipate" was also rated very high in Simple Dodge Ball, Jump the Shot, and Crows and Cranes. Boundary Ball was rated highly for the values, "Identify with group or team" and "Be competitive." All ratings were anticipated; thus they verified the expectations.

An interesting pattern was formed by the results of the ratings of the six relay games. All had high scores for the values of "Be involved," "Appreciate one's own abilities and others'", "Be co-operative," "Be competitive," and "Identify with group or team." All of the relays were rated lower, but similarly on "Degree of physical activity," "Be alert and anticipate," and "Practice good sportsmanship." As a group, they showed an
average to low amount of value-involvement. Since the literature on relays regards them as beginning team games and the beginning of competition, the results mentioned here substantiate the literature.

The four games that were classified as more highly organized for third and fourth grades--Dodge Ball, Bombardment, Boundary Ball, and Simple Dodge Ball--had half or more (thirteen) of their total numbers rated forty-three points or higher. Thus, this indicated that the jurors felt these four team-type games showed a high amount of value-involvement. These games also had similar values and in the same approximate amount to offer players. Their lowest value was "Be creative." As a group, these team-type games also followed a pattern. They were rated as having more physical activity and a higher degree of rules complexity than the relays--one of the simplest forms of team games. These games also contained the values, "Be alert and anticipate," "Be persevering," "Be considerate," "Share," "Be involved," "Appreciate one's own abilities and others'," "Be aggressive or release frustrations acceptably," "Be co-operative," "Be competitive," "Identify with group or team," "Make decisions or choices," "Learn the vocabulary and rules of the game," "Learn athletic team strategy--offensive and defensive," "Practice good sportsmanship," "Observe game and social etiquette," and "Learn and practice safety rules."
For tag games and/or games with persons tagging, the five values most frequently rated high were "Degree of physical activity," "Be alert and anticipate," "Be involved," "Be competitive," and "Learn and practice safety rules."

Circle games and line-and-teacher games were the least closely related in grouping of values. All eleven of them showed a high rating for "Be alert and anticipate" and six of them were rated high in "Be involved." Both classifications had games which were rated high in several values and games which were rated low in all values; thus, no pattern was formed and generalizations were difficult to make. However, circle games and line-and-teacher games could be ranked among the other nineteen games in the study.

For all thirty games, "Degree of physical activity," "Be alert and anticipate," "Be involved," and "Be competitive" were the values most frequently rated high by the jury.

Summary of Coefficients of Correlations

Two matrix tables of intercorrelations (Pearsonian r's) were computed; one matrix table for all of the values and one matrix table for all of the games. Table 4 (p. ) shows a comparison of one value to another value. Each of these values represented its ratings for all thirty games. The correlations that resulted
showed a relationship between the two values for this selected group of thirty games.

A second matrix table (p. 61) shows a comparison of one game to another. Each of these games represented its ratings for all twenty-seven values. The correlations that resulted showed a relationship between the two games for the values these games represented, or the correlation indicated the degree of similarity of the profiles of the two games.

A $t$ test was calculated, and it was found that 55 per cent of the correlations of values were significant at the .05 level of confidence, and that 62 per cent of the correlations of games were significant at the .05 level of confidence. Since this represented several hundred significant correlations, arbitrary points of demarcation of +.60 and -.60 were established. This study primarily concerned itself with the correlations above or below these points.

The analysis shows that "Be aggressive or release frustrations acceptably" and "Practice good sportsmanship" correlated +.60 or higher with thirteen other values and "Learn athletic team strategy--offensive and defensive" correlated with twelve other values. "Be responsible," "Appreciate one's own ability and others'," "Observe game and social etiquette," and "Learn and practice safety rules" each correlated with eleven other values.
When the above values were found in games, several other values were always present. These seem to be the values stressed in our culture.

"Be creative" and "Be honest" had no correlations at .60 or higher. These values were found often in the study with low, yet significant, correlations.

"Change roles or lose leadership" and "Practice role of group member as a follower" each had only one correlation of .60 or higher. Perhaps the raters did not perceive this to be an important aspect of these games.

"Be patient" had no high positive correlations but did have a -.65 correlation with "Be involved." This could have been expected because youngsters of eight and nine years of age would find it very difficult to be patient, yet involved at the same time.

The highest single correlation between values was a .87 between "Practice good sportsmanship" and "Observe game and social etiquette."

The highest negative correlation was -.65 as mentioned above.

The analysis showed that the games Pinch-Oh-I and Crows and Cranes both had sixteen correlations of values over .60. Squat Tag I had fifteen high correlates; Numbers Change had
fourteen high correlates; Jump the Shot, Bronco Tag, and Simple Dodge Ball all had thirteen high correlates. Fetch-and-Carry Relay, Hill Dill, and Cross Tag all had twelve high correlates, and Poison Circle had eleven correlates over .60. All of these games offer a high total-involvement for children.

Blindman’s Buff and Indian Club Snatch each had only two high correlates, and, thus, these games showed less value-involvement when considering all the values in the study.

The highest single correlation between games was .97 between Stride-Ball Relay and Over-and-Under Relay. The next highest correlation was .93 between Fetch-and-Carry Relay and Walking Relay and also .93 between Pom-Pom-Pull-Away and Hill Dill. The latter two had identical rules and were in the study as a reliability check.

The highest negative correlation among games was -.25 and it was not significant.

Conclusions

All the hypotheses underlying this study proved to be acceptable. The first hypothesis, that "the structure of third- and fourth-grade group games contained social, emotional, and mental values and that the important ones could be identified," was established by means of a list of twenty-seven values and was
verified through the literature and then by use of a rating scale applied by eighteen experts. All twenty-seven were found in various degrees in the games. This was substantiated further through semistructured interviews with twelve additional jurors.

Second, it was hypothesized that "the thirty games most frequently found in the literature could be compiled and then ranked by a jury as to the degree they contained these values." The game list was compiled through a survey of the current literature and the games were rated through the use of a five-point rating scale. These ratings were shown on histograms, by tables of the total scores, and by correlations of coefficients. All three types of data substantiated this hypothesis.

Third, it was hypothesized that "the games could be altered or created to meet specific social, emotional, or mental needs of the child and that this medium of learning is unique in the school environment." This hypothesis was substantiated directly through the twelve interviews and indirectly through the substantiation of the first and second hypotheses.

The fourth hypothesis, that "the teacher has a specific function in games situations," was substantiated through the semistructured interviews.
The fifth hypothesis, that "the various interpersonal relationships of the individual pupil and the group are related to the child's total development," was substantiated directly through the interviews and substantiated indirectly through the rating scale.

The sixth hypothesis, that "the effect of the environment in a game situation and the influence of competition upon the child and group in game situations have an important influence upon the child's total growth," was substantiated by the semistructured interviews. The influence of competition was substantiated further through the rating scale.

Implications for Further Study

In the area of group games for the third and fourth grades, further studies of the structure of games recommended at this age level are needed. Such studies would result in better teacher planning and thus promote the child's total growth and development.

One direct extension of this study might involve using the same list of values and rating the games as the children play them. The results then could be compared with the results of this study.

Another possibility would be to take a "typical" game from each general category of games and do a depth analysis in one area--such as psychological.
A third possibility would be to analyze several of the newly created games found in the literature for their basic elements. From such a study, a list of suggestions and procedures on how to formulate new games might result.

A fourth study might be comprised of comparisons among games used in primary, intermediate, and upper grades or might be comparisons of low-organization games through highly organized games. Either of these suggestions could be done for a wide range of games or for a specific type of game.

A fifth study, historical in nature, could take one of several different approaches to the problem. One approach might be to trace the development of a game and show how the game and its rules have reflected cultural changes throughout the ages.

A sixth experimental study might consider how children learn spatial relationships in games.

A seventh possible experiment would involve standardizing the names of game titles, formations, degree of activity, and rules. This might be done by giving all group games a technical name in code. The name could include such information as the challenge or theme of the game, formation(s) used in the game, type of leadership ("teacher" or "It"), method of changing leadership,
type of action, and type of equipment. In this study the rules and type of ending could be coded also.

There has been so little research concerning the structure of children's games that the entire field needs to be systematized before it can progress. Interrelationships between a specific rule in a game and its effect on a child need to be examined and conclusions drawn as to what actually could happen to the child. Then the classroom teacher or physical education specialist could plan a program of low-organization games more effectively for children. As Redl stated, "This very idea of developing a 'pharmacopoeia' of game ingredients so as to know which combination will have which effect on a given child or group is in the foreground of our most cherished hopes."¹

QUESTIONNAIRE

1. This game's degree of physical activity is: ________________.
2. This game's degree of rules complexity is: ________________.

In this game the child has opportunity to:

3. Be creative.
4. Be honest.
5. Be courageous.
6. Be alert and anticipate.
7. Be persevering.
8. Be responsible.
10. Be considerate.
11. Share.
12. Be involved.
13. Appreciate one's own abilities and others'.
14. Be egocentric or feel self-important.
15. Be aggressive or release frustrations acceptably.
16. Become leader and practice being one.
17. Change roles or lose leadership.
18. Practice role of group member as a follower.
20. Be competitive.

21. Identify with group or team.

22. Make decisions and choices.

23. Learn the vocabulary and rules of the game.

24. Learn athletic team strategy—offensive and defensive.

25. Practice good sportsmanship.


27. Learn and practice safety rules.
BOOKS USED IN SURVEY


**Card Files**


GAMES

(1) **Blindman's Buff**

Rules of game: The players are in a circle with one player blindfolded in the center of the circle. The circle moves around until the child who is blindfolded claps his hands. He then goes and touches one of the players and tells him to count to ten. The blind man tries to guess who the player is. Three guesses are given him. If he is successful in guessing the person, that person becomes "It"; if not, he continues to be "It."^1

(2) **Pom-Pom-Pull-Away**

Rules of game: A goal line is drawn at each end of playing space. All players stand behind one goal line. A single player who is "It" stands in the center of the playing area between the two goal lines. He says, "Pom-Pom-Pull-Away; if you don't come away, I will pull you away." All players must then run over to the other goal line. "It" tries to tag as many players as possible. Those who are tagged help "It" and the game continues. "It" is the only one who gives the chant. The last person caught is "It" for the next game.^2

(3) **Pinch-Oh!**

Rules of game: The players form a line facing the person who is "It." "It" is about ten feet in front of the line. Each player has his right hand behind his back and has hold of the next player's left hand with his right hand. The first player at the end of the line squeezes the hand of his neighbor and calls, "Pinch." The pinch is passed on down the line until it gets to the last player who calls, "Oh," which is a signal for all to run to a goal line at the end of the room, while "It" chases them. The first child who is caught becomes "It" for the next game.

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^2Ibid., p. 243.
**Teaching suggestion:** The players in line should have their backs to the goal. ³

(4) **Bull in the Ring**

**Rules of game:** The children form a circle with the "Bull" in the center of the circle. The Bull tries to escape the circle by breaking through the joined hands of the children. When the Bull breaks through the circle, he is chased by the two players who allowed him to get loose. After he has been tagged, he selects a player from the group to be the next Bull. ⁴

(5) **Bombardment**

**Playing area:** Playground, gymnasium, a rectangular space divided into two equal parts with an area marked off across each end.

**Rules of game:** The players are divided into two teams, Team 1 and Team 2. Six Indian clubs are placed in the marked off area across each end of the court. A ball is given to Team 1 and another to Team 2. At the signal, each team tries to knock down the Indian clubs of the opposing team, while attempting to keep their own from being knocked down. A team scores one point for each club knocked down.

**Teaching suggestions:** It is advisable to limit the time. A timer and a scorekeeper eliminate confusion. ⁵

(6) **Automobile Relay**

**Rules of game:** Six to eight children make a single line which forms a team. Each team takes the name of a car. First player of each group runs to a marked place, turns around, runs back, and touches off the next player in his line who does the same; and so on until all the players have run. ⁶

³Ibid., p. 273. ⁴Ibid., pp. 263-64.

(7) **Jump the Shot**

Rules of game: Players form a large circle with a player sitting in the center holding the rope with the beanbag on the end. The center player starts whirling the rope so that the beanbag will reach the feet of the players in the circle. It should be in a steady motion close to the floor. As the beanbag swings around, each player jumps to avoid being hit. A player who is hit must drop out and stay out until another player is hit. They then change places resulting in only one player being out of the game at a time.

(8) **Bronco Tag**

Rules of game: Players are scattered over the play area in groups of three. Each group represents a Bronco. The first player is the head; the second player, who has his arms around the first player's waist, is the body; and the third player, who has his arms around the second player's waist, is the tail. The game starts with two extra players, one "It" and the other the "Runner." The only way that the Runner may be safe is to get hold of one of the Bronco's tails. As soon as he takes hold of the waist of a third player, he becomes the Bronco's tail and the head of the Bronco becomes the Runner. If the Runner is tagged, he becomes "It" and "It" becomes the Runner.

(9) **Stride-Ball Relay**

Rules of game: Players are lined up in relay formation. Each player is about five feet in distance from the next player in the line. Players all stand with their legs in a stride position; the first player in each line holds a basketball. On signal the first player rolls the ball between his legs. The ball advances down the line between the legs of all the players. The last players to receive the ball run to the head of the line and start the ball down the lines again. The team wins when the first player is again in his original position.

(10) **Three Deep**

Rules of game: Players form a large double circle, facing inward. One player is "It" and chases a runner who may be safe by stepping

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7Ibid., p. 295. 8Ibid., p. 292. 9Ibid., p. 300.
in front of a couple. When this is done, the person on the outside of the circle becomes the runner and the game proceeds. When the runner is tagged, he becomes "It" and "It" becomes the runner. 10

(11) Simple Dodge Ball

Rules of game: This is an informal type of dodge ball. Half of the players form a circle and the other half are in the center of the circle. Those in the circle try to hit the ones in the center. When a player is hit, he must join the circle. The last player caught wins. 11

(12) Fetch-and-Carry Relay

Rules of game: Players are lined up in single lines. A circle is marked on the ground some thirty feet in front of each team. A beanbag is placed in each circle. The first runner runs forward and picks up the beanbag, returns with it to the starting line, and places it in the hand of the second runner on his team. The second runner carries the beanbag back, places it in the circle, and runs back and touches the third runner, who gets the beanbag and returns it to the fourth, and so on to the end.

Teaching suggestions: If a beanbag is not put in the circle, a team is disqualified. If a player drops the beanbag, he must pick it up before going on. Runners should put the beanbag in the left hand of the next player. 12

(13) I Say "Stoop"

Rules of game: The leader stands at the front of the room and says, "I say 'Stoop'" or "I say 'Stand.'" The players follow the command, not the actions, as he may stoop when he says stand. Anyone who does not follow the command is "It." 13

10 Ibid., p. 301. 11 Ibid., p. 274.

(14) **Spud**

**Number of players:** Ten to fifteen

**Rules of game:** Players who have been numbered are lined up around the circle with one foot on the line. "It," who has the ball, is in the center of the circle. The game is started by "It" throwing the ball into the air and calling a number. The player whose number is called must recover the ball while the other players run. As soon as he has recovered the ball, he calls "Spud" and everyone must stop immediately. He then tries to hit a player. If he succeeds, the other player becomes "It." If he does not succeed, he must recover the ball and the circle is reformed. The game is continued by "It" throwing the ball into the air and calling a number. If a player whose number is called catches the ball before it touches the ground, "It" must continue. Each player who has been "It" has one "Spud" against him. When he has three Spuds, he must leave the game and can return only when another person obtains three Spuds. 14

(15) **Walking Relay**

**Rules of game:** Players are lined up in relay formation with a goal line thirty feet in front of each team. The players progress to the goal line by walking as fast as possible. Upon touching the goal line, they turn, and run back, touching off the next player. The team wins whose players are first in their original position. 15

(16) **Circle Stride Ball**

**Rules of game:** The players stand in stride position with their feet touching the feet of the players on either side. "It" is in the center with a basketball attempting to throw the ball between the legs of the players, who must keep their hands on their knees until after "It" has released the ball. The players then may use their hands in attempting to block the ball. When the ball goes between a player's legs, that person retrieves the ball and is then "It." Considerable feinting is often necessary to be successful.

14Ibid., pp. 352-53. 15Ibid., p. 303.
(17) **Still Pond**

**Rules of game:** A Player is blindfolded; another player says to him, "How many horses are therein your father's stable?" "Three." "What color are they?" "Black, white, gray." The player then turns the blindfolded player around three times and says, "Go out and catch one of them." All players scatter out and must stop when he says "Still Pond." When he tags a player, he has three guesses to determine who it is. If he guesses, the player is "It"; if he fails, he must go on and tag someone else. 16

(18) **Red Light**

**Rules of game:** Two parallel lines are marked off some fifty feet apart. "It," stands on the line at one end with his back to the other players who are all lined up along the other line. It is the object of the game for the players to try to make it to the line upon which "It" stands. The first one doing so becomes "It" for the next game. "It" starts the game by counting up to ten and then yelling, "Red Light." While he is counting, the players are advancing toward his line. Upon the words "Red Light," they must stop, and not move a muscle. "It" at once looks at them. If any move, they must go back to the starting line. 17

(19) **Indian Club Snatch**

**Rules of game:** Two teams of an equal number of players are lined up on parallel lines, facing each other. These lines are about twenty feet apart. An Indian club is placed midway between the lines. The players are numbered consecutively starting at opposite ends. When the teacher calls a number, the two players who have that number try to get the Indian club. The one who succeeds tries to get back to his place before the other one tags him. If he does, he scores one point for his team; if he fails, the opponent gets to score one point for his team. Another number is called and the game continues. The team which has the largest score wins. 18

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16Ibid., p. 274. 17Ibid., p. 244. 18Ibid., p. 295.
(20) Crows and Cranes

Rules of game: Goal lines are drawn at each end of the playing space approximately sixty feet apart. Two restraining lines are drawn across the width, three feet on either side of the center. The Crows stand behind one restraining line and the Cranes behind the opposite line, facing each other. The caller, standing at the side of the center area, begins by saying, "Cr---r," and completes the word "crows" or "cranes." The team whose name is called turns and runs towards its goal line, with the opposite team attempting to tag them. All players caught must join the team tagging them. The caller may use another word beginning with "Cr," but then use the term "crows" or "cranes" immediately afterwards. The players may not enter the center area to chase until after the other team's name has been called. The game is played until one team has almost all of the players.

(21) Numbers Change

Rules of game: Players form a circle with "It" in the center of the circle. Each player, including "It," has a number. "It" calls two numbers, and the players whose numbers he calls must change places in the circle. "It" then tries to get one of their places. The one who does not succeed is "It" for the next game. 19

(22) Squat Tag I

Rules of game: This game is played as a simple tag game with a player safe if he squats; however, this time the one who is "It" gets to say how many squats will be allowed. 20

(23) Poison Circle

Rules of game: Players holding hands with their arms spread wide apart form a circle. A chalk circle is drawn inside the circle thus formed. The players try to pull each other into the chalk or "poison" circle, thus "poisoning" them without entering it themselves. If they let go of hands, both players where the break occurred are poisoned. The game continues until time is called.

19 Ibid., pp. 296-97. 20 Ibid., p. 300.
(24) Animal Relay

Rules of game: Players are lined up in relay formation behind a starting line, facing a goal line some fifteen feet away. Each player is required to progress toward the goal line and back in the manner representing some animal: rabbit hop, donkey walk, crab walk, lame dog, bear walk, duck waddle, kangaroo hop, frog hop, etc. The first players of each team should all represent the same animals; the second players the same animals, etc. 21

(25) Boundary Ball

Equipment: Two large rubber balls

Rules of game: The play area, about one-half the size of a basketball court, is divided into three divisions; a center and two end areas. The players are divided into two equal teams and are placed one team in each end area. The object of the game is to throw the ball over the opponent's rear boundary line. One point is scored each time with five points being game. The game is started by the ball's being thrown from each team's rear boundary line; the balls are thrown thereafter from where they are intercepted by each team. A ball that goes out of bounds is put into play in the team's area nearest the spot where it went out. The center area is neutral and is considered out of bounds.

Teaching suggestion: A player must not run with the ball. 22

(26) Boiler Burst

Rules of the game: One player is telling a story with the other players grouped around him. Suddenly in his story he calls, "Boiler Burst," which is a signal that he is going to chase them. The players run to an area which has been designated at the start of the game as the safety area. The one caught starts the game again by telling a story while the children are grouped around him. 23

21Ibid., p. 291. 22Ibid., pp. 316-17. 23Ibid., p. 263.
(27) **Over-and-Under Relay**

**Rules of game:** Players are lined up in relay formation. The first player in each line has a basketball in both hands. At the start of the game, he passes the ball over his head to the next player, who then passes it between his legs to the third player. The ball is passed over and under to the last player, who then runs to the head of the line and starts the ball down the line again. The team which first gets the ball in the hands of the original first player, wins.

(28) **Hill Dill**

**Rules of the game:** Goal lines are drawn at each end of the playing area. All of the group stand behind one goal line except a caller, who stands in the center of the area and says, "Hill Dill, come over the hill or I'll catch you while you're standing still." The players run to the other goal while the caller tries to tag as many as possible. Those tagged join the caller as assistants and help him tag. The original caller is the only one who may call. The last person tagged becomes caller for the next game.

(29) **Dodge Ball**

**Rules of game:** The game shall consist of twelve innings. Each inning shall consist of each team having the chance to make twelve throws. One team is stationed around the circle facing inward while the other team is inside of the circle. The team on the outside gets to throw the ball twelve times. Any player who is hit must step outside of the circle until the end of that half of the inning. At the end of twelve throws the teams change places.

**Fouls:** If a ball hits a player above the waist, the player is not out, but the throw counts against the throwing side. If a player, while throwing a ball, steps over the line, the throw counts, but a player who is hit does not have to leave the game.

**Scoring:** A point is scored by the circle team every time a ball thrown by one of its members hits an inside player on or below the hips.

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Ibid., p. 297.
Teaching suggestion: Have a scorekeeper who takes care of the number of innings and the score; and a referee who counts the number of throws and watches for fouls. 25

(30) Cross Tag

Rules of game: All the players scatter over a wide area. The class decides upon one child to be "It" and another child to be the "Runner." "It" must chase the Runner, who only becomes safe when another player crosses between him and "It." "It" then chases the one that crossed. When "It" succeeds in tagging the Runner, he becomes the Runner and the Runner becomes "It."

Teaching suggestion: Players may cross to help the Runner. If two people cross, the nearest one toward "It" is the one chosen. 26

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TABLE 7
GAMES COMPiled FROM SURVEY OF TEXTBOOKS

<table>
<thead>
<tr>
<th>Game No.</th>
<th>Game Name</th>
<th>Level of Activity</th>
<th>Formation or Type</th>
<th>Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Blindman's Buff</td>
<td>Q</td>
<td>Circle</td>
<td>3</td>
</tr>
<tr>
<td>(2)</td>
<td>Pom-Pom-Pull-Away</td>
<td>A</td>
<td>Goals and Tagger</td>
<td>3</td>
</tr>
<tr>
<td>(3)</td>
<td>Pinch-Oh</td>
<td>SA</td>
<td>Goals and Tagger</td>
<td>3</td>
</tr>
<tr>
<td>(4)</td>
<td>Bull in the Ring</td>
<td>A</td>
<td>Circle</td>
<td>3</td>
</tr>
<tr>
<td>(5)</td>
<td>Bombardment</td>
<td>A</td>
<td>Team Game</td>
<td>4</td>
</tr>
<tr>
<td>(6)</td>
<td>Automobile Relay</td>
<td>Q</td>
<td>Relay</td>
<td>3</td>
</tr>
<tr>
<td>(7)</td>
<td>Jump the Shot</td>
<td>SA</td>
<td>Circle</td>
<td>4</td>
</tr>
<tr>
<td>(8)</td>
<td>Bronco Tag</td>
<td>A</td>
<td>Scatter and Tagger</td>
<td>4</td>
</tr>
<tr>
<td>(9)</td>
<td>Stride-Ball Relay</td>
<td>SA</td>
<td>Relay</td>
<td>4</td>
</tr>
<tr>
<td>(10)</td>
<td>Three Deep</td>
<td>SA</td>
<td>Circle</td>
<td>3</td>
</tr>
<tr>
<td>(11)</td>
<td>Simple Dodge Ball</td>
<td>A</td>
<td>Team Game</td>
<td>3</td>
</tr>
<tr>
<td>(12)</td>
<td>Fetch-and-Carry Relay</td>
<td>SA</td>
<td>Relay</td>
<td>3</td>
</tr>
<tr>
<td>(13)</td>
<td>I Say &quot;Stoop&quot;</td>
<td>Q</td>
<td>Lines and Teacher</td>
<td>3</td>
</tr>
<tr>
<td>(14)</td>
<td>Spud</td>
<td>A</td>
<td>Circle</td>
<td>3(4)</td>
</tr>
<tr>
<td>(15)</td>
<td>Walking Relay</td>
<td>SA</td>
<td>Relay</td>
<td>4</td>
</tr>
<tr>
<td>(16)</td>
<td>Circle Stride Ball</td>
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<td>Circle</td>
<td>3</td>
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<tr>
<td>(17)</td>
<td>Still Pond</td>
<td>SA</td>
<td>Scatter and Tagger</td>
<td>3</td>
</tr>
<tr>
<td>(18)</td>
<td>Red Light</td>
<td>A</td>
<td>Lines and Teacher</td>
<td>3</td>
</tr>
<tr>
<td>(19)</td>
<td>Indian Club Snatch</td>
<td>SA</td>
<td>Lines and Teacher</td>
<td>4</td>
</tr>
<tr>
<td>(20)</td>
<td>Crows and Cranes</td>
<td>A</td>
<td>Goals and Tagger</td>
<td>3</td>
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<tr>
<td>(21)</td>
<td>Numbers Change</td>
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<td>Circle</td>
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<td>(22)</td>
<td>Squat Tag I</td>
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<td>Scatter and Tagger</td>
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<td>Poison Circle</td>
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<td>Circle</td>
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<td>(25)</td>
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<td>A</td>
<td>Team Game</td>
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<tr>
<td>(26)</td>
<td>Boiler Burst</td>
<td>Q</td>
<td>Scatter and Tagger</td>
<td>3</td>
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<tr>
<td>(27)</td>
<td>Over-and-Under Relay</td>
<td>A</td>
<td>Relay</td>
<td>4</td>
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<tr>
<td>(28)</td>
<td>Hill Dill</td>
<td>A</td>
<td>Goals and Tagger</td>
<td>3</td>
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<tr>
<td>(29)</td>
<td>Dodge Ball</td>
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<td>4</td>
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<tr>
<td>(30)</td>
<td>Cross Tag</td>
<td>SA</td>
<td>Scatter and Tagger</td>
<td>4</td>
</tr>
</tbody>
</table>

*A = Active; SA = Semi-active; Q = Quiet.
Dear

As a part of my graduate study at The Ohio State University, I am undertaking a study of the social variables in the structure of some selected children's games at the primary level. To do this I will be submitting questionnaires to a selected group of experts whose experience and interest would qualify them to evaluate the games. I hope that you will be part of this jury.

So that you can indicate your willingness to take a maximum of two hours of your time to assist me in my project, I am enclosing a reply postal card to be returned by May 15, 1964. If so, the questionnaire will be mailed to you approximately June first.

Sincerely yours,

/S/ Idella L. Graves
Idella L. Graves
Ph. D. Candidate

Approved by adviser

MAM
Professor of Physical Education
JURORS REPLY POSTAL CARD

I would be willing to answer the questionnaire ☐
I would not be willing to answer the questionnaire. ☐
My address will remain the same. ☐
My address will change ___________________________ and
(date)

Summer Address:

__________________________
Signature
JURORS FOR THE QUESTIONNAIRE

Miss Naomi M. Allenbaugh, Professor, Teacher Education, Department of Physical Education, The Ohio State University, Columbus, Ohio.

Dr. Willard P. Ashbrook, Professor, Department of Physical Education, The Ohio State University, Columbus, Ohio.

Dr. Beulah J. Drom, Assistant Professor, Supervisor of Teacher Education, Department of Physical Education for Women, University of Illinois, Urbana, Illinois.

Mr. Bruce W. Ferguson, Instructor, Supervising Teacher of Physical Education, Department of Education, Northern Illinois University, DeKalb, Illinois.

Miss Jane C. Fink Assistant Professor, Division of Health and Physical Education, Wayne State University, Detroit, Michigan.

Mrs. Barbara G. Gordon, Coordinator, Women's Physical Education Department, Laboratory School, University of Chicago, Chicago, Illinois.

Miss Dorothy G. Kozeluh, Assistant Professor, Physical Education Department, Chicago Teacher's College--South, Chicago, Illinois.

Miss Edna K. Lambert, Assistant Director, Health and Physical Education, Columbus Public Schools, Columbus, Ohio.

Dr. Lorena Porter, Professor, Physical Education, Northern Illinois University, DeKalb, Illinois.

Miss Tabea L. Ryll, Instructor, Concordia Teacher's College, Seward, Nebraska.

Miss Helen E. Stevens, Assistant Professor, University School and Center for School Experimentation, The Ohio State University, Columbus, Ohio.

Dr. Margaret M. Thompson, Associate Professor, Physical Education Department, and Director of Motor Therapy Laboratory of Achievement Center for Children, Purdue University, West Lafayette, Indiana.

Dr. Marianna Trekell, Assistant Professor, Department of Physical Education for Women and College of Education, University of Illinois, Urbana, Illinois.

Anonymous man, professor, Midwestern university.

Anonymous man, supervisor of physical education of a city system.
Anonymous woman, administrator, physical education department.

Anonymous woman, chairman of elementary school physical education department.
Dear Juror:

Thank you for your willingness to help me with my study of children's games.

I am enclosing herewith the following: 1) a personal data sheet; 2) a brief description of each of thirty games (nine pages); 3) an instruction sheet; 4) a questionnaire to be applied to each game; 5) an answer sheet for each game; 6) a Manila paper heading; 7) an electrographic pencil; and 8) a return envelope.

These thirty games were selected through a survey of games found in the current literature. Inasmuch as Larson and Hill's book entitled Physical Education in the Elementary School provided descriptions of most of the games, permission was obtained from the publisher, Holt, Rinehart and Winston, Inc., to use them in this study. For the sake of brevity, I have arbitrarily omitted the information provided regarding playing area, equipment, number of players, kind of game, skills involved, objectives, and most of the teaching suggestions.

To standardize the findings, I would appreciate your limiting consideration of each game to the description given. If you would care to make comments concerning the game, please do so on the back of the corresponding answer sheet. It is important that all of the games be covered and that all of the questions for every game be answered.

The return envelope bears your name and address, which I would like to use in checking the mailing list. If you wish your answers to remain anonymous, please indicate this on the personal data sheet.

Please mail the completed answer sheets and personal data sheet by July 3. Do not return the other materials as postage covers only the personal data and answer sheets.

Again, may I express my very deep gratitude.

Sincerely yours,

/S/ Idella Graves

Idella Graves

enc.
Note: The cover letter was concise but ambiguous to some of the jurors who requested more background information. A brief one-page explanation of the study and definitions of the words and phrases could have answered their questions. This had been omitted deliberately so that the jurors' answers would be objective and unbiased.
PERSONAL DATA SHEET

Miss
1. Mrs. _______________________________________________________
   Mr.    Last    First    Initial
2. Present Position ________________________________________________
   Title
3. Address _______________________________________________________
4. Grades Taught or Comparable Age Groups That You Have Worked With: (Circle)
   1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.
5. Number of Years of Teaching 0-5 Over 5
6. Number of Years in Administrative Work 0-5 Over 5
7. Summer Camp-Experience Yes No Years 0-5 Over 5
8. Recreation Work Yes No Years 0-5 Over 5
9. Major Areas of Study at the University Level.
10. Have you ever taught a teacher education course or workshop in elementary school games? Yes No
11. Books Written (in Elementary Physical Education and Related Areas) List
12. Articles Written (in These Areas) List
13. Research (in These Areas) List
14. Do you wish to remain anonymous? Yes No
15. When this study is completed, do you wish a summary of the results? Yes No
INSTRUCTION SHEET

1. Please fill out the personal data sheet.

2. The IBM answer sheet slips into the cardboard heading so that the letters, "A," "B," etc. on the answer sheet, correspond to the letters on the heading.

3. Use the electrographic pencil provided or a similar one to rate the questions.

4. Check to see that the game you have read from the mimeographed sheet of games and the name of the game on the answer sheet are the same. Extra answer sheets are provided.

5. On the answer sheet put your last name or initials in the space provided and check "Yes," or "No," to the question, "Have you taught this game?"

6. Rate each statement by reading the phrase at the top of the sheet, next the statement and then fill in one space under the word or words you would apply to it.

7. The marks should be kept within lines and erasures should be complete so that multiple markings will not be recorded by the tabulating machine.

8. After completing the answer sheet for all of the games, please return them to me by July 3.

9. If you have any questions, please contact me by writing or telephone me collect at Chicago 664-5266.
ANSWER SHEET AND MANILA HEADING

<table>
<thead>
<tr>
<th>Name</th>
<th>Game</th>
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</table>

Have you taught this game? Yes _ No _

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<th>A</th>
<th>Not at all</th>
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</thead>
<tbody>
<tr>
<td>B</td>
<td>A little</td>
</tr>
<tr>
<td>C</td>
<td>Some</td>
</tr>
<tr>
<td>D</td>
<td>Quite a bit</td>
</tr>
<tr>
<td>E</td>
<td>Very much</td>
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</tbody>
</table>

123
<table>
<thead>
<tr>
<th>Value No.</th>
<th>Value</th>
<th>No. of Games with High Total Scores</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>15</td>
</tr>
<tr>
<td>2.</td>
<td>Degree of rules complexity</td>
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<tr>
<td>3.</td>
<td>Be creative</td>
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<td>4</td>
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<tr>
<td>5.</td>
<td>Be courageous</td>
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<td>6.</td>
<td>Be alert and anticipate</td>
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<td>7.</td>
<td>Be persevering</td>
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<td>8.</td>
<td>Be responsible</td>
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<td>9.</td>
<td>Be patient</td>
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<td>Be considerate</td>
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<td>11.</td>
<td>Share</td>
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<td>12.</td>
<td>Be involved</td>
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<td>13.</td>
<td>Appreciate one's own abilities and others'</td>
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<td>14.</td>
<td>Be egocentric or feel self-important</td>
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<td>15.</td>
<td>Be aggressive or release frustrations acceptably</td>
<td>8</td>
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<tr>
<td>16.</td>
<td>Become leader and practice being one</td>
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<td>17.</td>
<td>Change roles or lose leadership</td>
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<td>18.</td>
<td>Practice role of group member as a follower</td>
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<td>Be co-operative</td>
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<td>20.</td>
<td>Be competitive</td>
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<td>21.</td>
<td>Identify with group or team</td>
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<td>22.</td>
<td>Make decisions and choices</td>
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<td>23.</td>
<td>Learn the vocabulary and rules of the game</td>
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<tr>
<td>24.</td>
<td>Learn athletic team strategy--offensive, defensive</td>
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<tr>
<td>25.</td>
<td>Practice good sportsmanship</td>
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<tr>
<td>26.</td>
<td>Observe game and social etiquette</td>
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<tr>
<td>27.</td>
<td>Learn and practice safety rules</td>
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### TABLE 9

**GAMES RANKED FOR HIGH VALUE-IN卷VEMENT**

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<thead>
<tr>
<th>Rank Order</th>
<th>Game Name and No.</th>
<th>Number of Values with High Total Scores</th>
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<tbody>
<tr>
<td>1</td>
<td>Dodge Ball (29).</td>
<td>20</td>
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<tr>
<td>2</td>
<td>Bombardment (5).</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>Boundary Ball (25).</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>Simple Dodge Ball (11).</td>
<td>14</td>
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<tr>
<td>5</td>
<td>Pom-Pom-Pull-Away (2).</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>Hill Dill (28).</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Bronco Tag (8).</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Indian Club Snatch (19).</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>Spud (14).</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Poison Circle (23).</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Cross Tag (30).</td>
<td>7</td>
</tr>
<tr>
<td>12</td>
<td>Bull in the Ring (4).</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Automobile Relay (6).</td>
<td>6</td>
</tr>
<tr>
<td>14</td>
<td>Pinch-Ohl (3).</td>
<td>5</td>
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<tr>
<td>14</td>
<td>Jump the Shot (7).</td>
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</tr>
<tr>
<td>14</td>
<td>Stride-Ball Relay (9).</td>
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<td>14</td>
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<td>Over-and-Under Relay (27).</td>
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</tr>
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<td>19</td>
<td>Red Light (18).</td>
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<td>Boiler Burst (26).</td>
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<td>24</td>
<td>Three Deep (10).</td>
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<tr>
<td>24</td>
<td>I Say &quot;Stoop&quot; (13).</td>
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<tr>
<td>24</td>
<td>Circle Stride Ball (16).</td>
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<tr>
<td>24</td>
<td>Squat Tag I (22).</td>
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</tr>
<tr>
<td>28</td>
<td>Blindman's Buff (1).</td>
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<tr>
<td>28</td>
<td>Numbers Change (21).</td>
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TABLE 10

GAMES RANKED FOR PHYSICAL ACTIVITY

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Game Name and No.</th>
<th>Activity Level Categorized from Survey of Textbooks*</th>
<th>Activity Level Categorized from Jurors’ Total Scores</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Pom-Pom-Pull-Away (2)</td>
<td>A</td>
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<tr>
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<td>Hill Dill (28).</td>
<td>A</td>
<td>58</td>
</tr>
<tr>
<td>3</td>
<td>Bombardment (5).</td>
<td>A</td>
<td>54</td>
</tr>
<tr>
<td>3</td>
<td>Jump the Shot (7).</td>
<td>SA</td>
<td>54</td>
</tr>
<tr>
<td>5</td>
<td>Automobile Relay (6)</td>
<td>Q</td>
<td>53</td>
</tr>
<tr>
<td>5</td>
<td>Crows and Cranes (20).</td>
<td>A</td>
<td>53</td>
</tr>
<tr>
<td>5</td>
<td>Dodge Ball (29).</td>
<td>A</td>
<td>53</td>
</tr>
<tr>
<td>8</td>
<td>Boundary Ball (25).</td>
<td>A</td>
<td>52</td>
</tr>
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<td>9</td>
<td>Poison Circle (23)</td>
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<td>51</td>
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<td>10</td>
<td>Bronco Tag (8)</td>
<td>A</td>
<td>50</td>
</tr>
<tr>
<td>11</td>
<td>Pinch-Oh! (3)</td>
<td>SA</td>
<td>47</td>
</tr>
<tr>
<td>11</td>
<td>Simple Dodge Ball (11)</td>
<td>A</td>
<td>47</td>
</tr>
<tr>
<td>13</td>
<td>Spud (14)</td>
<td>A</td>
<td>46</td>
</tr>
<tr>
<td>13</td>
<td>Squat Tag I (22).</td>
<td>A</td>
<td>46</td>
</tr>
<tr>
<td>13</td>
<td>Cross Tag (30)</td>
<td>SA</td>
<td>46</td>
</tr>
<tr>
<td>16</td>
<td>Fetch-and-Carry Relay (12)</td>
<td>SA</td>
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</tr>
<tr>
<td>16</td>
<td>Animal Relay (24)</td>
<td>Q</td>
<td>41</td>
</tr>
<tr>
<td>18</td>
<td>Over-and-Under Relay (27)</td>
<td>A</td>
<td>39</td>
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<td>Bull in the Ring (4)</td>
<td>A</td>
<td>37</td>
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<td>19</td>
<td>Boiler Burst (26)</td>
<td>Q</td>
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</tr>
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<td>21</td>
<td>Stride-Ball Relay (9)</td>
<td>SA</td>
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</tr>
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<td>22</td>
<td>Red Light (18)</td>
<td>A</td>
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<td>Walking Relay (15)</td>
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<td>32</td>
</tr>
<tr>
<td>23</td>
<td>Indian Club Snatch (19)</td>
<td>SA</td>
<td>32</td>
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<td>26</td>
<td>Numbers Change (21)</td>
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<td>27</td>
<td>I Say &quot;Stoop&quot; (13)</td>
<td>Q</td>
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<td>Circle Stride Ball (16)</td>
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<td>29</td>
<td>Still Pond (17)</td>
<td>SA</td>
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<tr>
<td>30</td>
<td>Blindman’s Buff (1)</td>
<td>Q</td>
<td>17</td>
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*A = Active; SA = Semi-Active; Q = Quiet.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Game Name and No.</th>
<th>Total Scores for Degree of Rules Complexity</th>
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<tbody>
<tr>
<td>1</td>
<td>Dodge Ball (29)</td>
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<tr>
<td>2</td>
<td>Boundary Ball (25)</td>
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<tr>
<td>3</td>
<td>Spud (14)</td>
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<tr>
<td>4</td>
<td>Bombardment (5)</td>
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</tr>
<tr>
<td>5</td>
<td>Fetch-and-Carry Relay (12)</td>
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</tr>
<tr>
<td>5</td>
<td>Cross Tag (30)</td>
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</tr>
<tr>
<td>7</td>
<td>Bronco Tag (8)</td>
<td>38</td>
</tr>
<tr>
<td>8</td>
<td>Three Deep (10)</td>
<td>34</td>
</tr>
<tr>
<td>8</td>
<td>Crows and Cranes (20)</td>
<td>34</td>
</tr>
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<td>Animal Relay (24)</td>
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<td>8</td>
<td>Over-and-Under Relay (27)</td>
<td>34</td>
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<tr>
<td>12</td>
<td>Indian Club Snatch (19)</td>
<td>32</td>
</tr>
<tr>
<td>13</td>
<td>Simple Dodge Ball (11)</td>
<td>31</td>
</tr>
<tr>
<td>13</td>
<td>Red Light (18)</td>
<td>31</td>
</tr>
<tr>
<td>15</td>
<td>Pinch-Oh-I (3)</td>
<td>30</td>
</tr>
<tr>
<td>15</td>
<td>Still Pond (17)</td>
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</tr>
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<td>17</td>
<td>Stride-Ball Relay (9)</td>
<td>28</td>
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<tr>
<td>18</td>
<td>Circle Stride Ball (16)</td>
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<td>19</td>
<td>Bull in the Ring (4)</td>
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<td>19</td>
<td>Jump the Shot (7)</td>
<td>26</td>
</tr>
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<td>19</td>
<td>Boiler Burst (23)</td>
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<tr>
<td>19</td>
<td>Pom-Pom-Pull-Away (2)</td>
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</tr>
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<td>23</td>
<td>Hill Dill (28)</td>
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<td>23</td>
<td>I Say &quot;Stoop&quot; (13)</td>
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<td>Automobile Relay (6)</td>
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<td>Squat Tag I (22)</td>
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<td>Walking Relay (15)</td>
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<td>Blindman's Buff (1)</td>
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</table>
Notes for Figures 1-30:

1. Degree of physical activity
2. Degree of rules complexity
3. Be creative
4. Be honest
5. Be courageous
6. Be alert and anticipate
7. Be persevering
8. Be responsible
9. Be patient
10. Be considerate
11. Share
12. Be involved
13. Appreciate one's own abilities and others'
14. Be egocentric or feel self-important
15. Be aggressive or release frustrations acceptably
16. Become leader and practice being one
17. Change roles or lose leadership
18. Practice role of group member as a follower
19. Be co-operative
20. Be competitive
21. Identify with group or team
22. Make decisions and choices
23. Learn the vocabulary and rules of the game
24. Learn athletic team strategy--offensive and defensive
25. Practice good sportsmanship
26. Observe game and social etiquette
27. Learn and practice safety rules
Fig. 1. -- Blindman's Buff
Fig. 2. — Pom-Pom-Pull-Away
Fig. 3. -- Pinch-Oh!
Fig. 4. -- Bull in the Ring
Fig. 5. -- Bombardment
Fig. 6. -- Automobile Relay
Total Scores

Developmental Values

Fig. 8. —Bronco Tag
Fig. 9.—Stride-Ball Relay
Fig. 10. -- Three Deep Developmental Values

Total Scores

0 10 20 30 40 50 60

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
Fig. 11. — Simple Dodge Ball
Fig. 12. -- Fetch-and-Carry Relay
Total Scores

Developmental Values

Fig. 13. --I Say "Stoop"
Developmental Values

Fig. 14. -- Spud
Fig. 15. -- Walking Relay
Fig. 16. --Circle Stride Ball
Total Scores

Developmental Values

Fig. 17. -- Still Pond
Total Scores

Developmental Values

Fig. 18 -- Red Light
Total Scores

Developmental Values

Fig. 19. --Indian Club Snatch
Total Scores

Developmental Values

Fig. 20. -- Crows and Cranes
Total Scores
72

Developmental Values

Fig. 21.—Numbers Change
Total Scores

Developmental Values

Fig. 22.--Squat Tag. I
Fig. 23. — Poison Circle
<table>
<thead>
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Fig. 24. --Animal Relay
Total Scores

Fig. 25. -- Boundary Ball
Total Scores

Developmental Values

Fig. 26. -- Boiler Burst
Fig. 27. -- Over-and-Under Relay
Fig. 28. — Hill Dill
Fig. 29.--Dodge Ball
Developmental Values

Fig. 30. -- Cross Tab
|   | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| V |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| a | x  | x  | o  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  |
| l | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  |
| u | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  |
| e | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  |
| s | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  | x  |
|   | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

Fig. 31. --Values with High Significant Correlations*

*Notes--following page.
Notes:

1. Degree of physical activity
2. Degree of rules complexity
3. Be creative
4. Be honest
5. Be courageous
6. Be alert and anticipate
7. Be persevering
8. Be responsible
9. Be patient
10. Be considerate
11. Share
12. Be involved
13. Appreciate one's own abilities and others'
14. Be egocentric or feel self-important
15. Be aggressive or release frustrations acceptably
16. Become leader and practice being one
17. Change roles or lose leadership
18. Practice role of group member as a follower
19. Be co-operative
20. Be competitive
21. Identify with group or team
22. Make decisions and choices
23. Learn the vocabulary and rules of the game
24. Learn athletic team strategy--offensive and defensive
25. Practice good sportsmanship
26. Observe game and social etiquette
27. Learn and practice safety rules

x indicates a high (+.60 or -.60 or higher) correlation.

o indicates a high negative correlation.

Significant means at least at the .05 level.
**Games**

|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| 1 |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 2 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 3 |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 4 |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 5 |   |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 6 |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 7 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 8 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 9 |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 10 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 11 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 12 |   |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 13 | G | a | m | e | s |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 14 |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 15 |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 16 |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 17 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 18 |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 19 |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 20 |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 21 |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 22 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 23 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 24 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 25 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 26 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 27 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 28 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 29 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 30 |   |   |   |   | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |

*Fig. 32. --Games with High Significant Correlations*

*Notes--following page.
Notes:

( 1) Blindman's Buff
( 2) Pom-Pom-Pull-Away
( 3) Pinch-Oh!
( 4) Bull in the Ring
( 5) Bombardment
( 6) Automobile Relay
( 7) Jump the Shot
( 8) Bronco Tag
( 9) Stride-Ball Relay
(10) Three Deep
(11) Simple Dodge Ball
(12) Fetch-and-Carry Relay
(13) I Say "Stoop"
(14) Spud
(15) Walking Relay
(16) Circle Stride Ball
(17) Still Pond
(18) Red Light
(19) Indian Club Snatch
(20) Crows and Cranes
(21) Numbers Change
(22) Squat Tag I
(23) Poison Circle
(24) Animal Relay
(25) Boundary Ball
(26) Boiler Burst
(27) Over-and-Under Relay
(28) Hill Dill
(29) Dodge Ball
(30) Cross Tag

x indicates a high (r > .60 or higher) correlation.

Significant means at least at the .05 level.
AUTHORITIES INTERVIEWED

1. Miss Naomi M. Allenbaugh, Professor, Teacher Education, Department of Physical Education, The Ohio State University, Columbus, Ohio.


4. Miss Edna K. Lambert, Assistant Director, Health and Physical Education, Columbus Public Schools, Columbus, Ohio.


6. Mrs. Dolores L. Petty, Assistant Professor, Women's Physical Education, Chicago Teacher's College--North, Chicago, Illinois.

7. Dr. Martha Norman Rashid, Associate Director, Special Program in Elementary Teacher Education, The George Washington University, Washington, District of Columbia.

8. Miss Helen E. Stevens, Assistant Professor, University School and Center for School Experimentation, The Ohio State University, Columbus, Ohio.

10. Anonymous, professorial rank, human development area, Midwestern college, a city.

11. Anonymous, elementary school physical education specialist, Midwestern public school system, a city.

12. Anonymous, elementary school physical education specialist, Midwestern public school system, a city.
INTERVIEW QUESTIONS
Concerning Third- and Fourth-Grade Games

1. Do you believe that within the structure of children's games there is the potential for emotional learnings (psychological)?

2. Do you believe that within the structure of children's games there is the potential for mental (intellectual) learnings?

3. Do you believe that within the structure of children's games there is the potential for social learnings?

4. Could you create, alter, or modify a game which would provide for a specific social, mental, or emotional learning?

5. What is the function (or role) of a teacher in a game situation?

6. How does the environment affect a game situation?

7. What is the influence of the pupil-group upon the individual, and the individual upon the pupil-group, etc.?

8. What is the effect of competition upon the individual and upon the group?

Note: The words in parentheses were used if the person being interviewed did not seem to respond to the first word given.
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