WILLCOX, DIANE E. A Description and Analysis of the Behavior of Two Experienced Teachers Initiating the Movement Education Approach to Teaching Beginning Basketball to College Women. (1975)
Directed by: Dr. Kate R. Barrett. Pp. 211.

The purpose of this study was to describe and analyze the behavior of two experienced teachers initiating for the first time in their experience, the implementation of the movement education approach to physical education, teaching beginning basketball to college women. The sub-purpose of this study was to revise Barrett's category system for systematic observation of teaching behavior in the implementation of the movement education approach at the primary level, to make it consistent with the purpose of this study.

The revised category system was composed of three dimensions of teacher verbal behavior. These were called Movement Task, Content, and Guidance. The Movement Task and Guidance dimensions were composed of categories which defined the degrees of freedom for decision-making given the learner by the teacher's statement of the initial task and the subsequent development of it. The Content dimension was composed of the substantive aspects of the movement education approach, as defined by interpretations of Laban's analysis of the components of human movement.

For the collection of data, each teacher planned, taught, and evaluated a series of six, half-hour lessons, for between three and five students. The written lesson plans were accepted as evidence of pre-instructional behavior; tape recordings of teacher verbalizations, as instructional

behavior; and written evaluations, as post-instructional behavior.

Only 10 of the original 12 tape recordings were finally available for analysis. They were coded by two trained judges, using the revised category system. One of the judges also coded the lesson plans. The evaluations were kept in their original form.

Reliability and objectivity of the judges in using the category system were estimated using the Pearson product-moment technique. The results showed the reliability of both judges to be tenuous in the Movement Task dimension. Coefficients of correlation were high for reliability in the Content and Guidance dimensions, and for objectivity in all three dimensions.

For description and analysis, the lesson plans, lessons, and, where useful, the written evaluations, were examined subjectively for each teacher separately, then compared, to identify any trends in their behavior, as defined by the categories of the system. The results showed that, in general, the teachers did not allow their students much freedom for decision-making. They also tended to concentrate their content focus upon those aspects of movement usually associated with a direct approach to teaching basketball skills. For both teachers, the evaluations tended to be vague, although both expressed frustration in dealing with allowing students freedom to decide how to move in response to movement tasks.

A DESCRIPTION AND ANALYSIS OF THE BEHAVIOR OF TWO EXPERIENCED TEACHERS INITIATING THE MOVEMENT EDUCATION APPROACH TO TEACHING BEGINNING BASKETBALL TO COLLEGE WOMEN

by

Diane E. Willcox

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Kate Ross Barrett
Thesis Advisor

APPROVAL PAGE

This thesis has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

Thesis Advisor Kate T. Barrett

Oral Examination Committee Members Gail M. Hennis

Marie Riley

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Date of Examination

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Chapter 1

INTRODUCTION

Education has been undergoing vigorous reform during the last two decades. These changes have been the result of efforts to make the educational process more consistent with the needs of modern society, while reflecting the implications of current learning theories for educational programs. The traditional concept of the learner as a passive recipient of facts and pieces of information is no longer adequate in modern society where the fund of knowledge is growing at explosive rates, rendering facts obsolete faster than they can be learned. Moreover, the actual learning process is being examined carefully. As Gordon (1966:56-57) pointed out, psychology no longer views the learner as a bundle of hereditarily-fixed potentials which emerge, through natural growth and development, at the appropriate age; rather, the child is viewed as possessing an assortment of potentials which are enhanced by his active participation in a variety of learning experiences. These changes in the view of the role of the learner, the nature of learning and the search for the best means to prepare the learner for today's world, have resulted in many trends in educational reform.

Among the emerging trends in education were attempts

to rebuild and reorganize subject matter based on identification of the structure of knowledge in various disciplines and fields of study (Bruner, 1960; Denemark, 1961; Goodlad, 1966; Phenix, 1964). This led to an educational approach which emphasized the establishment of direct relationships between school studies and scholarly pursuits, but neglected consideration of the individual learner and societal needs.

Another emerging trend, however, among other educators and psychologists (ASCD, 1962, 1964; Holt, 1964, 1967; Rogers, 1969), focused on learning theories based on man's individuality and freedom of choice. Their first concern lay with identifying the individual's starting point, and providing experiences which would enhance his fullest development as a human being.

All of the writings cited as examples of works concerned with the structure of knowledge, and those concerned with individual and societal needs, are typical of efforts to make learning a relevant and active process. From these efforts have come new meanings, relationships, and points of view which have, in turn, influenced changes in content and methodology.

These trends in education in general have been followed by similar efforts in physical education. Theorists in physical education have been attending to questions concerning structure of the body of knowledge, as

evinced in works by Abernathy and Waltz (1964), Brown (1967), Henry (1964), Jewett (1968, 1969, 1971), and Ulrich and Nixon (1972). Moreover, physical educators have begun to explore ways of teaching physical education which are more consistent with current views of persons as individuals with freedom of choice (Barrett, 1973a, 1973b; Heitman, 1973).

One trend which has emerged in physical education appears to combine both an expanded focus on the structure of human movement and an increased emphasis on student responsibility for learning, in an attempt to structure meaningful learning experiences. The approach, which has come to be known as movement education, began in Britain during the 1950's. It involves an application of Laban's movement theory to physical education movement patterns and skills. All of this is presented through methods which emphasize the student's individuality, and his taking responsibility for his own learning (Bilbrough and Jones, 1968; Cameron and Pleasance, 1968; Morison, 1969).

Within the past decade, the emphasis on movement and individualization of instruction has begun to affect physical education programs at all levels in the United States (Halsey, 1964; Mosston, 1966, 1972). The major emphasis, however, is still at the elementary level (Anderson et al., 1972; Barrett, 1973a, 1973b; Gilliom, 1970; Logsdon and Barrett, 1969, 1970; Tillotson et al., 1969).

As pervasive as this emphasis on movement and individualization of instruction is becoming, there is yet a great deal of confusion concerning the implementation of this approach. Examples of discrepancies in the interpretation of the movement education approach are cited by Gilliom (1970:4) ". . . just another method of teaching the same old thing . . . ," ". . . movement for the sake of movement . . . there is no content . . . ," ". . . all content, pure knowledge content . . . ." The source of this confusion is readily evident in the literature, with such definitions of the movement education approach as:

> . . . that phase of the total educational program which has as its unique contribution the development of effective, efficient, and expressive movement responses in a thinking, feeling, and sharing human being (Tillotson et al., 1969:7).

> . . . a prescription for the kind of gross motor skill to be taught to school children and for how [sic] such instruction is to be accomplished (Locke, 1969:203).

The difficulty with the lack of agreement about the definition and interpretation of the movement education approach, and the resulting confusion concerning the implementation, is, in itself, a large problem for physical educators. It is, however, further complicated by the fact that implementation of the approach necessitates a change in teacher behavior from that appropriate for what Hoffman (1971) has described as traditional methodology. Traditionally, physical educators have been taught to use explanation and demonstration in an effort to have masses

of students performing sports and game skills in orderly, sometimes even mass-synchronized, patterns (Hoffman, 1971:52-53). With this background, physical educators have difficulty in operationally defining the objectives of the movement education approach, and in accepting and structuring situations which are student-centered, rather than teacher-centered.

There is little doubt that teachers at all levels do encounter problems in the implementation of the movement education approach to physical education. Since there is so much discrepancy in the literature about what is involved in the approach, it is not surprising that there is so much confusion. Most of the practical assistance available in the literature is in the areas of dance and gymnastics (Bilbrough and Jones, 1968; Gilliom, 1970; Holbrook, 1973; Logsdon and Barrett, 1969, 1970; Morison, 1969; Russell, 1966; Stanley, 1969; Tillotson et al., 1969), with very little available dealing with the application of movement education specifically to games (Barrett, 1973a; Johnson and Trevor, 1970; Mauldon and Redfern, 1969; Stanley, 1969).

One means which might help teachers in the initiation of the changes necessitated by using the movement education approach, is some means of objectively describing their teaching behavior. The purpose of such description would not be for judgmental evaluation, but would be to serve as an account of what actually did occur. This would

be useful to the individual teacher as well as a supervisor, for identifying specifically areas of strengths and weaknesses in the use of this approach. The only feedback information which has been available to teachers initiating the movement education approach has been their own subjective identification of what they thought they did. When lessons have been difficult, or unsuccessful in the teacher's eyes, they have been left with only the information of what they thought they did, hampered by subjectivity as well as incomplete memory. The situation has been further complicated by the fact that the sources of effective techniques to serve as a basis for comparison are so inadequate.

Thus, description and analysis of teacher behavior in the initiation of the implementation of the movement education approach might serve two purposes. First, it would identify the actual behaviors for the teachers themselves. If they knew objectively what they were doing, they would have a substantial basis for making decisions about what changes might make their teaching behaviors more consistent with their intentions. In addition, the objective identification of teacher behavior in this situation could serve as a basis for future efforts to meet the needs of teachers through published material, workshops, and pre-service training. Those who are writing, conducting workshops, and teaching in teacher preparation programs,

have been hampered by the same lack of objective information, which would provide a basis for preparing materials which are designed to satisfy identified areas of weakness.

In summary, it appears that the movement education approach to physical education is a trend which is consistent with emerging trends and concerns in the general field of education. It also seems that initiation of the movement education approach requires significant changes in teacher behavior, from that used in traditional physical education classes. To aid teachers and prospective teachers in their understanding of the movement education approach, and to help them to identify their own teaching behavior, a means for objective observation needs to be developed.

STATEMENT OF PROBLEM

The primary purpose of this study was to describe and analyze the pre-instructional, verbal instructional, and post-instructional behavior of two experienced teachers implementing for the first time in their teaching experience, the movement education approach to instruction of college women in beginning basketball.

The sub-purpose of this study was to adapt and revise the category system developed by Barrett (1969) to make it consistent with the purpose of this study.

DEFINITION OF TERMS

1. Movement education approach: a philosophy about physical education, which in implementation implies application of a theory of movement which focuses on body awareness, effort qualities of movement, spatial awareness, and relationships, accomplished through presentation and development of movement tasks involving varying amounts of freedom of choice to the learner about how he should move.

2. Pre-instructional behavior: decisions made by the teacher, prior to the teaching-learning interaction, about what is to be taught, how it is to be organized, and how and when it is to be presented. The concern for this study was how these decisions would affect the teacher's verbal behavior. In this study evidence of these decisions was accepted as revealed in the written lesson plans.

3. Post-instructional behavior: evaluation by the teacher of what she thought occurred during the preceding teaching-learning interaction situation, and indication of the effect these observations may have on subsequent teaching behavior. Evidence of these evaluations was accepted as revealed in written records following each lesson.

4. Verbal instructional behavior: verbal talk of the teacher while interacting with students during the act of the teaching-learning situation. In this study evidence

of this behavior was accepted as revealed in tape recordings of the teacher's verbalizations during each lesson.

LIMITATIONS AND ASSUMPTIONS

The following are the limitations and assumptions which governed this study.

Subjects

The subjects for this study were two teachers, one with four students, the other with numbers varying from two to five, due to the inconsistency of student attendance. It was assumed that two is the minimal number of teachers to be observed to determine whether there is similarity of teacher behavior under similar circumstances, as determined by the context of this study. It was assumed that the limited number of student subjects was adequate in that the verbal behavior of the teachers would be essentially the same whether there were 4 or 20 students.

Length of Classes

Each teacher met her students 6 times each for 30-minute sessions. It was assumed that 6 sessions is a minimum number of lessons to permit meaningful analysis.

Number of Tapes

There were only 10 tapes, 5 for each teacher, available for analysis. Originally, the plan was to analyze six lessons for each teacher, but, due to experimenter error,

two of the tapes were destroyed. The use of 1 of the 10 remaining tapes for analysis was questionable, since it had been used as a trial run in the coding training of the judges, and was followed by further training. Thus, of the 12 lessons, and 10 available tapes, only 9 were used to estimate reliability and objectivity; all 10 were used in the final analysis of teaching behavior.

Scope of Instructional Teaching Behavior

This study was concerned only with the verbal teaching behavior of the teachers, as defined by the dimensions of the category system. These behaviors included the presentation and development of the movement tasks. Other verbal behaviors dealing with reinforcement and organization of students were acknowledged in mass classification codings, with no identification of nature or intent. No attempt was made to deal with non-verbal teaching behaviors or student responses.

Chapter 2

REVIEW OF LITERATURE

Literature from three broad areas was reviewed to provide a background for this study. These areas were: (1) current trends in educational reform, based on the view of the learner as active agent in his own learning process; (2) selected current trends in physical education reform; and (3) systems for descriptive analysis of teacher behavior in physical education. This chapter will report on selected literature from these areas as it relates to this study.

CURRENT TRENDS IN EDUCATIONAL REFORM

A recognized key influence in curricular reform was Bruner's (1960) Process of Education. In this work, Bruner advocated concentration on the learner's understanding of the underlying principles which give structure to a field of study. From this basis, the learner could make application beyond the original learning situations, which would allow him to discover relationships among what have formerly been unrelated ideas. Thus, the structure of the field of study, rather than a massive accumulation of facts, became the organizational focus of learning. Bruner suggested that this is a most relevant approach to learning, in light of

the exponential rate of increase in knowledge, which renders memorization of facts and unrelated ideas inadequate and obsolete.

Selected Educational Reform

Giving rise to Bruner's (1960) report, and gaining impetus from it, was an emphasis upon approaching learning through the structure of fields of knowledge, by focusing attention to utilizing the structure of the discipline as a basis for curriculum design. Examples of significant contributions in this area were made by Denemark (1961), Goodlad (1966), and Phenix (1964). All of them advocated the identification of the structure of various disciplines to discover representative ideas of the discipline. As Phenix (1964:279-342) pointed out, these representative ideas are in hierarchical order, beginning with the concepts characterizing the discipline, followed by corollary ideas suggested by the concepts, then the subconcepts which organized the corollary ideas, and finally the more specific ideas essential to the development of particular areas of the discipline. Because of this ordering, each discipline has its own logic or method of inquiry, and its own integrity. Those involved in this restructuring insisted that to lose sight of this is to risk triviality, in terms of what is taught in the schools. Thus, the structure of disciplines must serve as the guide in curricular construction and selection of content.

The shortcoming of this approach to educational reform, with its efforts to establish direct relationship between the school studies and scholarly pursuits, appeared to have been its strong emphasis upon knowledge, with little concern for societal or learner needs, or the learner's internal integration of knowledge (Foshay, 1970:16). Although Bruner (1960) did not address himself directly to this concern for individual learners, he did indicate that the learner's active involvement in discovering new relationships, in participating actively in the learning process, was a highly satisfying and rewarding experience because of its personal relevance. Thus, it is more relevant for the learner to be actively involved in the learning process, rather than passive recipient of knowledge.

Individualization of Instruction

Foshay (1970:26) pointed out that present society, with its emphasis on individual needs and integrity of personality, must influence schools to become more intimately concerned with the development of the fully functioning human being. This concern is one idea underlying the recent emerging emphasis on individualization of instruction. As Foshay (1970:26) indicated, the emphasis on the individual, rather than replacing concern for revitalization of subject matter, serves to add another dimension to it. The understanding of structure, and fostering the student's ability

to go beyond a given learning situation to make applications and define new relationships, must remain an important aim of education. As Rogers (1969:104) said:

> The only man who is educated is the man who has learned how to learn; the man who has learned how to adapt and change; the man who has learned that no knowledge is secure; that only the process of <u>seeking</u> [sic] knowledge gives a basis for security.

Realization of this objective for learning must have implications for implementation of curriculum: how content should be organized, and how students are to interact with content. Traditionally, the implementation, or methodology, has failed to establish an atmosphere for thinking and creativity. In fact, those who exhibited these tendencies have been punished for their failure to conform (Wight, 1970:239). The implication was a need to move away from a methodology which deals with regimented transmission of facts, toward an emphasis on providing the individual with learning skills so that he could get content when he needed it, and integrate it into his own system of understandings and ideas (Wight, 1970:241). The individual was to be given responsibility for the learning method. This carried with it a need to individualize instruction, to make it relevant to individually unique needs which had been shaped by a specific past, present, and future (ASCD, 1962).

The extent of the influence of this concern for involving students in the learning process, and the need for individualization of instruction was readily evident in the

quantity of literature which has been addressed to this topic. Selected examples will be presented, in an effort to demonstrate the breadth and increasing volume of the influence.

Early recognition of a change in the beliefs about the nature of man and the limits of his potentials, and the influence of this change on education, came from the Association for Supervision and Curriculum Development of the National Education Association (1962, 1964). The old view of man, as limited by his biological heritage, was giving way to a view of man which held that the fully functioning personality could be fostered, despite heritage, by the individual's participation in a wide variety of personally relevant experiences (ASCD, 1962). Teaching behaviors, encouraged to foster this development, were described in such terms as guiding, stimulating, encouraging, supporting, clarifying (ASCD, 1964:47). Student behaviors, in situations designed to foster the fully functioning personality, were later described as being centered in such activities as creating, exploring, researching, and experimenting (ASCD, 1969:49).

The inadequacy of public education in its failure to deal with individual relevance in educational practices, has been attacked at all levels (Holt, 1964, 1967; Glasser, 1969; Silberman, 1970). As Silberman said (1970:173), "The banality and triviality of the curriculum in most schools

has to be experienced to be believed." This situation, he continued, seems far from Bruner's criteria for meaningful curriculum inclusions: "'. . . whether, when fully developed the material is worth an adult's knowing, and whether having known it as a child makes a person a better adult'" (Silberman, 1970:173 quoting Bruner's Process of Education, 1960).

Holt (1964) was concerned about the irrelevance of the prevailing classroom situations, with their emphasis on right answers, rather than the thinking process, particularly at the elementary level. Children become adept at giving right answers at the right time, regardless of whether it makes sense to them; if they do not thus adapt to the system, they fail. Following up these observations, Holt (1967) suggested that education would experience more success if educators took special care to observe the process by which children learn. His proposal was that students be given some special skills, such as reading, and then be permitted to learn what they want or need to know, as part of their personal effort to make sense of the world around them.

Glasser (1969), too, indicted the traditional educational system for its contribution to the establishment of a pervasive failure orientation for so many children. His suggestions, less radical than Holt's (1967), advocated change within, rather than abolition of, the existing

structure of education, to make it more relevant to the learner as he becomes actively involved in all facets of classroom life. He emphasized the importance of real-life situations in the classroom, through which students could make connectings with their life outside the classroom. Included among the real-life situations were student self-governance and abolition of homogeneous groupings, except for temporary situations involving the handling of a combination of both severe disciplinary and learning difficulties.

This emphasis on learning situations to enhance the development of the individual's development has continued to be a current educational concern. Frymier et al. (1973:3-84), attempting to suggest guidelines for schools of the future, also identified the need for individualized programs, based on a knowledge of the wants and needs of each student, both present and future, for the purpose of enhancing the individual's life.

Summary

In summary, concern for the purpose and structure of education has resulted in a great deal of critical observation, analysis, speculation, and reform. The work of the last two decades has seen a shift from emphasizing the implications of the structure of the discipline for curricular planning, to the broader concern for the individual's wants, needs, and active participation in the

planning and personal integration of this knowledge. What effect has this concern, most evident in the "academic" fields of study, had on the field of physical education?

SELECTED CURRENT TRENDS IN PHYSICAL EDUCATION REFORM

Physical education frequently has been criticized for its failure to keep pace with trends in general educational reform and implementation of new ideas. Typical of this criticism was Bellack's (1969:ix) comment:

> During the 1950's, most of the teaching fields included in the school curriculum have been the objects of intensive study and reform. But physical education . . . has gone largely untouched.

Since that time, there were examples of reforms being implemented at both the secondary level (Heitman, 1973; Singer and Dick, 1974), and the elementary (American Association for Health, Physical Education, and Recreation, 1973; Barrett, 1973a, 1973b). Included among these changes were: contractual teaching, student participation in determining objectives, conceptual approaches, and increasing freedom given to the student to decide how he is to respond to movement tasks. The intent of these reforms was to move toward greater individualization of instruction. However, as Ulrich (1973:35-36) reported, evidence of these innovations is still meager in physical education, while these approaches have a 25-year history in general education.

Thus, the gap in physical education reform in the school curriculum is just beginning to close.

A review of literature in physical education indicated that part of the difficulty with evidence of reform in the physical education curriculum was a gap between theory and practice. One area which has been the subject of intensive study over the past decade has been an expanded focus on the identification and structure of human movement.

The Expanded Focus on Human Movement

In the United States, physical educators have been attempting to identify the structure of knowledge, as well as the substance of physical education (Brown, 1967; Henry, 1964; Jewett, 1968, 1971; Rarick, 1967; Ulrich and Nixon, 1972). Brown (1967:53), Henry (1964:32-33), and Rarick (1967:49-52) all attempted to identify a discipline of physical education, a scholarly field of study separate from the professional or applied approach. Brown (1967: 53), Henry (1964:32), and Rarick (1967:52) identified human movement as being the focus of the body of knowledge of physical education, as physical education has no unique body of knowledge.

Brown (1967:55-56) suggested that physical education is the structure for instruction in human movement. She (1967:57) emphasized the necessity of differentiating between concepts as statements of generalization identified

as having importance within a field of study, and as the internalized result of the student's own problem solving. The "structure of instruction" of human movement, she (1967:57) went on, must allow for both.

Jewett (1968, 1971), basing part of her work on Brown's (1967) work on the structure of human movement, presented a conceptual framework for physical education. This framework illustrated the interrelationships among purpose-oriented concepts, and process-oriented concepts. The purpose-oriented concepts, based on Brown's (1967:54-56) structure of knowledge of human movement, dealt with the achievements of the goals of man: coping with the environment, development, and communication and expression. The process-oriented concepts dealt with the ways in which man learns to move: generic, or developmental patterns; ordinative, or refining patterns; and creative, or unique patterns.

Ulrich and Nixon (1972), after more than 10 years of involvement with professional study committees on a project under the auspices of the American Association for Health, Physical Education, and Recreation,[1] reported the results of this project to ". . . identify and describe a theoretical structure of physical education as an area of scholarly study and research" (1972:1). The (1972) report

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[1]In 1974, this became the American Alliance for Health, Physical Education, and Recreation.

proposed a tentative theoretical structure of physical education, and attempted to clarify the relationship between physical education as a discipline, and the body of knowledge of physical education. The (1972) theory was based, in part, on Jewett's (1971) process-media-result relationship, where movement experiences are processed through the behavioral domains, and arrive at the purposes, in terms of achievement of human goals, of human movement.

Individualization of Instruction

In the realm of methodology, Mosston (1966, 1972) presented a spectrum of teaching styles from a strictly teacher-controlled situation to one in which students had a great deal of responsibility for making choices about how and what they would learn. This was an effort to make it possible for students to "learn how to learn" in physical education. This same underlying goal motivated Mackenzie (1969) in the development of a curricular approach to physical education, the purpose of which was to foster the student's ability to think and learn physical education on an independent basis.

More recently Singer and Dick (1974) set forth a plan for specifying individually defined objectives through the use of systems models. They (1974) dealt with planning specifically defined outcomes designed to meet individual needs in the full spectrum of human behavior: social, emotional, intellectual, and movement.

Thus, over the past decade, physical education has been moving in the direction of identifying a structure of knowledge for the experiential phenomenon of human movement. This structure should serve as a basis for exploration of the body of knowledge of human movement, as well as for instruction in human movement. Concern has been directed toward the process, as well as the content, of learning. As Ulrich (1973:35-36) suggested, it would appear that the gap is now beginning to close between theory and practice. The co-educational programs, computerized scheduling, student participation in the formulation of objectives, contractual teaching, and learning programs may or may not have any direct connection with the expanding focus on the study of human movement. However, they do at least make some headway toward taking into account the wants, needs, and developmental level of the individual, in a commitment toward developing him toward his fullest potentials.

The Movement Education Approach

One approach to physical education, which appears to combine the concern for process and purpose, along with individualization of instruction, and an expanded focus on human movement, is the approach which has come to be known as movement education. According to the historical reporting of Tillotson *et al*. (1969:7), the movement education approach to teaching physical education emerged in England

in the mid-1950's, as a result of the awakening awareness on the part of the citizenry that more efficient movement was needed in everyday life. This came as a development of the work begun in the late 1930's by Laban, who was analyzing industrial movement pattern efficiency (Siedentop, 1972: 106). Thus, according to Tillotson et al. (1969:7), the English Minister of Education, during the two-year period 1954-1956, developed guidelines for an elementary school physical education program based on Laban's scheme for analysis of movement into components of time, force, space, and flow.

Although Laban himself was not an educator, as Thornton (1971:57-58) pointed out, he did value certain educational aims, such as self-awareness, understanding of self and others, effective giving and receiving of communication, and appreciation of the shapes and rhythms in the world. These were evident in the implementation of his programs, and were carried over, along with the educators' concern for development of individual potential to the fullest, to the movement education approach. Thus, there is an emphasis on creating, exploring, and problem-solving in the implementation of the movement education approach. This methodology also reflected a concern for providing activities appropriate to the developmental level of each individual, as well as fostering decision-making abilities (Department of Education and Science, 1973).

During the summer of 1956, 14 American educators went to England to attend the first Anglo-American workshop on physical education. There they observed the movement education approach in teaching primary level physical education. Through their efforts, then, the approach was brought back to the United States (Tillotson et al., 1969:7).

In England, the movement education approach has been applied primarily at the elementary level in dance and gymnastic activities (Bilbrough and Jones, 1968; Holbrook, 1973; Mauldon and Layson, 1965; Morison, 1969). Morison (1969:4-5) indicated that gymnastics has an external focus, dealing with objects and tasks, while dance has an internal focus, dealing with expression and communication. Thus, the two tend to complement one another. Holbrook (1973) presented a discussion of the content of the movement education approach and developed representative lesson plans using this content in a gymnastics context. Although Bilbrough and Jones (1968), too, directed their focus toward gymnastics, they (1968:176) suggested that this same approach should be useful for games. More recently, examples of games programs, applying the principles of the movement education approach, have been proposed (Department of Education and Science, 1973; Johnson and Trevor, 1970; Mauldon and Redfern, 1969).

The movement education approach, as it has developed in the United States, does, despite some dissimilarity and

confusion in terminology and scope, have aspects in common with that developed in England. Like the English, American movement educators have tended to use this approach most frequently for dance and gymnastic activities. The common framework for classifying movement identified by American movement educators (Barrett, 1969, 1973b; Gilliom, 1970; Halsey and Porter, 1963; Kirchner et al., 1970; Logsdon and Barrett, 1969, 1970; Pye, 1968; Tillotson et al., 1969), are adapted from Laban's principles of movement. They include:

1. The body - What moves, including body parts, body shapes, locomotor and non-locomotor movement, and relationship of body parts.

2. Effort - How the body moves, including force, or weight; time, or speed; space, direct or indirect; and flow, or continuity.

3. Spatial movements - Where the body moves, including level, direction, pattern, use of personal or general space.

4. Relationship - With what body movement occurs, including relationship among body parts, people, and people and objects.

This same general breakdown of movement was recognized by Stanley (1970:36-39), a Canadian physical educator who expanded her application of the movement education approach to include sports and games. Stanley

(1970) based her work on that of Laban, as well as American and English physical educators (1970:329-330).

The approach usually is coupled with a methodology intended to foster the child's decision-making ability, while meeting and challenging him at his own developmental level. Halsey and Porter (1963:53) identified the methodology as problem-solving. Pye (1968) emphasized the necessity that movement tasks be designed to foster self-direction, decision-making, and building on basic concepts. Logsdon and Barrett (1969, 1970) and Gilliom (1970) developed elementary programs using the movement education approach which showed similar concern with thinking and experiencing. Stanley (1970:16), too, cited the need for children to discover for themselves.

Bilbrough and Jones (1968) and Tillotson (1968) discussed more specifically the range of methodologies which could be employed for the movement education approach. Kirchner et al. (1970:22-24) based their discussion of methodology upon the work done by Bilbrough and Jones (1968).

Bilbrough and Jones (1968:31-33) identified a continuum of methodology, with the direct method in which children are given no choice about how they are to move, at one end, and the indirect method, in which children are given total freedom of choice about how they are to move, at

the other. These extremes correspond with what Tillotson et al. (1968:8) identified as "command" and "free exploration."

Between these two extremes, Bilbrough and Jones (1968:34-35) identified a "limitation method," wherein students are permitted to explore, but within certain limitations, such as what body parts are to be stressed, apparatus to be used, varieties of responses to be attempted, etc., as defined by the teacher. This approach allows for more individualization of response than the direct method, but permits the teacher more opportunity to provide guidance and direction than the indirect method. Tillotson et al. (1968:8) identified smaller steps in their continuum, which correspond to various aspects of "limitation," but are more specifically defined. They were, in order of increasing responsibility given to students: task, problem solving, and guided exploration.

Barrett (1969:101-108, 1971), after reviewing the literature, also identified a continuum for presentation of movement tasks, the extremes of which agreed in intent with Bilbrough and Jones (1968:31-33) and Tillotson et al. (1968:8). She called these "command" and "free exploration." Like Tillotson, Barrett more specifically defined the aspects of limitation. In order of increasing responsibility given to students, these were: guided discovery, selected response, specific limitation, non-specific

limitation. More recently, Barrett (1973a:15-17) has proposed a teaching continuum, the extremes of which still represent no freedom and complete freedom given to the learner about how he/she is to respond. Her continuum suggests that the teacher is free to decide how much or how little freedom to give the students in both the initial and subsequent teaching behaviors.

Both Bilbrough and Jones (1968:35-37) and Barrett (1967:101, 1971:29) indicated that there is a place, within the teaching-learning interaction in the movement education approach, where each methodology on the range of the continuum is appropriate. Bilbrough and Jones (1968:38) stressed their preference for the limitation and indirect methods for their potential in fostering individual development and understanding of what and how movements are performed.

Although the emphasis has always been primarily an elementary program using the movement education approach, secondary and college levels have been mentioned in connection with the terminology (Halsey, 1964; Souder and Hill, 1963). Halsey (1964:58), in discussing individualized physical education at the secondary level, pointed out that instruction should be geared to meet individual needs. The individual, once motivated, should direct his own work, defining a problem, trying out various solutions, choosing the best solution, and evaluating his performance. Halsey (1964:58) also mentioned such aspects as teacher-defined

movement problems, on which students would work independently trying a variety of solutions, several of which, though different, might be equally good. She (1964:58) also mentioned student demonstration of original and interesting solutions, which might serve as points for analysis by the teacher and class.

Souder and Hill (1963) and Halsey (1964) mentioned movement education programs at the college level. As at the secondary level, Halsey (1964) advocated problem-solving, including such aspects as control of the quality of movement, effective use of space, and variations in design, tempo, rhythm, and force. Souder and Hill (1963) proposed a movement education program for college women, the purpose of which was to help students to an awareness of the scope of human movement possibilities, and provide opportunity for them to experience the joy of easy and successful movement in a variety of activities. Like Halsey (1964), they were concerned for analysis of movement as a point of learning about laws and structure which govern all movement.

There appears to be the possibility of an underlying thread of concern among all of these discussions of the movement education approach, for the process-content relationship as discussed by Jewett (1968, 1971). Although Gilliom (1970:3), in identifying movement education as ". . . the foundational structure and process portion of

physical education," was the only one to address herself directly to this concern, there appeared to be implications for this in others' work. Pye (1968) implied the importance of process when she cited the necessity for developing self-direction in learning movement, as a philosophical justification for including the movement education approach in the school program. Certainly an emphasis upon the process-content relationship would be amenable to discussions of methodology, and their rationales, as presented by Barrett (1969:101-108), Bilbrough and Jones (1968:31-38), Halsey (1964:58), Halsey and Porter (1963), Kirchner et al. (1970:22-24), and Tillotson et al. (1969:8). There was also evidence of this concern for process, learning how to learn through movement, in the programs presented by Gilliom (1970), Logsdon and Barrett (1969, 1970), and Stanley (1969).

Summary

Thus, selected trends in physical education, the expanded focus on human movement, and the movement education approach have been examined. Special attention was given to ways in which the movement education approach reflects the expanded focus on human movement, as well as the trend in general education toward individualization of instruction. The content deals with adaptations of Laban's analysis of movement. The methodology includes a range of kinds and

amounts of decisions permitted the learner, with an emphasis on those which do permit him some degree of decision-making. It appeared, therefore, that the movement education approach to physical education was one which combined both the expanded focus on human movement, as well as the concern for individual relevance, active participation in the learning process, and development of individual potentials.

SYSTEMS FOR DESCRIPTIVE ANALYSIS OF TEACHER BEHAVIOR IN PHYSICAL EDUCATION

The final section of this review of literature examines systems for descriptive analysis of teacher verbal behavior in physical education. Observational systems for teacher behavior are not new to the field of education. However, the majority of those constructed have been designed for observation of classroom teacher and student behavior. Because physical education, with its focus on movement and physical activity, is not appropriately observed and analyzed by these systems, special systems have been devised specifically for physical education class situations. Though these are still few in number, they are considered most pertinent to this study.

This section will review those systems for observation of teacher behavior, in which the major focus was on physical education situations. The studies will be examined

particularly in terms of their purpose, with some attention to the system used for observing behavior, the reliability, objectivity, and validity.

Bookhout

Bookhout (1965:4) designed a study

> . . . to determine by observation the patterns of teacher behavior which are related to climate formation: specifically, the pattern characteristic of teachers who create supportive climates, and the pattern characteristic of teachers who create defensive climates in their classes.

The study was based on the assumption that teacher behavior is largely responsible for the climate of the classroom, and that behavior which affects climate should be overt, and therefore, observable. Her hypothesis was that common teaching behaviors are employed by teachers in whose physical education classes a similar climate exists (1965:4).

Bookhout's (1965:6) subjects were physical education classes of ninth grade girls and their teachers. In order to assess the climate in these classes, to determine whether it was supportive or defensive, she administered an adapted form of Reed's Pupil Inventory (Bookhout, 1965:35-37). The next step was development of a tool to observe teacher behaviors which might be considered to be related to the development of classroom climate.

System for observation. Bookhout (1965:37-38) developed her system of observation based on Medley and

Mitzel's (1958) Observation Schedule and Record (OSCAR), which had been constructed for observation of teacher behavior associated with emotional climate, verbal emphasis, and social organization. Bookhout (1965:37-38) did not alter items from the original if they could be expected to occur in a physical education class. New items were framed, according to the same principles used by Medley and Mitzel, and added to the schedule in order to accommodate as many physical education teaching behaviors as possible.

The behaviors identified in Bookhout's (1965:60) schedule are as follows:

Description of Teaching Behavior

Participates with P, Sm, or G[a]
Allows leadership by P, Sm, or G
Answers questions of P, Sm, or G
Ignores questions or rejects comment of P, Sm, or G
Invites discussion, plans with, allows planning by P, Sm, or G
Positive emotive expressions: smiles, expresses concern, encourages P, Sm, or G
Negative emotive expressions: disapproval, threat, criticism, and frowning at P, Sm, or G
Grouping used: from fixed to permissive
Static teacher
Moving teacher
Total quantity of teaching behavior directed toward P, Sm, or G
Point out error to P
Total quantity of teaching behavior directed toward P
Teacher gives initial directions or leads mass activity

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[a]P, pupil; Sm, Small group; G, entire class

Reliability, objectivity, and validity. Bookhout (1965:43) reported reliability and objectivity coefficients

which were consistently at least .85 on three consecutive observations, based on the codings of two observers. She did not report on validity.

Rink

Rink (1969:4) designed a study for the purpose of evaluating ". . . the movement responses of four first-grade boys to teacher-stated movement problems." In order to do this, she also designed an observation system for the purpose of observing movement responses and analyzing movement problems. She assumed (1969:4) that an understanding of the way students are responding should give teachers some insight in presenting movement tasks, using the movement education approach.

System for observation. Rink (1969:19) devised two category systems. One was for coding the movement responses of the subject, and one was to record and code problems presented by the teacher.

Rink (1969:20) initially identified four criteria for describing the quality of student involvement in a physical education class using the movement education approach: (1) involvement, (2) variety, (3) correctness, and (4) skill level. These criteria, with skill level finally omitted because of the difficulty of objectively defining it, served as the basis for her system for describing student response (1969:23). The categories for this

systems were ranked in four steps which denoted high quality to low quality of involvement. Rink's (1969:104) four categories were:

Time-- time the child spends on his interpretation of the problem out of the time available to him.

Context-- the ability to stay with relationships and combinations of movements demanded by a problem.

Variety-- the number of different specific movement responses the child exhibits to the problem.

Correctness--the correctness of the individual moves the child attempted in relation to what the problem demands.

The category system for analyzing movement tasks involved assignment of point values, determined by the degree of freedom or limitation inherent in the wording of the movement task (1969:108). The four categories Rink (1969: 108-109) identified for analysis of movement tasks were:

Root-- the verb or verbs which tell what movement is to be done.

Focus-- a word or words which describe how a movement is to be done.

Combinations--combinations of the same root, and combinations of different roots.

Variety-- refers to the variety of response called for in the movement problem.

Reliability, objectivity, and validity. The data used to estimate the reliability and objectivity of Rink's system for evaluation of student movement response were the coded observations of two video tapes coded by four judges.

The coefficients of correlation for reliability ranged from .84-.93 (1965:25). The coefficients of intercorrelation for objectivity ranged from .76-.91 (1969:24).

The data used to estimate the reliability and objectivity of Rink's system for analysis of movement tasks were the codings of 20 representative movement tasks by 4 judges. The coefficients of correlation for reliability were above .85 for three out of four of the judges (1969:30). The coefficients of intercorrelation for objectivity ranged from .61-.93 (1969:29).

Rink did not report any estimation of validity.

Barrett

The purpose of Barrett's (1969:9) study was

> . . . to develop and test a procedure for systematically describing teacher-student behavior evident in primary physical education lessons implementing the concept of movement education.

System for observation. Barrett (1969:101) identified the components of a physical education lesson implementing the movement education approach: movement task(s), student response(s), content, guidance, teacher, and learner. Using the interrelationship of these components as a basis, she devised a category system of four dimensions.

The first of these was Movement Tasks, which Barrett (1969:95) defined as:

> . . . a verbal statement or question given to the learner by the teacher which indicates the content being developed and the type of response expected by the learner and serves as the central focus of the learning experiences.

Barrett (1969:102-108) defined eight types of tasks, based on the varying degrees of freedom given to the learner about how he is to respond. The Movement Task dimension was as follows (1969:128):

- Command
- Guided Discovery
- Selected Response
- Specific Limitation
  - implied variety
  - continuous variety
- Non-Specific Limitation
  - implied variety
  - continuous variety
- Free Exploration

The second dimension of the system was Content, which Barrett (1969:97) defined as ". . . the subject matter (movement in particular) with which the learner is engaged." Barrett (1969:110-114) identified 14 individual categories, based on the analysis of movement originally conceived by Laban and adapted by British and American physical educators. The categories of the Content dimension were as follows (1969:128):

- Time
- Space
- Force
- Flow
- Body Parts
- Body Shape
- Relationship of Body Parts
- Locomotor
- Non-Locomotor

Manipulative
Personal Space
General Space
Direction
Level
Unrelated

The third dimension of Barrett's system was Guidance, which she (1969:99) defined as ". . . verbal statements or questions which serve to guide the learner toward achievement of the lesson's objectives." Barrett (1969:121) identified five categories of guidance behaviors. The intent of this dimension was to identify the verbal behaviors which teachers use specifically to assist learners to move more efficiently in given situations (1969:117). The categories of the Guidance dimension were as follows (1969:128):

Focusing
Questioning
Accepting
Rejecting
Organizing
Unrelated

The fourth dimension of Barrett's system was Student Response, which Barrett (1969:96) defined as

> . . . the degree of self-disciplined behavior the learner(s) actually exhibits in relation to the degree required as implied by the design of the movement task given.

Barrett (1969:125-127) defined five categories of student response behavior. The focus for this aspect was developed on the premise that movement tasks, with varying degrees of opportunity for individual exploration and discovery, are

designed for the purpose of helping students to become more self-disciplined in their learning of movement (1969:121). The categories of the Student Response dimension were as follows (1969:128):

Unaware of the Situation
Aware of the Situation
Responding: inappropriately
Responding: appropriately but inconsistently
Responding: appropriately and willingly

Reliability, objectivity, and validity. Data used for estimation of reliability and objectivity of Barrett's system were the coded observations of 5 judges viewing 12 video taped lessons (1969:148). For determination of reliability, 2 viewings each of 6 of the 12 tapes were compared for each judge (1969:150). The percentages of intrajudge agreement ranged from 48-86 per cent (1969:174). By dimension, the range for the Movement Task dimension was 48-80 per cent; Content, 73-82 per cent; Guidance, 74-86 per cent; Student Response, 55-85 per cent (1969:175).

The percentages of interjudge agreement, determined by pairing each judge with each of the others, ranged from 32-92 per cent (1969:155). By dimension, the range for Movement Task dimension was 32-77 per cent; Content, 62-82 per cent; Guidance, 69-83 per cent; and Student Response, 59-92 per cent.

Validity of the system was estimated in terms of both construct and content validity. Construct validity was concerned with whether the categories represented the

context from which they are derived: whether all the behaviors defined by the system were used, and whether all behaviors observed could be categorized (1969:184). Two categories of the Content dimension, Flow and Space, were not used (1969:185), nor was the category Unaware, in the Student Response dimension (1969:186).

Content validity was estimated by the analysis of four experts in the field of physical education as to whether the category system was ". . . representative and comprehensive of the concept of movement education as it was being implemented in the schools" (1969:188). The experts' positive reactions were accepted as meaningful to a study of this nature, and indicative of its content validity (1969:189).

Dougherty

The purpose of Dougherty's (1971:39) system of interaction analysis for physical education was:

> . . . to distinguish those acts of the teacher that increase students' freedom of action from those that decrease students' freedom of action and to keep a record of both.

System for observation. Dougherty's (1971:40-43) system for observational analysis was an adaptation of that developed by Amidon and Flanders (1967). The system was divided into three broad dimensions: teacher talk, student talk, and non-verbal activities (1971:50). The teacher talk was further divided into groupings: direct teacher

statements, which tend to limit students' freedom to respond, and indirect statements, which tend to maximize this freedom (1971:39-40). With the exception of the eleventh category, which he added, Dougherty's definitions of the categories are taken directly from Flanders. Dougherty (1971:41) also added a technique for indicating whether the teacher talk was to an individual or the entire group. Dougherty's system was as follows:

Teacher talk--indirect
1. Accepts feelings
2. Praises or encourages
3. Accepts or uses ideas of students
4. Asks questions

Teacher talk--direct
5. Lecturing
6. Giving directions
7. Criticizing or justifying authority

Student talk
8. Student talk--response
9. Student talk--initiation

Non-verbal
10. Silence or confusion
11. Meaningful non-verbal activity

Reliability, objectivity, and validity. Dougherty did not report on the reliability, objectivity, or validity of this system.

Fishman and Anderson

The purpose of Fishman and Anderson's (1971:10) system was the development of ". . . a procedure for recording how physical educators provide augmented feedback to students." Their (1971:10) rationale was that, based on a review of literature in motor learning, feedback plays a

key role in the development of motor skills. Therefore, this appeared to be an important aspect of physical education teacher behavior to be identified. Fishman and Anderson (1971:11) defined augmented feedback as

> . . . a teaching behavior dependent upon the motor response of one or more students and intended to provide information related to the acquisition or performance of a motor skill.

System for observation. Fishman and Anderson's (1969:13) category system was presented in the form of a checklist, with all categories and sub-categories provided on the coding sheet. The final form of the system included 6 major categories of augmented feedback behavior, and 20 sub-categories (1971:12). They were as follows (1971:12-13):

1. Form
   a. Auditory-Augmented Feedback
   b. Auditory-Tactile Feedback
   c. Auditory-Visual Feedback

2. Direction
   a. A Single Student
   b. A Group of Students
   c. All Students in the Class

3. Time
   a. Concurrent Feedback
   b. Terminal Feedback

4. Intent
   a. Evaluative Feedback
   b. Descriptive Feedback
   c. Comparative Feedback
   d. Explicative Feedback
   e. Prescriptive Feedback
   f. Affective Feedback

5. General Referent
   a. The Whole Movement
   b. Part of the Movement
   c. Outcome or Goal of the Movement

6. Specific Referent
   a. Rate
   b. Force
   c. Space

Reliability, Objectivity, and Validity. The reliability, objectivity, and validity of the system were not reported.

Gasson

The primary purpose of Gasson's (1971:1) study was:

> . . . to create an observational instrument in order to record selected verbal and non-verbal behaviors of both teachers and pupils that were thought to be related to class management.

The study was concerned with primary school children.

System for observation. Gasson (1971:38) identified three dimensions of behavior which literature had indicated were pertinent to class management. These were: (1) Verbal Dimension, (2) The Location of the Teacher Dimension, and (3) The Child Activity Dimension. The Verbal Dimension was based on that developed by Flanders (1965), while the Location of the Teacher Dimension, and the Child Activity Dimension were Gasson's own creations (1971:38-57), based on observations of primary physical education lessons.

The individual categories, as finally accepted, were summarized (1971:58) as follows:

Verbal
   Accepts feeling
   Praises or encourages
   Accepts or uses ideas
   Asks questions

Lecturing or giving directions
Giving a divergent task
Criticizing or justifying authority
Pupil talk
Inaudible teacher talk
Silent teacher
Demonstrating
Stimulus used

Location of the Teacher
Perimeter
Among
Absent

Child Activity
Less than a quarter not attempting the activity task
A quarter or more not attempting the activity task
Other (inactive children)
Demonstration
Organization
Less than a quarter attempting to obey the teacher's instructions on an activity task

Reliability, objectivity, and validity. Gasson (1971:61) reported that the data he used to estimate inter-observer reliability (objectivity) were the coded recordings of two trained observers, compared with his own codings as a standard, and compared with one another. He set a standard for acceptable inter-observer reliability at a coefficient of .70. The coefficients were determined using the Scott method. The observers and the investigator (standard) repeated trial codings until that reliability coefficient of .70 was reached. Gasson did not discuss intrajudge agreement, or validity of his system.

Ciesla

The purpose of Ciesla's (1972:5) study was

> . . . to develop an objective, reliable, and valid tool for the systematic description of selected teacher behavior evident in the teaching of the cradle in lacrosse to beginners.

System for observation. Ciesla's (1972:40-45) system was divided into two major parts, each relating to a type of response: Specific and Non-specific. "Specific" referred to identification of those movement tasks, the intent of which allowed no choice to the student about how he should move. "Non-specific" referred to identification of those movement tasks, the intent of which allowed choice to the student about how he should move.

The components of a physical education lesson, taking into account physical education lessons in general, physical education lessons for beginners, and physical education lessons dealing specifically with teaching the cradle in lacrosse to beginners, served as the basis for formulating the categories of Ciesla's (1972:45-46) system. The categories she thus formulated described teaching behaviors which could each be defined in a specific or a non-specific way, except Analysis, which always implied a specific response (1969:61-69). The following are Ciesla's (1972:70) categories:

Demonstration
Analysis
Manual Assistance
Organization
Reinforcement
Space
Body Parts and Body Actions
Quality of Movement
Relationships
Freedom

Questions
Unclassified

Reliability, objectivity, and validity. The data used to estimate reliability and objectivity were the codings of three judges viewing three video taped lessons of the cradle in lacrosse being taught to beginners, each lesson taught by a different teacher (1972:85-88). Ciesla (1972:116-117) set the standard for acceptance of reliability and objectivity at .90.

Reliability coefficients were obtained by comparing the codings of each judge from the first viewing of the tapes, with the codings of the same judge for the same tapes from a second viewing of the tapes. Reliability coefficients for the entire system combined, ranged from .975-.999 (1971:117). Looking at each portion of the system separately, the results for the reliability coefficients for the Specific part were as follows: range, .802-.999, with all three judges reaching .90 or above on tapes #1, #2, and total tapes #1, #2, and #3 combined; only one judge was above .90 on tape #3 (1972:117). The reliability coefficients for the Non-specific part were as follows: .90 was reached by two judges on all tapes except tape #2; the third judge did not reach .90 on any tapes (1972:117).

The objectivity coefficients for the entire system combined ranged from .943-.998 (1972:117). Looking at each part of the system separately, the range of coefficients for

the Specific part was .969-.999 for all pairings of judges on all tapes except tape #3 (1972:116). For the Non-specific part, the range was .414-.698 for two pairings of judges, with only one pairing reaching .90 and only on tapes #1, #3, and the total tapes #1, #2, and #3 combined (1972:116).

Validity was estimated in terms of construct and content validity. Construct validity was concerned with whether the categories represent the context from which they are derived: whether all the behaviors defined by the system are used, and whether all behaviors observed can be categorized (1972:109). Ciesla (1972:111) reported that all categories except Unclassified were used.

Content validity was estimated by a careful analysis of lacrosse literature to determine the comprehensiveness and representativeness of the system as it related to teaching the cradle in lacrosse to beginners (1972:111). Ciesla (1972:111) reported that each category was supported by lacrosse literature.

Summary

Techniques for descriptive analysis of classroom behavior, both student and teacher, have been of growing interest in the field of education. Although most of the work has been done with classroom situations, an increasing number of systems are being designed for physical education. Five completed studies, one in process, and one minor

revision of a tool originally designed for classroom interaction analysis have been reviewed, with special concern for purpose, system of observation, and reliability, objectivity, and validity.

SUMMARY

The literature relevant to this study was reviewed in three sections. The first section dealt with recent reforms in education, particularly the restructuring of subject matter, and the growing concern for individualization of instruction. The second section dealt with current trends in physical education reform, with special attention to the expanding emphasis on human movement, individualization of instruction, and the movement education approach. The third section dealt with a review of studies in physical education that had as their main purpose the observation and analysis of some aspect of teacher behavior in physical education. The studies were reviewed with special concern for the purpose, system of observation, and reliability, objectivity, and validity.

The literature reviewed in this chapter provided a basis for the procedures and methods to be used in this study. Chapter 3 will describe the procedures used for the collection and treatment of the data.

Chapter 3

PROCEDURES

The purpose of this study was to describe and analyze the pre-instructional, verbal instructional, and post-instructional behaviors of two experienced teachers implementing for the first time in their teaching experience, the movement education approach to instruction of college women in beginning basketball. A sub-purpose of this study was to adapt the category system designed by Barrett (1969) to make it consistent with recent literature and relevant to the specific context of this study. The purpose of Chapter 3 is to describe the procedures used to identify and analyze the teachers' behaviors and adapt the category system.

COLLECTION OF DATA

The data used to identify and analyze the teaching behavior of two teachers implementing the movement education approach for the first time were: coded recordings by two trained judges of the teachers' verbal behavior during class, the teachers' lesson plans, coded by the investigator, for each lesson, and the teachers' written evaluations following each lesson. The collection of data included: selection and training of teachers, selection of student

subjects, tape recording procedures, acquisition of evidence of pre-class decisions and evaluations of lessons, revision of Barrett's (1969) category system, selection and training of judges, and procedures used for final coding.

Selection and Training of Teachers

The two teachers for this study were chosen on the basis of their interest and similarity of background. Both had taken a graduate course entitled Current Theories and Practices of Teaching Sports, which was offered during the first semester of the 1970-1971 school year at The University of North Carolina at Greensboro. Both subjects were women, enrolled as full-time graduate students in physical education at The University of North Carolina at Greensboro, School of Health, Physical Education, and Recreation. Both had two years of experience teaching at the secondary level.

Neither teacher had any experience with the movement education approach prior to her participation in the Current Theories and Practices of Teaching Sports class. In the class, both were exposed to Mauldon and Redfern's Games Teaching (1969) and Stanley's Physical Education: A Movement Orientation (1969). They observed physical education classes at the Julius I. Foust Elementary School, Greensboro City Schools, Greensboro, North Carolina, in which the movement education approach was being used.

In terms of practical experience, they participated

as students in a lacrosse lesson, presented using the movement education approach. In addition, each taught one lesson in team sport fundamentals to groups of approximately eight students at The Joseph Charles Price Junior High School[1], Greensboro City Schools, Greensboro, North Carolina.

Under these conditions, it was assumed that each of the teachers met the criterion of being inexperienced in using the movement education approach. Based on their teaching experience and acquaintance with the movement education approach, the two teachers were considered to be generally equated.

These teachers were given an orientation session on April 28, 1971, to acquaint them with the interpretation of the movement education approach which governed this study. Prior to the actual orientation session, the plan for the discussion of the movement education approach was validated by the two faculty members at The University of North Carolina at Greensboro, School of Health, Physical Education, and Recreation, who were accepted as experts. The orientation session was tape recorded to provide a check on the actual presentation as compared with the validated plan. It proved to be the same. An outline of the presentation appears in Appendix A. After the discussion of the movement

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[1]In 1972, this became the Joseph Charles Price Elementary School.

education approach, the two teachers were given detailed instructions concerning their responsibilities, and an opportunity to ask any questions they might have about them.

In addition to the oral presentation, the orientation session also included a 10-minute mini-lesson in soccer, taught by a teacher experienced in the movement education approach. The two teachers for this study were the participants for this mini-lesson. The verbalizations of this lesson appear in Appendix B.

Selection of Students

Students for this study were chosen from selected physical education instructional classes in various individual activities at The University of North Carolina at Greensboro, in early May, 1971. The investigator polled those classes which met at times that she was free. The following criteria governed the choice of subjects:

1. They could not be currently enrolled in a team sports class. It was assumed that current involvement in any team sport might introduce a bias due to possible similarities to basketball of strategies or movement patterns.

2. They could not have had any previous or current experience with high skill levels in basketball. This was defined as advanced instruction in basketball, or participation at the varsity level in high school or college.

3. They could not have had any previous experience with the movement education approach to physical education.

4. They had to have either the 9:00 a.m.-10:00 a.m., or 10:00 a.m.-11:00 a.m. hour free on Mondays and Wednesdays for the last three weeks of the second semester of the 1970-1971 school year.

Each potential subject was questioned about each of these criteria. If she failed to meet any one, she was not accepted as a subject. Of those who volunteered, five met the qualifications for the 9:00 a.m.-10:00 a.m. group, and four met the qualifications for the 10:00 a.m.-11:00 a.m. group. The nine subjects thus chosen as students for this study represented activity courses in personal conditioning, recreational sports, fencing, swimming, and bowling.

Tape Recording Procedures

The taping procedures in this study included the technical procedures for tape recording the teachers, and the actual recording of the lessons.

Technical procedures for taping. In order for the verbal behavior of the two teachers to be studied, it was necessary to find a method of recording it that would insure that all verbalizations were audible. At the same time, it was desirable to permit the teacher freedom to move about the gym as she taught.

The investigator sought help with this problem from the media specialist, and the Director of the Human Performance Laboratory at the School of Health, Physical Education and Recreation at The University of North Carolina

at Greensboro. The equipment chosen was the EKG-EMG-EEG transmitter; the FM Biotelemetry Receiver, model FM-1100-6; and a Wollensak tape recorder.

It was found that the transmitter, wrapped in a quarter-inch layer of foam rubber to prevent its antenna from being grounded upon contact with skin, could be adhesive-taped to the chest, either over the sternum or laterally below either clavicle. This permitted the wearer complete freedom of movement, and provided clear pick-up on the FM receiver from anywhere in a gymnasium. The FM receiver was jacked into the input of the tape recorder. The jacks, attached to either end of a 12-foot cord, were prepared by Guilford Electronic at a cost of $2.00.

The testing of the recording system took place in the Coleman Gymnasium of the School of Health, Physical Education, and Recreation at The University of North Carolina at Greensboro. The test subject moved all about the gym floor, positioning her body so that it was sometimes facing the receiver, and sometimes between the microphone and receiver. To test for the effect of movement of body and clothing on the pick-up on the microphone, the subject performed a variety of badminton strokes. All of the moving was done while the subject was speaking in a normal tone of voice. All of her verbalizations were clearly audible, with no interference, static, or extraneous sound from her shirt moving over the foam rubber-covered microphone.

Tape recording of teachers. The study consisted of 6, 30-minute lessons for each teacher, conducted on May 3, 5, 10, 12, 17, and 19, 1971. On each of these days, the first teacher taught from 9:15 a.m.-9:45 a.m., the second from 10:15 a.m.-10:45 a.m. The classes were taught in Curry Gymnasium, a facility of the School of Education at The University of North Carolina at Greensboro. Permission for its use was obtained from the Dean of the School of Education, following a written explanation of the need, and designation of desired dates and times. This facility was used because it was impossible to schedule sufficiently large time blocks in either Coleman or Rosenthal Gymnasia, which coincided with the investigator and teachers' free time.

For the actual taping of the lessons, two separate 1800-foot tapes were used. This permitted a total recording time of 180 minutes, sufficient for 6, 30-minute lessons. Each tape was used for only one teacher's lessons.

Several difficulties arose during the taping of the lessons. First, for both teachers, there was an unaccountable degree of interference, in the form of static picked up by the FM receiver, and transmitted to the tapes. It seemed to be unrelated to the teachers' position in the gymnasium, the location on the teacher's chest to which the microphone was taped, or the presence or absence of clothing over the microphone. The actual cause for the static was never

discovered, nor was the static eliminated. However, a spot check of the tapes indicated that the great majority of the verbalizations were not at all affected by the static, and those that were, were still distinguishable.

The second difficulty arose with the taping of the fourth lesson. As each side of the tape accommodated three lessons, the fourth lesson should have been recorded on side two. Due to investigator error, the tapes did not get turned, a mistake which was not discovered until Lesson 4 had been taped on top of Lesson 1 for both teachers. Discussion with each of the teachers as to what they had done in the first lesson was subsequently recorded, but the actual verbal behavior during class time was no longer available for study.

Lesson Plans and Evaluations

The two teachers were told during their orientation session that they were responsible for submitting a written lesson plan prior to each lesson. They were not, however, given any instruction on the format for the plans, in order to avoid the introduction of investigator bias in the planning. In addition, they were told that they could not discuss the plans with one another or with anyone familiar with the movement education approach. They were free to use any written sources they wanted. Copies of the six lesson plans for each teacher, as evidence of pre-class decisions, are found in Appendix C.

Also during their orientation, the teachers were told that they were responsible for preparing a written evaluation of each lesson immediately following the teaching of the lesson. As with the lesson plans, they were not given any instructions as to format, in order to avoid introducing investigator bias in the evaluations. They were told not to discuss the evaluations with one another or with anyone who was familiar with the movement education approach. Copies of all six evaluations for each teacher are found in Appendix D.

Revision of the Category System

The modifications of the category system as originally developed by Barrett (1969) to make it suited to this study included:

1. Deletion of the student response dimension, as this study was concerned only with the verbal behavior of the teacher in presentation and development of movement tasks during the in-class phase of teaching.

2. Changes in some categories of the content dimension, based upon literature not available at the time of Barrett's (1969) study, which was relevant to the movement education approach to physical education.

3. Change in the entire focus of the guidance dimension, based on more recent thinking by the original author (Barrett, 1971), as well as a difference in

interpretation of the major focus of guidance behaviors, based on the writings of Bilbrough and Jones (1968).

Thus, this study was concerned with three dimensions of classroom behavior in physical education, all of these dealing with teacher verbal behavior. The following sections will discuss the procedures and rationale for changes in each of these three dimensions.

Dimension 1: Movement Tasks. This dimension of the category system was accepted as presented by Barrett (1969:102-108), in that all of the original eight types of tasks were kept. However, the naming of the first category was changed from Command to Explicit Response. It was felt that the term "command" carried implications of constant regimentation, as used by Mosston (1966:19-20). Examples following the description of each type of task were altered to make them relevant to the instruction of college women in team sport fundamentals using the movement education approach. These examples were approved for consistency of intent by the original author.

The types of tasks identified were: (1) Explicit Response, (2) Guided Discovery, (3) Selected Response, (4a) Specific Limitation: implied variety, (4b) Specific Limitation: continuous variety, (5a) Non-specific Limitation: implied variety, (5b) Non-specific Limitation: continuous variety, and (6) Free Exploration. These

constituted the first dimension of the category system. The description of each of these categories, and examples of them, appear in Appendix E.

Dimension 2: Content. The Content dimension of the category system included several modifications of that originally presented by Barrett (1969:110-115). These modifications were based on Stanley's (1969:37-60) presentation of the components of the movement education approach, which reflected Laban's original movement principles, and included the application of such to the teaching of games, as well as dance and gymnastics.

The Content dimension was conceived by Stanley (1969:37) to include four major aspects: body, effort qualities of movement, space, and relationship. These aspects were sub-divided into 15 individual categories for this dimension. Category headings and descriptions presented by Barrett (1969:110-115) were retained where they were compatible with Stanley's (1969:37-60) classification of movement. In these situations, examples following the description of each aspect were altered to make them relevant to the instruction of college women in team sport fundamentals using the movement education approach. These examples were approved for consistency of intent by the original author.

The Content categories identified, and their recording symbols, were as follows: Body Shape (bs), Body

Parts (bp), Body Actions (ba), Force (f), Time (t), Space (s), Flow (fl), General Spatial Awareness (g), Personal Space Awareness (ps), Level (le), Direction (di), Pathway (pa), Manipulative Relationship (m), Non-manipulative Relationship (nm), and Relationship with People (p). These constituted the second dimension of the category system. The description of each of these categories, and examples of them, appear in Appendix E.

Dimension 3: Guidance. The major focus of Barrett's (1969:117-121) Guidance dimension was the identification of the nature of verbal guidance behaviors. These included statements and questions pertaining to assistance in skill performance, statements or questions pertaining to evaluation of the students' behavior, and statements or questions pertaining to organization or safety. Barrett (1969:203) mentioned one limitation of this dimension being its failure to identify very specific information, particularly in terms of the degree of freedom given the student to make his own decisions related to improving his response. This was considered a weakness because the concept of freedom in decision making is as much part of the development of a task, as it is a part of the initial task.

In more recent thinking, Barrett (1973a:15-17) suggested that description of the movement tasks might also logically be used to identify the kinds and amounts of decisions which the teacher gives the student while he is

working on the task. For example, for the task, "Use your hands in a variety of ways to keep the ball in the air," the task would be classified as 4a, Specific Limitation: implied variety. A possible guidance behavior, designed to help a student or group of students to develop the response, might be, "Choose one of the ways, and practice until you can do it easily." This guidance behavior might then be considered to be classified as category 3, Selected Response. In this example, freedom to try a variety of responses was limited by the teacher's guidance behavior.

This same implication of relationship between freedom in the task and guidance behaviors was made by Bilbrough and Jones (1968:36-37) in their development of ways and reasons for combining various degrees of freedom for decision-making for students, within the context of a single lesson. Thus, because it promised to give a more complete picture of the instructional aspect of the implementation of the movement education approach, guidance behaviors were identified and defined in the same terms as the categories of the Movement Task dimension. Instructions were added concerning the basis for the judges' differentiating between a movement task and guidance statement. These are found in Appendix E.

No effort was made to categorize verbalizations which gave guidance as to organization of students, safety, etc., all of which had been included in the original system

as developed by Barrett (1969). Occurrences of these, and verbalizations unrelated to the development of the movement task, were noted in non-specific terms. The revised Guidance dimension is found in Appendix E.

Recording technique. The instructions for recording were, where applicable, those originally presented by Barrett (1969:129-135). Instructions were altered to accommodate modifications in the choice of categories. The instructions, as presented to the judges during their training, are found in Appendix F.

Selection and Training of Judges

There were two judges trained in the use of the category system for this study. Both were graduate students at The University of North Carolina at Greensboro, School of Health, Physical Education, and Recreation, during the 1970-1971 school year, and the 1971 summer session. Since it was deemed desirable that these judges both be familiar with the movement education approach and the context of the terminology, one judge was chosen from among those graduate students who had been involved in extensive observation and practical experience in the physical education program at The Julius I. Foust Elementary School, Greensboro City Schools, Greensboro, North Carolina, which was being conducted using the movement education approach. The investigator served as the second judge as she understood the

context and terminology. It was deemed appropriate that the investigator be the other judge, since several weeks would have elapsed between the time of the tape recording of the lessons and the actual listening and coding sessions. The investigator did not listen to any of the tapes prior to the actual coding sessions.

Training of the judges involved seven sessions, each of approximately three hours' duration. These were held on June 7, 8, 9, 10, 13, and 14.

The training technique involved having the judges listen to and code the verbal behavior of recordings of three faculty members at The University of North Carolina at Greensboro, School of Health, Physical Education, and Recreation, who were considered experts in the implementation of the movement education approach. Each had prepared 2, 15-minute lesson segments using graduate students as their learners. The lessons were geared to using all dimensions of the category system, with special emphasis on all levels of the task and guidance dimensions. In addition, all the lessons dealt with sport skill fundamentals, excluding basketball.

During the training sessions, the judges learned the individual categories of the system, the coding system, and the technique for recording. Several clarifications of descriptions and examples of individual categories were made, based on discussed lack of clarity. Throughout the training

sessions, the codings of the two judges were continuously compared. When the judges appeared consistent in agreement with each other and themselves, the training sessions were terminated.

Prior to the official coding sessions, a trial recording session was held on June 18, 1971. Tape #6, chosen by random lot, was coded by both judges. The purpose of this session was to determine whether the training tapes, as prepared by experts in the implementation of the movement education approach, had served as appropriate and adequate training models for the judges to code lessons taught by beginners implementing the movement education approach. Identified areas of confusion were clarified by discussion between the judges following the coding.

Coding Sessions

The remaining nine tapes were divided randomly into two groups, to be coded on two successive days. Tapes #3, #4, #5, #7, and #10 were coded on June 19, 1971. The remaining tapes, #1, #2, #8, and #9 were coded on June 20, 1971. During both sessions, each tape was coded as it was heard once through.

On June 21, 1971, tapes #2, #3, and #10, chosen at random, were coded a second time to serve as a check for reliability. As was done with the first coding, each tape was coded by the two judges as it played through once.

PREPARATION OF DATA

The codings of the two trained judges served as data to estimate the objectivity, or interjudge agreement, and reliability, or intrajudge agreement, in their use of the system. After the determination of objectivity and reliability, the next procedural step in preparing the data for analysis was reducing it to tables.

Objectivity and Reliability

The data used to estimate objectivity were the codings of each judge for nine tapes. Coefficients of objectivity for each of the three dimensions of the system were determined using the Pearson product-moment correlation technique (Guilford, 1965:97). The coded data from 9 of the 10 tapes, with tape #6 omitted because it was used as a training tape, were used to estimate the coefficients of objectivity by dimension.

The data used to estimate reliability of the judges were the codings recorded by each judge for tapes #2, #3, and #10, on June 19 and 20, 1971, compared with second codings recorded by each judge of these same three tapes on June 21, 1971. Reliability coefficients were computed using the Pearson product-moment correlation technique (Guilford, 1965:97).

Presentation of Data

The raw data to be presented included the written lesson plans from two teachers for six lessons, the codings of two judges for five taped lessons for each teacher, and the written evaluations from two teachers for six lessons. For presentation and analysis, the lesson plans were coded and reduced to tables; the codings of the actual tapes were reduced to tables; and the written evaluations were retained in their verbatim form.

In order to construct the tables for presentation of the lesson plans, the first step was the coding of each plan. Each statement in the plans was analyzed by the investigator in terms of its intent according to the categories in the system used to code the tape recorded lessons. The text of the category system itself was used as a frequent reference during the coding process in order to insure as accurate as possible an interpretation of the teachers' intent. Since the judges had proven to be objective and reliable, except with reservation in the Movement Task dimension, it seemed valid that the investigator, one of the original judges, code the lesson plans alone. The use of the category system as constant reference strengthened this assumption.

After the plans were coded, the frequency of use of each category for each lesson was tallied. These data

were used for presentation of the lesson plans. The original verbatim plans are included in Appendix C.

Construction of tables showing frequency of use of each category in each of the actual lessons involved reducing the frequency of codings of two judges to a single figure for each category for each lesson. Since the coefficients of objectivity for each dimension of the system were high, it was determined that the averages of the tallies of the two judges' codings for each category in each lesson would be the data presented on the tables. For those situations in which the ratio of one judge's tallies for any category in any lesson was twice that of the other, the discrepancy was noted on the table, and the figure was not used in the analysis. The exception to this was those situations in which the highest frequency of use of any category by a judge during one lesson was four or less. In these situations, if the difference between the raw total codings by each judge for the category was two or less, the average was accepted (e. g., Judge A: 3, Judge B: 1; Judge A: 2, Judge B: 4; Judge A: 2, Judge B: 0). This entire procedure for establishing the limits for acceptance of averages to be useful for this study was adopted because the frequencies of codings for each category for each lesson were so small.

The written evaluations of each lesson from each teacher made only vague reference to the tasks and content

of the lessons. Therefore, it was deemed a difficult task of limited value to reduce them. They were examined in their original form, when such examination was useful for clarifying the lesson plans and/or actual lessons. The evaluations are included, verbatim, in Appendix D.

ANALYSIS OF DATA

The data used to describe and analyze the behavior of two teachers initiating for the first time in their teaching experience the movement education approach to teach beginning basketball to college women were: (1) pre-instructional behavior, as presented in the tables of frequency of use of each category for each lesson plan; (2) verbal instructional behavior, as presented in tables of average of 2 judges' codings of frequency of use of each category for each of 10 lessons; (3) post-instructional behavior, when appropriate for clarifying pre-instructional and verbal behavior, as obtained in the teachers' written evaluations of each lesson.

In the process of description and analysis of data, the pre-instructional and verbal instructional behavior of each teacher for each lesson was examined, to determine the relationship between the teacher's intention and actual verbal teaching behavior. Notice was taken of those situations when the written evaluations helped to explain or clarify the relationship between pre-instructional and

verbal instructional behavior. The data were also examined for any trend in use of categories which appeared to emerge, from Lesson 1 through Lesson 6, for each teacher.

Finally, the data for the two teachers were compared. From these comparisons, subjective inferences were drawn, concerning similarities and differences in the pre-instructional, verbal instructional, and post-instructional behavior of the two teachers.

SUMMARY

Chapter 3 presented the procedures necessary for collection, presentation, and analysis of the verbal teaching behavior of two teachers implementing the movement education approach for the first time in their teaching experience, teaching beginning basketball to college women. The following procedures were described in the collection of data needed for the analysis of the teaching behavior of the two teachers: selection and training of teachers, selection of student subjects, tape recording procedures, acquisition of evidence of pre-class decisions and evaluations of lessons, revision of Barrett's (1969) category system, selection and training of judges, and procedures for final coding.

The statistical techniques used for estimating reliability and objectivity of the judges were presented.

The procedures for presenting the data were described. Finally, procedures for description and analysis of the data were discussed.

Chapter 4

PRESENTATION AND ANALYSIS OF DATA

The purpose of this study was to identify and analyze the behavior of two teachers as they implemented the movement education approach for the first time in their teaching experience, instructing college women in beginning basketball. The purpose of this chapter is to describe and analyze the data.

This chapter will be presented in two major sections. The first section will be a report and analysis of the data used to estimate the reliability and objectivity of two trained judges in their use of the revision of Barrett's (1969) category system for description of teacher behavior. The second section will be an identification and analysis of the behavior of the two teachers as they implemented the movement education approach, instructing college women in beginning basketball.

RELIABILITY AND OBJECTIVITY

The data used to estimate the reliability of the two judges in their use of the system were the codings done by each judge for three of the tapes, chosen at random, compared with a later coding of these same three tapes for each judge. The raw data for these codings are found in

Appendix G, Table 7. The reliability coefficients, found using the Pearson product-moment technique, are reported on Table 1. The coefficients of reliability for both judges for the use of the Content and Guidance dimensions ranged from .96 to .98, all of which are considered high correlation (Sheehan, 1971:144). In the Movement Task dimension, however, Judge A had a reliability coefficient of only .51; the coefficient for Judge B was only .66. Though both of these coefficients are considerably lower than those found for the other two dimensions, according to Sheehan (1971:144) they can be considered to show moderate correlation.

Table 1. Reliability Correlations for Two Judges Calculated by Dimension

Dimensions	Judge A	Judge B
Movement Task	.51	.66
Content	.97	.96
Guidance	.98	.98

In summary, it can be concluded that, in the Content and Guidance dimensions, the judges were highly reliable in their use of the system. Though the coefficients showed only moderate correlation in the Movement Task dimension for the judges' reliability in the use of this

dimension, the reliability was accepted as high enough to be useful for this study.

The data used to estimate the coefficients of objectivity for the two trained judges were the coded recordings of nine lessons by each judge. The raw data are included in Appendix G, Table 8. The figures obtained for each dimension using the Pearson product-moment technique, are found on Table 2. The range was .96 to .98, all of which are considered to be very high correlation. Therefore, the objectivity of the judges in using this dimension was accepted as useful for this study.

Table 2. Objectivity Correlations for Two Judges Calculated by Dimension

Dimensions	Judge Pairing AB
Movement Task	.96
Content	.98
Guidance	.98

ANALYSIS OF TEACHER BEHAVIOR

The identification and analysis of the behavior of the two teachers implementing the movement education approach for the first time in their teaching experience, instructing college women in beginning basketball, involved examination of three sets of data for each teacher. These

were: (1) the frequency of codings of categories for each lesson plan, as evidence of pre-instructional behavior; (2) the average frequency of codings from two judges' codings of actual verbal behavior during the lesson; and (3) the written evaluations following each lesson, as evidence of post-instructional behavior. Throughout the presentation and analysis of data, reference to "lesson plans" means the pre-instructional behavior; "actual lesson" means verbal instructional behavior; and "evaluation" means the verbatim evaluation from each teacher following each lesson, the post-instructional behavior.

This section will be presented in three major subdivisions. The first two will deal with the reporting and analysis of data for the teaching behavior of each teacher. The third part will be a comparison of the teaching behavior of the two teachers. Figure 1, representing a condensation of the category system, was included to provide ease of reference to the meaning of each category.

Teacher A

The data for Teacher A will be presented and analyzed in two parts. The first part will deal with examination of the lesson plans, actual lessons, and where useful, the written evaluations, in the Movement Task and Guidance dimensions. These two dimensions were examined together because they both are concerned with the amount

Figure 1. Description of Categories in Category System

Movement Task and Guidance Categories

1 Explicit Response: student is encouraged to perform specific movements in specific ways

2 Guided Discovery: student is given freedom to decide how he/she is to move, while being encouraged to focus toward a more specific response

3 Selected Response: student is encouraged to select a movement response and repeat it

4 Specific Limitation: student is given freedom to find different ways of moving in relation to specific limitations in the task
   a. implied variety: the responses may be repeated, or new ones tried
   b. continuous variety: each attempted response should be different

5 Non-Specific Limitation: student is given freedom to find different ways of moving in relation to non-specific limitations in the task
   a. implied variety: the responses may be repeated, or new ones tried
   b. continuous variety: each attempted response should be different

6 Free Exploration: student is completely free to move as he/she wishes

G (Guidance dimension only): Guidance verbalizations not directly related to development of the movement task

U (Guidance dimension only): Guidance verbalizations unrelated to movement task development

Content Categories

t time: speed of movement

f force: amount of strength needed to perform a movement

s space: amount of space used by movement

fl flow: whether movement is fluid or restrained

ps personal space: space immediately surrounding the body

Figure 1 (continued)

gs general space: total area available in situation

le level: position of body or object along an up-and-down continuum

pa pathway: floor or air pattern made by body or implements in motion

di direction: change in direction body is moving or facing

ba body action: movements which move the body from one place to another

bs body shape: form or position body takes

bp body parts: body part(s) being used, or relationship between them

m manipulative: efforts to control movement of an external object

nm non-manipulative: adaptation of movement to stationary object, or boundary

p relationship with people: effect upon movement of relationship with other people in the movement situation

of freedom given the learner about how he/she is to move in response to the presentation and development of the movement task. The second part will deal with the examination of the lesson plan, actual lesson, and, where useful, the written evaluation, in the Content dimension. This dimension is concerned with the content elements which have been identified with the movement education approach to physical education.

Movement Task and Guidance dimensions. The data for the description and analysis of the lesson plans and actual lessons in the Movement Task and Guidance dimensions are found on Table 3. The table shows the total number of codings for each category from the investigator's coding of the lesson plans, together with the average frequency of codings from two judges in each category for each lesson. The data from the actual lesson for Lesson 1 are missing, as the tape recording of this lesson was accidentally destroyed before the judges could code it.

It can be seen from studying Table 3, that in Lesson Plan 1, Teacher A had constructed behaviors for the Movement Task dimension primarily in the Specific Limitation categories, 4a and 4b. Smaller, approximately equal proportions of intended behaviors were in categories 1, 2, and 5a: Explicit Response, Guided Discovery, and Non-Specific Limitation: implied variety. Thus, since the

Table 3. Frequency of Use of Categories from Coded Lesson Plans and Average Frequency of Use of Categories from Coded Actual Lessons in the Movement Task and Guidance Dimensions for Teacher A.

Categories	Lesson 1				Lesson 2				Lesson 3				Lesson 4				Lesson 5				Lesson 6			
	MT		G		MT		G		MT		G		MT		G		MT		G		MT		G	
	lp	l*	lp	l*	lp	l	lp	l	lp	l	lp	l	lp	l	lp	l	lp	l	lp	l	lp	l	lp	l
1 Explicit Response	3	-	0	-	6	5	2	19	6	2.5	1	6.5	0	0	0	6†	2	2	3	14	1	1	1	8.5†
2 Guided Discovery	3	-	7	-	8	8	11	27.5	9	6	10	12.5	5	3	0	14	9	10.5	3	23.5	7	5†	6	6
3 Selected Response	0	-	0	-	0	0	0	.5	0	0	0	.5	2	0	0	0	1	0	0	1	0	0	0	0
4a Specific Limitation: implied variety	6	-	0	-	5	3.5	0	0	11	8	0	0	8	6	0	3†	5	2.5	0	0	2	8.5	0	0
4b Specific Limitation: continuous variety	5	-	0	-	2	.5	0	0	4	1	0	0	1	.5	2	1	0	1.5	0	0	0	0	0	0
5a Non-Specific Limitation: implied variety	3	-	0	-	0	0	0	0	0	7†	0	.5	1	2	0	1.5†	0	0	0	.5	0	0	0	0
5b Non-Specific Limitation: continuous variety	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 Free Exploration	0	-	0	-	0	0	0	0	0	0	0	0	0	1.5	0	1.5†	0	0	0	0	0	0	0	0
G Guidance‡	NA		0	-	NA	NA	0	19†	NA	NA	0	22.5	NA	NA	0	19.5	NA	NA	0	18.5	NA	NA	0	11.5†
U Unrelated‡	NA		0	-	NA	NA	0	36.5	NA	NA	0	32.5	NA	NA	0	26	NA	NA	0	36	NA	NA	0	12.5†

Key: MT = Movement Task
G = Guidance
lp = lesson plan
l = actual lesson
NA = not applicable

* Tape destroyed; therefore, the actual lesson was not coded.

† Ratio of tallies between two judges was greater than 2:1; or there was a difference of more than 2 for totals between 0 and 4.

‡ Categories applicable only to Guidance dimension.

majority of the planned tasks were in 4a and 4b, the Specific Limitation categories, with some also in 5a, Non-Specific Limitation: implied variety, it appears that Teacher A's intention was to allow the students some freedom in making their own decisions about how to respond to movement tasks. This conclusion is possible because the description of movement tasks represents a continuum of freedom for decision-making allowed the learner, with 1, Explicit Response, at the extreme allowing no freedom, and 6, Free Exploration, at the extreme allowing complete freedom. The majority of planned behaviors were closer to the complete freedom extreme.

Since the tape of Lesson 1 for Teacher A was one of those accidentally destroyed, there were no data available for analysis. However, examination of the evaluation for Lesson 1, found in Appendix D, indicated that Teacher A had felt that she was unable to devise tasks that would elicit free movement responses. Not only was she uncomfortable, she felt that her students were also unable to handle the freedom they were given.

Accordingly, in the plan for Lesson 2, there was a sharp increase in the proportion of tasks in categories 1 and 2, Explicit Response and Guided Discovery. There was a decrease in the proportion of tasks using categories 4a and 4b, the Specific Limitation categories, although these categories did still appear in the plan. Planned Guidance

behaviors were all in categories 1 and 2, Explicit Response and Guided Discovery.

The coding of the actual Lesson 2 reflected the pattern of use of categories in the plan. In both the Movement Task and Guidance dimensions, categories 1 and 2, Explicit Response and Guided Discovery, were used most frequently. Categories 4a and 4b, the Specific Limitation categories, were used in even smaller proportion in the Movement Task dimension of the actual lesson, than in the plan.

The evaluation of Lesson 2, found in Appendix D, indicated that Teacher A felt the need for both more structure and a competitive situation to provide either motivation or structure. She also changed her source for planning from Stanley (1969), to Mauldon and Redfern (1969), because she thought the latter provided her with a better background for what she was trying to do. Examples of lesson format presented by Mauldon and Redfern (1969:86-106) were comprised of a statement of a task or problem and a series of questions, a problem-solving and experimentation approach (1969:75). Applying the category system to these tasks, they appeared to fit primarily into category 2, Guided Discovery, in the Movement Task dimension of the category system. On the other hand, Stanley (1969:173-205) included a wider range of degrees of freedom of decision-making for students.

In Lesson 3, for both the plan and the actual lesson, categories 1, Explicit Response, and 2, Guided Discovery, in the Movement Task dimension were still stressed, but had decreased from the proportion in Lesson 2. Both the planned and actual proportion of tasks in the Specific Limitation categories, 4a and 4b, increased. There was also the possibility of some tasks in the lesson in category 5a, Non-Specific Limitation: implied variety, although use of the average tally was an inconclusive figure due to interjudge disagreement. Most of the verbal guidance behaviors continued to be in categories 1 and 2, Explicit Response and Guided Discovery. The evaluation of Lesson 3, found in Appendix D, indicated that Teacher A was pleased with the results of the continuation of the more structured format of this lesson, as used in Lesson 2.

The trend toward more freedom of decision-making granted the student, which began to emerge in Lesson 3, continued in Lesson 4. Both the lesson plan and the actual lesson showed no use of category 1, Explicit Response, in the Movement Task dimension. The proportionate use of category 2, Guided Discovery, also decreased, while use of categories 4a, Specific Limitation: implied variety, and 5a, Non-Specific Limitation: implied variety, continued to rise. Categories 4b, Specific Limitation: continuous variety, and 6, Free Exploration, also appeared. This was the first incidence of the use of the complete freedom

extreme of the continuum of freedom of choice given the learner in the statement of the task. The use of category 3, Selected Response, in the lesson plan, was not reflected in the actual lesson.

In the lesson plan for the Guidance dimension for Lesson 4, Teacher A's intention was to use category 4b, Specific Limitation: continuous variety. Use of this category was reflected in the guidance behavior in the actual lesson. However, it was only a small proportion of the total guidance behaviors. Use of category 2, Guided Discovery, remained high. Because of interjudge disagreement, nothing can be said about use of categories 1, Explicit Response; 4a, Specific Limitation: implied variety; 5a, Non-Specific Limitation: implied variety; and 6, Free Exploration.

The evaluation for Lesson 4, found in Appendix D, made little specific reference to Movement Task and Guidance behavior. There was, surprisingly, one reference to the teacher's having failed to allow students to ". . . discover the best ways for themselves," despite the fact that the task statements in the lesson did demonstrate more opportunity for students to think for themselves than did the previous two lessons. Perhaps she had shifted to more freedom in the statement of the original task, but directed the students toward specifically pre-planned movement

responses in the development of the task. This could account for the stress on category 2, Guided Discovery, in the Guidance dimension.

Lesson 5, both plan and actual lesson, showed a reversal of the increased freedom for decision-making given the students in the statements of the initial tasks in Lesson 4. Use of category 1, Explicit Response, in the Movement Task dimension appeared again; use of Guided Discovery, category 2, increased to its highest proportion in this entire series of lessons; and use of the Specific Limitation categories, 4a and 4b, decreased to the lowest level since Lesson 2. Category 3, Selected Response, appeared in the plan, but was not reflected in the actual lesson. Use of categories 1 and 2, Explicit Response and Guided Discovery, in the Guidance dimension, continued in the same heavy pattern of stress as for previous actual lessons.

There was no indication in the evaluation of Lesson 5 as to the reasons why this lesson had demonstrated such a marked shift back toward use of Explicit Response and Guided Discovery, categories 1 and 2, in the presentation of the movement tasks. However, examination of the verbatim original Lesson Plan 5, in Appendix C, indicated that the subject of this lesson had been shooting, which is a well-defined skill. Because of its central importance to the game of basketball, it may be that this teacher, who

had indicated a need for competition and more structure for her teaching, might well have found it necessary to be more direct in her instruction of this skill. She did not, however, according to the plan, emphasize specific styles of shooting. Rather, the principles which must be considered in any kind of successful shooting were the focus of her problem-solving tasks. The failure to use category 3, Selected Response, in the lesson was explained by the mention in the evaluation (see Appendix D) that she had decided not to stress consistent success with one particular shot.

In the final lesson, the plan indicated that Teacher A intended to continue with a high proportion of the movement tasks in category 2, Guided Discovery. Categories 4a, Specific Limitation: implied variety, and 1, Explicit Response, were also used in the plan. In the actual lesson, however, category 4a, Specific Limitation: implied variety, was most frequently used. The proportionate use of categories 1 and 2, Explicit Response and Guided Discovery, had decreased considerably from Lesson 5.

The lesson plan for the Guidance dimension for Lesson 6 continued in the same pattern as the previous lessons. In the actual lesson, although it is apparent that behaviors in category 2, Guided Discovery, remained high, no conclusions can be made about the extent of use of category 1, Explicit Response, due to interjudge

disagreement. The evaluation for Lesson 6, found in Appendix D, did not make any useful reference to Movement Task or Guidance teaching behaviors.

In summary, it appeared, from studying the data on Table 3 (see page 78) for each lesson plan and actual lesson separately, that generally the lesson plans were accurately reflected in the types of tasks and guidance behaviors which Teacher A used in her lessons. In other words, there was general consistency between what she planned and what she did, with respect to behaviors in the Movement Task and Guidance dimensions. For the most part, however, the written evaluations did not function adequately as critical commentary on the lessons, nor did they provide specific observations which might serve as a basis for planning future lessons. The most notable exceptions to this were the evaluations of Lessons 1 and 2, in which she indicated that she needed more structure and was changing her primary resource from Stanley (1969) to Mauldon and Redfern (1969). This change of source was evident in both the subsequent plans and actual lessons in the types of tasks used.

Examination across the lesson plans and lessons, for the Movement Task dimension, revealed no distinct enduring trends in the type of initial tasks presented. The coded plan for Lesson 1 indicated that Teacher A had intended to focus her tasks on the type wherein the students would be permitted freedom of decision-making with defined

limits, as reflected by the codings in the Specific Limitation categories, 4a and 4b, and in the Non-Specific Limitation: implied variety category, 5a. Her discomfort and frustration with what she felt to be a lack of structure in this situation, as reported in the written evaluation of Lesson 1 (see Appendix D) led her to concentrate her tasks in Lesson 2 on categories 1, Explicit Response, and 2, Guided Discovery. This allowed less freedom to the learners to decide how they would move.

In lessons 3 and 4, there appeared to be a trend toward allowing the students more freedom for decision-making, as the proportionate use of categories 4a and 4b, the Specific Limitation categories, increased in both the lesson plan and the actual lesson. In addition, categories 5a, Non-Specific Limitation: implied variety, and 6, Free Exploration, appeared in Lesson 4. However, in Lesson 5 this trend was reversed in both the plan and actual lesson, with a marked increase in the use of category 2, Guided Discovery, a decrease in the use of the Specific Limitation categories, 4a and 4b, and no mention of tasks in any other categories which allow students freedom for decision-making. Lesson 6 again showed an increase in the proportion of tasks in category 4a, Specific Limitation: implied variety, but over-all the tasks did not permit the degree of freedom as they had in Lesson 4.

Movement Task category 3, Selected Response, was

never used in an actual lesson, although there had been some intended tasks in this category in Lesson Plans 4 and 5. Teacher A never used category 5b, Non-Specific Limitation: continuous variety, in either the plans or the actual lessons. In addition, she seldom used categories 5a, Non-Specific Limitation: implied variety, or 6, Free Exploration.

Thus, it appeared from examining the data on Table 3, that despite the fact that the emphasis on a specific type of task varied from lesson to lesson, Teacher A's teaching behaviors were generally focused on tasks which, by definitions of the categories, either elicited specific responses or allowed the students freedom within limitations.

In the Guidance dimension, it was apparent in all six lesson plans, and all five coded lessons, as seen from the data on Table 3, that Teacher A relied most heavily upon verbal Guidance behaviors in categories 1 and 2, Explicit Response and Guided Discovery, for the development of the movement tasks. The heavy use of category 2, Guided Discovery, was logical, given the fact that she used Mauldon and Redfern's (1969) lesson formats, which, as discussed previously, fit primarily into this Guided Discovery category. Thus, even as the Movement Tasks varied in the degree of freedom given the students to decide how they would move, the Guidance dimension behaviors used in the development

of the tasks, continued to focus on the student's "finding" a pre-determined solution.

Finally, in the Guidance dimension, categories G and U were both coded extensively by both judges in all lessons. It is not possible to draw any conclusions about these categories because, by their definition, they included an undifferentiated variety of verbal behaviors not directly related to the development of the movement task. For future research, differentiation of these categories might provide a more comprehensive view of guidance behaviors.

Content dimension. The data for the description and analysis of the lesson plans and actual lessons for Teacher A in the Content dimension are found on Table 4. The table shows the total number of codings for each category from the investigator's codings of the lesson plans, together with the average frequency of two judges' codings of each Content category for each lesson. The average frequency of codings of the actual lessons for Lesson 1 are missing, as this tape was destroyed before it could be coded.

The plan for Lesson 1 indicated that the teacher's intention was to make extensive use of categories ma and ba, manipulative and body action. Other categories mentioned were: t, time; f, force; gs, general space; le, level; di, direction; bp, body parts; and p, relationship

Table 4. Frequency of Use of Categories from Coded Lesson Plans and Average Frequency of Use of Categories from Coded Actual Lessons in the Content Dimension for Teacher A.

Categories	Lesson 1		Lesson 2		Lesson 3		Lesson 4		Lesson 5		Lesson 6	
	lp	l*	lp	l	lp	l	lp	l	lp	l	lp	l
t time	2	-	0	10.5	5	5	3	0	0	6.5	0	2.5
f force	5	-	3	5.5	2	0	0	1	5	0	2	0
s space	0	-	0	0	0	0	0	0	0	0	0	0
fl flow	0	-	0	0	0	0	0	0	0	0	0	0
ps personal space	0	-	0	0	0	0	0	0	0	0	0	0
gs general space	3	-	0	.5	0	3	1	0	0	0	0	0
le level	3	-	3	0	4	0	1	3.5	0	9.5	0	3.5†
pa pathway	0	-	2	0	0	0	0	0	0	0	0	0
di direction	2	-	0	5	3	3.5†	3	1	0	9.5	0	.5
ba body action	16	-	4	28.5	9	20.5	4	17	1	23	0	16†
bs body shape	0	-	0	0	0	0	0	0	0	2.5†	0	0
bp body parts	6	-	21	7	12	12.5	2	3	14	10	8	2.5
m manipulative	23	-	33	51	35	37	16	38	35	44	17	23
nm non-manipulative	0	-	2	21.5	0	2.5†	6	16	17	15	8	13.5
p relationship with people	7	-	10	17	23	28.5†	10	17	6	10.5	1	5†

Key: lp = lesson plan
l = lesson

*Tape destroyed; therefore, there were no codings done.

†Ratio of tallies between two judges was greater than 2:1, or there was a difference of more than 2 for totals between 0 and 4.

with people. These seemed logical content aspects to be included in objectives designed to meet the goal, as stated in the verbatim lesson plan in Appendix C, of having the student ". . . become aware of the body movements involved in passing a basketball."

Lesson Plan 2 also included heavy stress on the use of category m, manipulative. Category bp, body parts, was used frequently. Other categories mentioned were: f, force; le, level; pa, pathway; ba, body action; nm, non-manipulative; and p, relationship with people.

In the actual lesson, m, manipulative, was the most frequently used category, followed by ba, body action, and nm, non-manipulative. Two categories, le, level, and pa, pathway, mentioned in the lesson plan, were not used in the lesson. There was no indication in the evaluation of Lesson 2, found in Appendix D as to the reason this ommission had occurred. However, category di, direction, not used in the plan, was used by the judges in coding the actual lesson. Therefore, it may be that Teacher A had used reference to changes of direction to affect pathway. In addition, category t, time, was used in the actual lesson, despite the fact that it was not mentioned in the plan. There also was evidence of use of category gs, general space, but to a very small extent. Again, the evaluation provided no clues as to the reason for this difference.

Use of other Content categories in the actual lesson were as had been indicated in the plan.

Lesson Plan 3 showed a similar pattern of emphasis upon use of particular content categories as had the plan for Lesson 2: high concentration in categories m, manipulagive, and bp, body parts. In addition, category p, relationship with people, was also stressed in this plan. Other categories used were: t, time; f, force; le, level; di, direction; and ba, body action.

In the actual Lesson 3, use of categories p, relationship with people, and di, direction, was inconclusive, due to lack of interjudge agreement. Categories m, manipulative; bp, body parts; and ba, body action, were frequently used, thus accurately reflecting the lesson plan. As in the previous lesson, there was one category, in this case gs, general space, which was used in the lesson, but had not been used in the plan. The use of nm, non-manipulative, was questionable, due to lack of interjudge agreement.

There was no indication in the evaluation of Lesson 3, as seen in Appendix D, as to why category gs, general space, was added in the actual lesson. The evaluation also provided no reason that categories f, force, and le, level, used in the lesson plan, were not included in the actual lesson.

For Lesson 4, the Content categories m,

manipulative, and p, relationship with people, were most frequently used in the plan. Other categories mentioned were: t, time; gs, general space; le, level; di, direction; ba, body action; bp, body parts; and nm, non-manipulative. In the actual lesson, category m, manipulative, was most frequently used. Categories nm, non-manipulative; p, relationship with people; and ba, body action, were also frequently used. Categories t, time, and gs, general space, mentioned in the plan, were not used in the actual lesson. Interestingly, the evaluation, found in Appendix D, mentioned changes of speed in passing and dribbling as having been stressed, which would have appeared as use of category t, time, in the actual lesson. There is no indication from the evaluation concerning the ommission of category gs, general space. Category f, force, not used in the lesson plan, was mentioned in the lesson. Other categories used in the lesson plan were reflected in the actual lesson.

The plan for Lesson 5 mentioned very few Content categories. Of those mentioned, the following were most often used in the actual lesson: m, manipulative; nm, non-manipulative; bp, body parts; p, relationship with people; and ba, body action. In addition, several categories not mentioned in the plan were used in the actual lesson. These included t, time; le, level; and di,

direction. The category f, force, which had been mentioned in the lesson plan, was not used in the actual lesson.

Examination of the original written lesson plan, found in Appendix C, and the evaluation of Lesson 4, found in Appendix D, indicated why the categories m, manipulative; nm, non-manipulative; and bp, body parts, had been so heavily stressed. The emphasis for this lesson was shooting, a skill involving use of hands (bp) to manipulate the ball (m) in relationship to the basket (nm).

The evaluation also commented on the students' improvement in changing directions, which substantiates the use of category di, direction, in the actual lesson. There was no other indication in the evaluation about why there were discrepancies between the lesson plan and the actual lesson in the Content dimension.

The plan for Lesson 6 used the fewest Content categories of all the lessons in this series for Teacher A. Of the categories used in the plan, m, manipulative; nm, non-manipulative; bp, body parts; and p, relationship with people, were all used in the actual lesson. Examination of the original lesson plan in Appendix C, indicated that this lesson was primarily a review of shooting, and a game, which probably explains the sparse use of Content categories in the plan, as well as the choice of categories. Category f, force, used in the plan, was not evident in the actual lesson. Other categories not used in the plan, but

appearing in the actual lesson included: t, time; ba, body action; and di, direction. Use of category le, level, and p, relationship with people, was inconclusive due to inter-judge disagreement.

In summary, in the Content dimension, the actual lessons usually reflected the use of Content categories which had been mentioned in the plans. As can be seen from studying Table 4 (see page 89), a consistent exception to this was the use of category f, force. This category appeared in all the plans except the plan for Lesson 4. In the actual lessons, it was not used in Lessons 3, 5, and 6. The evaluations of the lessons did not give any indication as to the reason for this discrepancy.

There were other categories, too, which appeared in the lessons, but were not used in the plans, or which did not appear in the lessons, but were in the plans. These, however, were not consistent inconsistencies, as with the force category f. One possible explanation of these discrepancies is that they were parts of guidance behaviors, which, because they may be situation-dependent, could not have been planned accurately ahead of the actual lesson.

Throughout the lessons, evidence of category m, manipulative, was very frequent. This was logical, since the lessons dealt with the manipulative skills of basketball.

Use of category p, relationship with people, was especially frequent in both the plans and actual lessons for Lessons 2, 3, and 4, all of which dealt with passing and guarding. Use of this category was consistent throughout the series of lessons, a logical occurrence since basketball included co-operative and competitive relationships with people.

The category nm, non-manipulative, was also consistently used. This reflected skills dealing with bouncing the ball against the floor, wall, backboard, or rim, all of which are common activities in basketball.

The category bp, body parts, was also used in all lesson plans and lessons. This, again, was logical, as basketball makes use of hands in manipulating the ball, and a variety of body parts in faking and dodging.

Category ba, body action, appeared consistently in the actual lessons, although, as noted on Table 4, its use was inconclusive in Lesson 6, due to interjudge disagreement. This category, too, refers to actions, moving the body, which are commonly associated with the game of basketball.

Other categories which appeared, but not consistently, in both the lesson plans and lessons were t, time; le, level; and di, direction. Other categories used even less frequently were gs, general space, and bs, body shape.

Finally, categories s, space; fl, flow; ps,

personal space; and pa, pathway, were not used in any of the actual lessons. With the exception of pa, pathway, these categories also never appeared in any lesson plans, either. The one lesson in which the plan referred to pathway showed evidence of use of category di, direction, in the actual lesson, which may have been Teacher B's approach to affecting pathway.

Thus, the general pattern which emerged in the use of the Content dimension categories in both the lesson plans and the actual lessons was a concentrated use of those content areas commonly associated with what Hoffman (1971:52-53) described as a traditional approach, in the teaching of basketball. With such specifically defined skills as dribbling, footwork, specific passing styles, specific shooting styles, etc., in mind as the desired outcomes, it would be logical to emphasize categories m, manipulative; p, relationship with people; nm, non-manipulative; bp, body parts; ba, body action; le, level; t, time; and f, force.

Content categories which pertain to the content aspects of the movement education approach which are not usually linked to traditionally taught skills and game of basketball, were used seldom, if at all. Among these categories were force, f; space, s; flow, fl; general space, gs; personal space, ps; and body shape, bs. It may have been that Teacher A was unable to approach basketball using

these content aspects of movement; or it may be that this content breakdown is inappropriate for teaching basketball.

Teacher B

The data for Teacher B will be presented and analyzed in two parts. The first part will deal with examination of the lesson plans, actual lessons, and where useful, the written evaluations, in the Movement Task and Guidance dimensions. These two dimensions were examined together because they both are concerned with the amount of freedom given the learner about how he/she is to move in response to the presentation and development of the task. The second part will deal with the examination of the lesson plan, actual lesson, and where useful, the written evaluation in the Content dimension. This dimension is concerned with the content elements which have been identified with the movement education approach to physical education.

Movement Task and Guidance dimensions. The data used for description and analysis of the lesson plans and actual lessons in the Movement Task and Guidance dimensions are found on Table 5. The table shows the total number of codings for each category from the investigator's coding of the lesson plans, together with the average frequency of codings from two judges' codings in each category for each lesson. The data from the actual lesson for Lesson 1 are missing, as this tape was accidentally destroyed before

Table 5. Frequency of Use of Categories from Coded Lesson Plans and Average Frequency of Use of Categories from Coded Actual Lessons in the Movement Task and Guidance Dimensions for Teacher B.

Categories	Lesson 1				Lesson 2				Lesson 3				Lesson 4				Lesson 5				Lesson 6			
	MT		G		MT		G		MT		G		MT		G		MT		G		MT		G	
	lp	1*	lp	1*	lp	1	lp	1	lp	1	lp	1	lp	1	lp	1	lp	1	lp	1	lp	1	lp	1
1 Explicit Response	0		0	-	0	1	0	23	0	3	0	25	0	4	0	40.5	1	.5	0	33.5	5	3.5	0	14
2 Guided Discovery	1		0	-	0	8.5	2	21†	1	10	1	48	2	19.5	0	27	0	11	0	33.5	1	10.5	0	32
3 Selected Response	0		0	-	0	0	0	.5	0	0	0	1	0	0	0	0	0	.5	0	.5	0	0	0	0
4a Specific Limitation: implied variety	5		0	-	3	5.5†	0	4†	1	3	0	1.5†	8	8†	0	6†	9	4.5	0	4.5†	7	3.5	0	0
4b Specific Limitation: continuous variety	5		0	-	1	8†	0	2	1	2†	0	4	0	3.5†	0	.5	1	1.5	0	.5	0	0	0	0
5a Non-Specific Limitation: implied variety	1		0	-	2	0	0	0	2	.5	0	0	0	2.5†	0	.5	1	0	0	2.5	0	0	0	0
5b Non-Specific Limitation: continuous variety	0		0	-	0	0	0	0	0	1	0	1.5†	0	.5	0	.5	0	0	0	0	0	0	0	0
6 Free Exploration	1		0	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G Guidance‡	NA	NA	0	-	NA	NA	0	36	NA	NA	0	45.5	NA	NA	0	51	NA	NA	0	40	NA	NA	0	33.
U Unrelated‡	NA	NA	0	-	NA	NA	0	21	NA	NA	0	24.5	NA	NA	0	44	NA	NA	0	14.5†	NA	NA	0	14†

Key: MT = Movement Task
G = Guidance
lp = lesson plan
1 = actual lesson
NA = not applicable

* Tape destroyed; therefore, the actual lesson was not coded.

† Ratio of tallies between two judges was greater than 2:1; or there was a difference of more than 2 for totals between 0 and 4.

‡ Categories applicable only to Guidance dimension.

the judges could code it. In addition, Teacher B's lesson plans made few references to intended Guidance behaviors; therefore, discussion will include very little mention of plans for the Guidance dimension.

It can be seen from studying Table 5, that in the plan for Lesson 1, the teacher's intention was to present many tasks in categories 4a and 4b, the Specific Limitation categories. Other categories used in the plan were 2, Guided Discovery; 5a, Non-Specific Limitation: implied variety; and 6, Free Exploration.

Since the tape of Lesson 1 was destroyed, there were no data available for analysis. The indication from her written evaluation, found in Appendix D, though vague, indicated that Teacher B felt that both she and her students were unsure of what they were doing. She also made reference to ". . . telling them more than I was letting them find their own answers." Thus, it appeared that, at least in her own opinion, Teacher B did not follow through on her intentions to use movement tasks in the categories toward the end of the continuum which permits the students great freedom in deciding how they will respond to the task.

The plan for Lesson 2 also included movement tasks using categories 4a and 4b, the Specific Limitation categories; 5a, Non-Specific Limitation: implied variety; and 6, Free Exploration. Some reference to intended guidance behavior was in category 2, Guided Discovery.

The coding of the actual Lesson 2 showed that a large number of tasks were in category 2, Guided Discovery, which had not been included in the plan in the Movement Task dimension. Category 1, Explicit Response, was also in evidence. Categories 5a, Non-Specific Limitation: implied variety, and 6, Free Exploration, were not used. Because of interjudge disagreement, no conclusions can be drawn about the extent of use of categories 4a and 4b, the Specific Limitation categories.

In the Guidance dimension for Lesson 2, the majority of the task development guidance behaviors were in category 1, Explicit Response. Because of disagreement between the judges, again no conclusions could be made about the extent of use of category 2, Guided Discovery, or category 4a, Specific Limitation: implied variety. There was some evidence that category 4b, Specific Limitation: continuous variety, had been used. However, by comparison with the proportion of behaviors in category 1, Explicit Response, the frequency was not of very significant quantity. It appeared, in the examination of the data for both the Movement Task and Guidance dimensions for the actual Lesson 2, that the majority of verbal teaching behaviors were in categories 1 and 2, Explicit Response and Guided Discovery. Thus, Teacher B did not permit the students the degree of freedom which her plan indicated she had intended.

There was no distinct evidence in the evaluation

of Lesson 2, found in Appendix D, that Teacher B was aware of the discrepancy between her intent, as expressed in the plan, to allow the students freedom to decide how they should move in response to the movement task, and the fact that in the actual lesson, the tasks did not reflect this intent. The evaluation did, however, give indication that she had in mind specific outcomes: "They began to see that they have to change hands when they dribble and move around an opponent," and ". . . they were trying to give the right answers and I probably was looking for one answer." These outcomes could best be met by limiting the students' freedom to try a variety of responses, or by directing their responses in specific directions during the development of the task.

The plan for Lesson 3 included only five movement tasks. Though the intended use of category 2, Guided Discovery, was included, the majority of planned tasks in the Movement Task dimension were still in the center of the continuum of degrees of freedom granted students: categories 4a and 4b, the Specific Limitation categories and 5a, Non-Specific Limitation: implied variety. Category 6, Free Exploration, which had appeared in the plan for Lesson 2, was not used. The one reference in the plan to guidance behavior was in category 2, Guided Discovery.

Again, the actual Lesson 3 did not accurately reflect the intentions indicated by the lesson plan. The

majority of the actual tasks were in category 2, Guided Discovery. Although category 4a, Specific Limitation: implied variety, was used, the use was not proportionately as high as the plan had indicated; use of 4b, Specific Limitation: continuous variety, was inconclusive, due to lack of interjudge agreement. There was evidence of some use of categories 5a and 5b, the Non-Specific Limitation categories, but again, its use was infrequent. Finally, category 1, Explicit Response, which had not been used in the plan, appeared in the data for the actual lesson.

In the Guidance dimension, categories 1 and 2, Explicit Response and Guided Discovery, were used most extensively. Use of categories 4a, Specific Limitation: implied variety, and 5a, Non-Specific Limitation: implied variety, was questionable, due to interjudge disagreement. There were a few codings in categories 3, Selected Response, and 4b, Specific Limitation: continuous variety.

The plan for Lesson 4 had tasks in only two categories, the majority in 4a, Specific Limitation: implied variety, and some in 2, Guided Discovery. Again, the plan was not an accurate indication of the types of tasks which were used in the actual lesson. Category 2, Guided Discovery, was heavily stressed in the Movement Task dimension. Extent of use of categories 4a and 4b, the Specific Limitation categories, and 5a, Non-Specific

Limitation: implied variety, was inconclusive because of lack of interjudge agreement. There was little evidence of use of category 1, Explicit Response, and even less for 5a, Non-Specific Limitation: implied variety.

The data for the Guidance dimension for the actual Lesson 4 showed that category 1, Explicit Response, was most heavily stressed, and category 2, Guided Discovery, was also used frequently. There are evidences of use of categories 4b, Specific Limitation: continuous variety, and 5a and 5b, the Non-Specific Limitation categories, but the frequencies are very low compared to use of categories 1 and 2, Explicit Response and Guided Discovery. Extent of use of category 4a, Specific Limitation: implied variety, is inconclusive due to lack of interjudge agreement.

The evaluation of Lesson 4, found in Appendix D, referred frequently to the students' "thinking" about what they were doing. It is unclear how this related to the lesson, except perhaps in terms of their having "discovered" principles of movement which they should think about applying in subsequent situations. This would imply having either initial tasks, or guidance, in category 2, Guided Discovery, if tasks were designed to help students find the best way. This might also account for the high proportion of guidance behaviors in category 1, Explicit Response, if the teacher had in mind one right way to respond to a movement situation. There was no evidence in the evaluation

as to why the actual lesson had not reflected the freedom for variety of student response as demonstrated by the plan.

For Lesson 5, the plan included three-quarters of the tasks in category 4a, Specific Limitation: implied variety. The remaining planned tasks were in categories 4b, Specific Limitation: continuous variety; 5a, Non-Specific Limitation: implied variety; and 1, Explicit Response. Thus, the intent appeared, again, to be to present tasks which would allow the students freedom for decision-making, within some limitations. The actual lesson, however, followed the same pattern as was evident in previous lessons: the majority of tasks in category 2, Guided Discovery, with a few in the Specific Limitation categories, 4a and 4b. There was some evidence of use of categories 1 and 3, Explicit Response, and Selected Response, also.

In the Guidance dimension for Lesson 5, again categories 1 and 2, Explicit Response and Guided Discovery, were used most frequently. There were a few guidance behaviors in evidence in categories 3, Selected Response; 4b, Specific Limitation: continuous variety; and 5a, Non-Specific Limitation: implied variety. Extent of use of category 4a, Specific Limitation: implied variety, was questionable because of lack of agreement between the judges.

The plan for Lesson 6, as compared with previous

plans, appeared to shift the emphasis in the Movement Task dimension toward allowing the students less freedom to decide how they would move. This observation was based on the increased use of category 1, Explicit Response. This, however, may be misleading, as this particular lesson plan was sketchy, and its intent difficult to interpret. Therefore, this shift in emphasis may be due to misinterpretation by the investigator in the coding of the lesson plan. The plan also included frequent use of category 4a, Specific Limitation: implied variety, and mention of category 2, Guided Discovery.

In the actual lesson, category 2, Guided Discovery, was, as in almost all the previous lessons for Teacher B, used most frequently in both the Movement Task and Guidance dimensions. The plan had indicated a possible increased intention to use category 1, Explicit Response; and in this actual lesson, use of the category reached its highest peak of proportionate use in the Movement Task dimension in this series of lessons. Category 4a, Specific Limitation: implied variety, was used in about the same proportion as category 1, Explicit Response, in the Movement Task dimension. This represented a slight decrease in proportion from the previous lesson. Category 1, Explicit Response, was used in the Guidance dimension, but not to the extent it had been in the previous lesson.

In summary, it appeared, in examining the data on

Table 5 (see page 98) to look at each lesson plan and actual lesson separately, that generally Teacher B's plans indicated an intent to present movement tasks which would have allowed the students more freedom for decision-making, than the tasks in the lessons actually did permit. For the most part, the evaluations of each lesson, found in Appendix D, were too vague to be of practical value as critical commentary on the lessons.

Examination across the lesson plans and lessons for the Movement Task dimension revealed that the majority of tasks in the lesson plans were in category 4a, Specific Limitation: implied variety. In most of the plans, there were some tasks in category 4b, Specific Limitation: continuous variety, and 5a, Non-Specific Limitation: implied variety. Category 6, Free Exploration, was used in the plans for only Lessons 1 and 2. Category 1, Explicit Response, was not included in the plans until Lessons 5 and 6. Thus, it seemed that the planned degree of freedom granted the students was gradually diminished from Lesson 2 to Lesson 6. Category 2, Guided Discovery, was used only infrequently in the plans for Lessons 1, 3, 4, and 6. Categories 3, Selected Response, and 5b, Non-Specific Limitation: continuous variety, were never used in the plans.

Examination across the actual lessons in the Movement Task dimension indicated that category 2, Guided Discovery,

was consistently the most frequently used. In fact, at least half the original tasks in all but Lesson 2 were in this category.

The data for the extent of use of categories 4a and 4b, the Specific Response categories, in the Movement Task dimension, was, in part, inconclusive. Since this lack of agreement between the two judges was a source of concern, the raw data for frequencies of codings by each judge for these two categories were re-examined. It appeared that either the judges were having trouble, because of the category system, in distinguishing between 4a and 4b, or Teacher B was stating her movement tasks so that the choice of implied or continuous variety was nebulous. Therefore, the frequency of each judge's codings for these two categories was tentatively combined. The ratio of the judges' frequency of use of the combined categories was examined to determine whether there was any positive effect from the combining. The result was that, with the exception of Lesson 3, the ratios were less than two to one, which brought them into range of acceptability for discussion in this study. Thus, it seemed possible to state more conclusively that Teacher B did use the Specific Limitation categories, but not to the extent her plans had indicated. Moreover, use of this type of movement task decreased in each lesson from Lesson 2 to Lesson 6.

Category 1, Explicit Response, was used in every

lesson in the Movement Task dimension, with its heaviest emphasis in Lesson 6. Movement Task categories which were used seldom or never in the actual lessons were 3, Guided Discovery; 5a and 5b, the Non-Specific Limitation categories; and 6, Free Exploration.

Thus, though the plans indicated an intended emphasis upon tasks which allowed the students freedom to decide upon their responses to the tasks, in the actual lessons, the tasks were designed to help the students to arrive at one acceptable response, which had been predetermined by the teacher. The behaviors in the Guidance dimension supported this observation, as they were almost all in categories 1 and 2, Explicit Response and Guided Discovery.

Finally, in the Guidance dimension, categories G and U, Guidance and Unrelated, were both coded frequently by both judges in all lessons. However, it is not possible to draw conclusions about the nature of the teaching behavior because, by their definitions, these categories include an undifferentiated variety of verbal behaviors not directly related to the development of the movement tasks. For future research, differentiation of these categories might provide a more comprehensive view of guidance behaviors.

Content dimension. The data for the description and analysis of the lesson plans and actual lessons for

Teacher B in the Content dimension are found on Table 6. The table shows the total number of codings for each category from the investigator's coding of the lesson plan, together with the average frequency of two judges' codings of each Content category for each lesson. The average frequency of codings of the actual Lesson 1 are missing, as this tape was destroyed before it could be coded.

The plan for Lesson 1 indicated an intention to make extensive use of category m, manipulative, as well as categories p, relationship with people, and ba, body action. Other Content categories used in the plan were t, time; di, direction; and le, level. As is evident in the written verbatim lesson plan, found in Appendix C, this lesson was to deal with passing and catching, and moving with the ball, all of which are reflected by the Content categories used in the plan.

Since the tape for Lesson 1 was destroyed, there were no data to analyze for the actual lesson. The evaluation for Lesson 1, found in Appendix D, indicated that the lesson did deal with the students' moving themselves and the ball, as the plan had shown.

Lesson Plan 2 indicated an intention to stress content concerned with relationships between people, p, and body actions, ba. Categories m, manipulative; t, time; and di, direction, were also used.

The coding of the actual Lesson 2 showed an

Table 6. Frequency of Use of Categories from Coded Lesson Plans and Average Frequency of Use of Categories from Coded Actual Lessons in the Content Dimension for Teacher B.

Categories		Lesson 1		Lesson 2		Lesson 3		Lesson 4		Lesson 5		Lesson 6	
		lp	l*	lp	l	lp	l	lp	l	lp	l	lp	l
t	time	4	-	4	10.5	0	5	1	23	3	18.5	1	5†
f	force	0	-	0	3.5†	0	5.5	0	10	0	.5	0	14
s	space	0	-	0	0	0	0	0	4	0	0	0	0
fl	flow	0	-	0	0	0	0	0	0	0	0	0	0
ps	personal space	0	-	0	0	0	0	0	0	0	0	0	0
gs	general space	0	-	0	1.5	0	0	0	1.5†	0	0	0	0
le	level	1	-	0	0	3	14.5	0	19.5	0	2†	0	0
pa	pathway	0	-	0	1	0	1.5	0	5	0	0	0	0
di	direction	2	-	4	16	0	1.5†	2	22	4	14	1	6.5†
ba	body action	6	-	7	15.5	2	10.5†	6	25†	5	15	10	10
bs	body shape	0	-	0	0	0	0	0	2.5†	0	0	0	.5
bp	body parts	0	-	0	10.5	1	32	0	29.5	1	18	0	33.5
m	manipulative	12	-	5	61	6	99.5	10	85.5	8	73	10	58
nm	non-manipulative	0	-	0	45.5	4	5.5	7	7.5	5	38	8	9.5
p	relationship with people	7	-	8	28.5	2	40	2	50	3	20.5	2	8.5

Key: lp = lesson plan
l = lesson

*Tape destroyed; therefore, there were no codings done.

†Ratio of tallies between two judges was greater than 2:1, or there was a difference of more than 2 for totals between 0 and 4.

apparent stress on categories m, manipulative; p, relationship with people; ba, body action; di, direction; and t, time. There was also an emphasis on categories nm, non-manipulative, and bp, body parts, neither of which were included in the lesson plan. Neither the written verbatim plan, found in Appendix C, nor the written evaluation, found in Appendix D, gave any indication as to why the actual lesson stressed the non-manipulative relationship. The evaluation did, however, make reference to changing hands while dribbling, which indicated that the emphasis on body parts, bp, may have emerged in the development of the movement tasks.

The few recorded uses of the categories pa, pathway, and gs, general space, in Lesson 2, also had not been indicated in the lesson plan. Finally, use of category f, force, was questionable, due to lack of interjudge agreement.

The plan for Lesson 3 indicated a continued emphasis on category m, manipulative. Also used were categories nm, non-manipulative; le, level; ba, body action; p, relationship with people; and bp, body parts. In the actual lesson, those categories used in the plan were most emphasized. The extent to which category ba, body action, was used, was questionable, due to disagreement between the judges. The infrequent use of category nm, non-manipulative, was surprising, as the verbatim plan, found in Appendix C,

indicated that the lesson was to deal with shooting. Shooting is both a manipulative skill because it deals with controlling the ball, and a non-manipulative skill because of the relationship with the basket. Thus, it appeared that there should have been frequent use of the non-manipulative category in the actual lesson, which was not the case. There was no indication in the written evaluation, found in Appendix D, that the focus of the actual lesson had deviated substantially from the original plan.

Lesson 3, as Lesson 2, showed use of several more categories than the plan had included. Among these were time, t; force, f; and direction, di. Use of pa, pathway, not mentioned in the plan, was questionable, due to lack of agreement between the judges. There was no clue in the evaluation, found in Appendix D, as to why the extra content aspects had been used in the actual lesson.

Lesson Plan 4 stressed the same categories as had been emphasized in the plan for Lesson 3: m, manipulative; nm, non-manipulative; and ba, body action. This plan also mentioned categories di, direction; p, relationship with people; and t, time. In the actual lesson, there was evidence of use of all the categories included in the plan, although the extent to which ba, body action, was used is uncertain because of lack of agreement between the judges. In addition to those in the plan, the following categories were also used in the actual lesson: f, force; le, level;

pa, pathway; and bp, body parts. Use of categories s, space; gs, general space; and bs, body shape, was inconclusive, due to lack of agreement between the judges. Since the written evaluation of Lesson 4 did not provide any explanation for the use of more categories than were included in the plan, it seemed likely that they were parts of guidance behaviors which emerged in the development of the movement tasks.

For Lesson 5 there was less discrepancy in the use of Content categories between the plan and the actual lesson. Categories included in both the plan and the lesson were much the same as those used in the previous lesson: m, manipulative; ba, body action; nm, non-manipulative; di, direction; p, relationship with people; t, time; and bp, body parts. Category f, force, was evident in the actual lesson, but not used in the plans. Use of category le, level, also not in the plans, was inconclusive, as was the extent of use of ba, body action, due to interjudge disagreement.

In the plan for Lesson 6, the Content categories most often used were: m, manipulative; ba, body action; and nm, non-manipulative. Also included in the plan were p, relationship with people; di, direction; and t, time. All of these categories were reflected in the actual lesson, although the extent of use of di, direction, and t, time, was inconclusive due to interjudge disagreement. In

addition to those used in the plan, there was evidence of emphasis on category bp, body parts, as well as some use of f, force, and bs, body shape, in the actual lesson.

In summary, in the Content dimension, as seen in the data on Table 6 (see page 110), the categories which were used in Teacher B's plans were actually reflected in the actual lessons. In addition, many categories which were not included in the plans were used in the actual lessons. The use of more content aspects in the actual lessons could be the result of guidance behaviors which, because they may be situation-dependent, could not be included in the plans. Since guidance behaviors usually are based on student responses, they may reflect a necessity to review old content aspects, or add new ones to meet student needs.

The category used most frequently in all the actual lessons was m, manipulative. The use of this aspect of content was logical, as the series of lessons focused on the students' manipulation of a basketball.

Category p, relationship with people, was also used in all the lesson plans and actual lessons. Again, this content emphasis was to be expected, because the game of basketball frequently implies the ability to deal with other people in appropriate cooperative and competitive relationships. The lessons in which the use of this category was used most frequently, Lessons 2 and 3, emphasized

the players' ability to move successfully around an opponent, and to pass successfully to a teammate (see Appendix C).

Category ba, body action, was also used consistently in all the plans, and probably in all the actual lessons, as both judges coded it in every lesson. The extent, however, to which this aspect of content was used in the actual lessons was questionable, because of the considerable disagreement between the judges as to total tallies.

In the actual lessons there was consistent use of category bp, body parts, although this category appeared only twice in all the plans, once each in Lesson 3 and 5. This discrepancy between plans and lessons was probably due to the fact that the plans were very broad in their intent. Thus, a task such as ". . . moving with the ball around an opponent . . ." logically might be developed in the actual lesson in terms of changing hands (a body part) at the appropriate time when dribbling.

The category t, time, was used in all of the actual lessons, although the extent of use in Lesson 6 is inconclusive, and in all the plans except the plan for Lesson 3. Category di, direction, was also used in almost all of the lesson plans and actual lessons.

Other categories which were used in more of the actual lessons than the plans were: f, force; gs, general

space; bs, body shape; and pa, pathway, all of which never appeared in any lesson plans. In addition, le, level, which appeared in the plan and actual Lesson 3, was also used in Lesson 4; its use in Lesson 5 was questionable, due to lack of interjudge agreement. Use of category s, space, in Lesson 4, was also inconclusive.

Finally, the pattern which emerged in the use of Content dimension categories in both the lesson plans and the actual lessons was a concentration upon those categories which are commonly associated with what Hoffman (1971:52-53) described as a traditional approach, in the teaching of basketball. With such specifically defined skills as dribbling, footwork, specific passing styles, specific shooting styles, etc., in mind as the desired outcomes, it would be logical to use categories m, manipulative; p, relationship with people; nm, non-manipulative; bp, body parts; ba, body action; le, level; t, time; and f, force.

Those Content categories which pertain to the aspects of movement which are not usually linked to a traditional concept of the teaching and outcomes of beginning basketball, such as space, s; flow, fl; personal space, ps; general space, gs; and pathway, pa, were used seldom if at all. It may have been that Teacher B was unable to approach basketball using these content aspects of movement; or it may be that this content breakdown is inappropriate for teaching basketball.

Teacher A and Teacher B Compared

Despite the limitations on interpretation of some of the data, based on some situations where the extent of use of categories was inconclusive due to lack of agreement between the judges, the agreement within dimensions makes it possible to define some similarities, as well as some differences, in the behaviors of the two teachers. These observations can be made as a result of comparing the data on Tables 3 and 4 (see pages 78 and 89), for Teacher A, with that on Tables 5 and 6 (see pages 98 and 110), for Teacher B.

It can be seen from the data on Tables 3 and 5 that for both teachers, there were few, if any, codings of categories 3, Selected Response; 5a and 5b, the Non-Specific Limitation categories; or 6, Free Exploration, in either the Movement Task or Guidance dimensions in either the lesson plans or actual lessons. Both teachers' actual lessons showed evidence of many movement tasks, and almost all of the guidance behaviors, in categories 1 and 2, Explicit Response and Guided Discovery. Both of these categories are found at the end of the movement task continuum which provides little or no freedom for the student to decide how he/she will move in response to the movement task.

Teacher A, according to her written evaluations (see Appendix D) knew that she had to structure her lessons

more tightly in order to control the varieties of her students' responses. She had recognized both her own and her students' discomfort with the initially high degree of freedom given them by the statements of the movement tasks. Her lesson plans, therefore, indicated accurately the approximate proportions of the various categories which she actually used as she designed tasks which would give her the amount of structure she needed.

Teacher B, on the other hand, had a somewhat higher proportion of the movement tasks in her actual lessons in categories 1 and 2, Explicit Response and Guided Discovery, than Teacher A. Yet, Teacher B's lesson plans consistently indicated an intention to stress tasks in categories 4a and 4b, the Specific Limitation categories. Although Teacher B's written evaluations, found in Appendix D, stated that she was frustrated by her attempts to implement the movement education approach, she gave no indication of knowing that she actually had allowed the students less freedom to make decisions than her plans had shown.

The other categories used by both teachers were 4a and 4b, the Specific Limitation categories, in the Movement Task dimension. For Teacher A, the proportion of the use of these categories showed no consistent trend, as 4a, Specific Limitation: implied variety, was most stressed in Lessons 3 and 6. For Teacher B, the extent of use of these categories considered separately was inconclusive

because of lack of interjudge agreement. But when the categories were considered together as one category, the ratio of frequencies of coding between judges was less than two to one. When the data on Table 5 are considered in this way, it can be seen that the use of Specific Limitation tasks decreased steadily from Lesson 2 through Lesson 6. Since Teacher B seldom or never used the Non-Specific Limitation categories 5a and 5b, or category 6, Free Exploration, it appeared that the amount of freedom given the learner was gradually diminished during the series of lessons.

In the Guidance dimension, as can be seen in the data on Tables 3 and 5, both teachers had a very high proportion of their verbal behaviors in categories 1 and 2, Explicit Response and Guided Discovery. Both of these categories permit the student very little freedom to decide how he/she will move in response to the development of the movement task. Thus, despite the varying degrees of freedom given the student in the original movement tasks by each teacher, the development of the tasks seemed consistently to direct the learner toward a specific response.

The undifferentiated categories G, referring to statements indirectly related to movement tasks and their development, and U, referring to statements unrelated to the development of the movement tasks, were also frequently used in the actual lessons for both teachers. Because of

the general nature of the definitions of these categories, they indicated little of the teaching behavior except that there was considerable verbal behavior which was not directly related to the development of movement tasks.

In the Content dimension, as seen in the data on Tables 4 (see page 89) and 6 (see page 110), the categories most frequently used by both teachers were m, manipulative; p, relationship with people; nm, non-manipulative; bp, body parts; di, direction; and ba, body action, although the extent of use of this category for Teacher B was inconclusive because of lack of interjudge agreement. The categories which neither teacher ever used were fl, flow, and ps, personal space. Teacher A also did not use categories s, space, and pa, pathway.

For both teachers, the relationship between the plans and actual lessons in the use of content categories was relatively high. For Teacher B, the actual lessons nearly always reflected use of all the categories included in the plans, usually with the addition of a few categories in the actual lesson. For Teacher A there was some discrepancy in the Content categories used in the lesson plan and the actual lesson, although those categories stressed in the plan were used in the actual lessons.

The written evaluations of each lesson from both teachers, found in Appendix D, tended to be too vague to be of great value, either to their subsequent behavior,

or for analysis of their teaching behavior. The exceptions to this were Teacher A's evaluations for Lessons 1 and 2, in which her stated need for more structure was reflected in the types of tasks stressed in subsequent plans and actual lessons. Whether the teachers' vagueness in their evaluations was due to the fact that these teachers were unaccustomed to the process of evaluating their behavior, or whether they were too uncertain of the movement education approach to be able to evaluate, is unknown.

Though it is impossible from this study to make generalizations about the teaching behavior of all teachers beginning the implementation of the movement education approach to teaching physical education, hopefully the description and analysis of these two teachers' behaviors will be one step toward expanding objective descriptions of teachers beginning the implementation of the movement education approach. Without question, a complete picture cannot be gained until similar studies are done, using teachers of a variety of age-group students, and a variety of sports, dance, gymnastics, and aquatics activities. This more complete picture can then serve as a resource for those responsible for helping others to develop teaching skills in using the movement education approach.

SUMMARY

The purpose of this chapter was to describe and analyze the data for this study. The chapter was presented

in two major parts. The first part dealt with the results of the estimation of the reliability and objectivity of the two judges in their use of the category system. The second part was concerned with description and analysis of the behavior of two teachers as they implemented, for the first time in their teaching experience, the movement education approach, instructing college women in beginning basketball.

Reliability and Objectivity

Coefficients for estimation of reliability ranged from .51 to .98, based on comparison of two codings by each judge for each of three randomly chosen tapes. Coefficients for the judges' reliability in the Movement Task dimension were low for both judges: .51 and .66. Though low, they were high enough to indicate moderate correlation (Sheehan, 1971:144) and were, therefore, accepted as high enough to be of use in this study. Coefficients for the Content and Guidance dimensions ranged from .96 to .98, showing very high correlation (Sheehan, 1971:144).

Coefficients for estimation of the judges' objectivity in the use of each dimension of the system were found to range from .96 to .98, based on the codings of nine tapes by two judges. These were all considered high correlations (Sheehan, 1971:144); therefore, the judges were considered to be objective in their use of the system.

Analysis of Teacher Behavior

The identification and analysis of the behavior of the two teachers involved examination of three sets of data for each teacher: (1) the frequency of codings of categories for each lesson plan, as evidence of pre-instructional behavior; (2) the average frequency of codings from two judges' codings of actual verbal behavior during the lesson; and (3) the written evaluations following each lesson, as evidence of post-instructional behavior.

The identification and analysis of the teachers' behavior was presented in three sections. The first two parts dealt with reporting and analyzing the data for each teacher. The third part was a comparison of the behavior of the two teachers.

Teacher A. In the Movement Task and Guidance dimensions, as could be seen in the data on Table 3, there was consistently a high relationship between the categories used in the plans, and those in evidence in the actual lessons. Teacher A's actual lessons showed a large number of Movement Task, and almost all Guidance behaviors, in categories 1 and 2, Explicit Response and Guided Discovery. She also used categories 4a and 4b, the Specific Limitation categories, but not consistently. Her plans and actual lessons showed almost no reference to categories 5a and 5b, the Non-Specific Limitation categories; 3, Selected Response; or 6, Free Exploration. Therefore, it would

appear that she did not permit her students very much freedom to decide how they would move in response to the statement and development of the movement tasks. Her evaluations, found in Appendix D, substantiated this likelihood, in that she expressed a need for more structure after the first lesson.

In the Content dimension, as seen in the data on Table 4, there was some discrepancy from the plans to the actual lessons in terms of categories used. However, there was evidence in the actual lessons of those categories which had been emphasized in the plans. The categories most consistently and frequently used were: m, manipulative; p, relationship with people; ba, body action; bp, body parts; nm, non-manipulative; di, direction; and t, time. Categories used seldom or never were: s, space; fl, flow; ps, personal space; gs, general space; and pa, pathway.

Teacher B. In the Movement Task and Guidance dimensions, as could be seen in the data on Table 5, there was a consistent lack of relationship between the lesson plans and the actual lessons. The plans consistently emphasized use of categories 4a and 4b, the Specific Limitation categories, while the actual lessons had the majority of the tasks in 2, Guided Discovery. The written evaluations, found in Appendix D, gave no indication that Teacher B was aware of this discrepancy. The actual lessons showed evidence of frequent use of category 1, Explicit

Response, in the Movement Task dimension. Though there was evidence of use of categories 4a and 4b, the Specific Limitation categories, in the Movement Task dimension, the extent of use was inconclusive due to lack of interjudge agreement; it was, at any rate, less than the plans indicated. Categories 3, Selected Response; 5a and 5b, the Non-Specific Limitation categories; and 6, Free Exploration, were seldom if ever used in the plans or actual lessons. This fact, coupled with the fact that categories 1 and 2, Explicit Response and Guided Discovery, were used so frequently in the Guidance dimension, showed that Teacher B did not permit her students much freedom to decide how they would move in response to the presentation and development of the movement tasks.

In the Content dimension, as seen on the data on Table 6 (see page 110), there was consistent agreement between the categories used in the plans, and those in evidence in the actual lessons. For most actual lessons, there were more categories used, in addition to those in the plans. The Content categories used most frequently were: m, manipulative; p, relationship with people; nm, non-manipulative; bp, body parts; ba, body action; le, level; t, time; and f, force. Those categories used seldom, if ever, were: s, space; fl, flow; ps, personal space; gs, general space; and pa, pathway.

Teachers A and B compared. Generally speaking, both Teachers A and B structured their movement task and guidance behaviors in the actual lessons so that students were not permitted very much freedom to decide how they would move. This was shown by their emphasis in both dimensions on categories 1 and 2, Explicit Response and Guided Discovery. Though Teacher A had indicated in her plans that she needed more structure for her movement tasks, she actually had a lower proportion of tasks in 2, Guided Discovery, than Teacher B. Teacher B's plans had indicated frequent use of categories 4a and 4b, the Specific Limitation categories, but this emphasis was not reflected in the actual lessons. Neither teacher, for either plans or actual lessons, made much, if any, use of categories 3, Selected Response; 5a and 5b, the Non-Specific Limitation categories; or 6, Free Exploration.

In the Content dimension, the actual lessons for Teacher B showed evidence of use of more categories than those for Teacher A. Generally, however, the categories used most frequently, and those used seldom or never, were about the same. The categories most frequently used by each teacher were: m, manipulative; p, relationship with people; nm, non-manipulative; bp, body parts; di, direction; and ba, body action. The categories used seldom or never were fl, flow; ps, personal space; sp, space; and pa, pathway.

For both teachers, their written evaluations of each lesson were rather vague and non-specific. Therefore, they did not provide a basis for subsequent changes in the teachers' own behaviors. Nor did they provide useful critical commentary for the analysis of the teachers' behaviors.

Chapter 5

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

SUMMARY

Among the trends which have emerged in the field of education in the last two decades are attempts to restructure learning based on identification of the theoretical structure of various bodies of knowledge, and attempts to make learning an active, meaningful experience designed to meet individual learners' needs. In physical education, the movement education approach to instruction appears to combine both of these educational concerns.

Physical educators, however, educated to be concerned with neat, orderly patterns of mass student activity prescribed by the teacher, and with specific skills being the major focus of the lesson, have encountered difficulty in the implementation of the movement education approach, with its expanded focus upon the aspects of movement, and its concern with students' accepting responsibility for their own learning. This difficulty has been compounded by general confusion in the literature in the definition of the movement education approach, and the conflicting suggestions for implementation. In addition, teachers have had no way objectively to identify what they

have been doing as they taught. Therefore, efforts to implement the movement education approach, or to cope with difficulties encountered in attempting to change teaching behavior, have been based on subjective recall by teachers of what they thought they did. Thus, it appeared that some objective means of identification of the behaviors of teachers beginning the implementation of the movement education approach to physical education might be of help to the teachers themselves, as well as to those who are preparing materials, workshops, and pre-service education in this area.

The purpose of this study was to describe and analyze the pre-instructional, verbal instructional, and post-instructional behavior of two experienced teachers implementing for the first time in their teaching experience, the movement education approach to instruction of college women in beginning basketball. The sub-problem of this study was to adapt and revise the category system developed by Barrett (1969) to make it consistent with the purpose of this study. It was assumed that 2 teachers, each teaching 6, 30-minute lessons to 4 students, was a minimum for meaningful analysis.

Selected literature from three areas was reviewed. The first area dealt with recent reforms in education, particularly the restructuring of subject matter, and the growing concern for individualization of instruction. This

was followed by examination of current trends in physical education, particularly those dealing with expanded focus on human movement, individualization of instruction, and the movement education approach. Finally, studies were reported which had been conducted in physical education and had as their main purpose the observation and analysis of teacher behavior. The literature provided a theoretical basis and substantive background for the procedures, methods, and analysis of data used in this study.

Data were collected for the study in the form of written lesson plans from each teacher for each of six lessons; tape recordings of the same six lessons, except Lesson 1 for each teacher which was accidentally destroyed; and the teachers' written evaluations of these same lessons. The tape recordings of the lessons were then coded by two trained judges, and the data from the written lesson plans were coded by one of the judges, using a revised version of the category system designed by Barrett (1969). Revision of the system included deletion of the Student Response dimension, changes in the Content dimension based on literature published after Barrett's original work, and changes in the focus of the Guidance dimension.

Before the coded data were analyzed, the coded recordings of nine tapes from the two judges were compared, using the Pearson product-moment technique, to determine the judges' objectivity in using the system. In addition,

estimates of the judges' reliability in use of the system were also found, using the Pearson product-moment technique to compare first and second codings of three randomly chosen tapes for each judge.

Finally, in the process of the analysis of the data, the coded data for lesson plans and actual lessons, and the written evaluations for each lesson for each teacher, were subjectively examined separately, and then compared. The coded lesson plans were compared with the coded lessons to determine the relationship between the teacher's intention, as demonstrated by the plans, and the actual pattern of teacher behavior as defined by the category system from the judges' codings of the lessons. The data were also examined for evidence of any trends in behavior, as defined by the categories, which appeared to emerge from Lesson 1 through Lesson 6. In most lessons for both teachers, the evaluations were too vague to serve any meaningful purpose in analysis. Finally, the data for the two teachers were compared, to determine similarities and differences in their use of the categories in the coded plans and actual lessons.

CONCLUSIONS

Within the limitations of this study, several conclusions can be drawn:

1. A revision of the category system originally developed by Barrett (1969) may serve as a useful tool for

describing teaching behavior within the context of the movement education approach to physical education. The following data support this conclusion:

a. Coefficients for estimation of objectivity of judges in using the system for each dimension, ranged from .96 to .98, based on the codings by two trained judges for nine tapes.

b. Coefficients for estimation of reliability of judges in using the system for each dimension, ranged from .51 to .98, with a range of .96 to .98, in the Content and Guidance dimensions. Coefficients for both judges were low in the Movement Task dimension, .51 and .66; however, they were high enough to indicate moderate correlation (Sheehan, 1971:144), and were accepted as useful for this study.

2. There is need for review of the structure of the Specific Limitation categories 4a and 4b, and the Non-Specific Limitation categories, 5a and 5b, in both the Movement Task and Guidance dimension, along with the Content category ba, body action. This conclusion is supported by the following data:

a. For Teacher A, there were two instances in the actual lessons in the Movement Task and/or Guidance dimensions when the disagreement between the judges in use of category 4a, Specific Limitation: implied variety, was too great to permit meaningful analysis; and three instances when disagreement was too great in category 5a, Non-Specific Limitation: implied variety, to permit meaningful analysis.

b. For Teacher B, there were six instances in the actual lessons in the Movement Task and/or Guidance dimensions when disagreement between the judges in use of category 4a, Specific Limitation: implied variety, was too great to permit meaningful analysis; three instances when disagreement was too great in category 4b, Specific Limitation: continuous variety; and one instance each in categories 5a and 5b, the Non-Specific Limitation categories, when disagreement was too great for meaningful analysis.

c. For Teacher B, there were three of the five actual lessons coded where disagreement between the judges about frequency of use of Content category ba, body action, was too great to permit meaningful analysis. These corresponded to lessons in which there was insufficient agreement in the Specific Limitation categories, 4a and 4b, and/or the Non-Specific Limitation categories, 5a and 5b, in the Movement Task and/or Guidance dimensions. Since the Content category ba, body action, deals with ". . . movements which are executed to move the body from one place to another . . ." (see Appendix E, p. 197) and the Specific Limitation and Non-Specific Limitation categories deal with different classifications of limitations upon ". . . actions of the body . . ." (see Appendix E, pp. 193, 194), there appears to be the possibility for confusion in attempting to distinguish among these categories.

3. In both the presentation and the development of the movement tasks, the teachers did not permit the students very much freedom to decide how they would move in response to the task or guidance statements. This conclusion is supported by the following data:

a. Both teachers frequently used categories 1 and 2, Explicit Response and Guided Discovery, in both the Movement Task and Guidance dimensions. These categories are at the end of a continuum of freedom of choice given the student where the student has very little, if any, freedom to decide how he/she will respond.

b. Categories 5a, 5b, and 6, the Non-Specific Limitation categories and Free Exploration, in both the Movement Task and Guidance dimensions, were seldom, if ever, used. These categories are toward the end of the continuum which allows students greater freedom to decide how they will move in response to task and guidance statements.

4. Both teachers tended to use those Content categories which would commonly be associated with basketball as taught in a traditional (Hoffman, 1971:52-53) approach, with emphasis on direct acquisition of

specifically defined techniques for skills such as dribbling, shooting, passing, etc., as the primary objectives. They used seldom, if ever, the Content categories not usually linked with the traditional approach to teaching of basketball. The following data support this conclusion:

a. Categories s, space; fl, flow; ps, personal space; and gs, general space, were recorded seldom or never by either judge.

b. Categories m, manipulative; p, relationship with people; nm, non-manipulative; di, direction; and bp, body parts, all of which are usual considerations in the traditional approach to teaching the game of basketball, were most frequently coded for both teachers. Codings of these categories combined accounted for about 70 per cent of Teacher A, and 76 per cent of Teacher B's total use of Content categories.

5. The consistency between the teachers' intent as expressed by the lesson plans, and what categories were evident in their actual lessons, varied between the two teachers, and between the Movement Task and Content dimensions for each teacher. The following data support this conclusion:

a. Teacher A's lesson plans reflected her expressed need for tighter structure after Lesson 1, with a rather consistent focus on movement tasks in categories 1 and 2, Explicit Response and Guided Discovery. This emphasis was reflected in the categories coded in the Movement Task dimension of her actual lesson.

b. The lesson plans for Teacher B indicated that she intended consistently to focus her movement tasks in the Specific Limitation categories, 4a and 4b. Her actual lessons, however, showed evidence of more frequent use of categories 1 and 2, Explicit Response and Guided Discovery, in both the Movement Task and Guidance dimensions.

c. In the Content dimension for Teacher A, there were some discrepancies from the lesson plans to the actual lessons in the categories which were in evidence. Some categories which had been used in the plans did not appear in the lesson, while some categories which did appear in the lesson had not been in the plans. For the most part, however, those categories which had been used most frequently in the plans did appear in the actual lessons.

d. In the Content dimension for Teacher B, there was consistent evidence in the actual lesson of use of those categories which had been used in the plans. In addition, there were usually some more categories used in the actual lesson, than had been in the plan.

6. For both teachers, one commonality in the written evaluations, was expression of frustration with trying to deal effectively with the concept of allowing the students freedom of choice in their response to movement tasks. They also indicated difficulties with structuring tasks to permit this freedom.

IMPLICATIONS

Two major implications from this study are suggested: (1) further work in revising the category system, or revising the training procedures to enable the judges to achieve consistent and acceptable measures of reliability and objectivity in their use of all three dimensions; and (2) further use of this system, or a revision of it, with consistent and acceptable coefficients of reliability and objectivity, to collect more data on the verbal teaching behavior of teachers initiating the implementation of the movement education approach to physical education.

Further Work in Revising the Category System

In order that the category system be of optimum assistance in research on systematic description of teaching behavior during the implementation of the movement education approach, as well as to the teachers themselves, three areas need further study. These are: (1) the refinement of certain categories, (2) acquisition of consistent and acceptable measures of the objectivity and reliability of each dimension, and (3) possible enlargement of the system.

For some categories in each dimension in the actual lessons, there was sufficient disagreement between the judges' total frequencies of coding that meaningful analysis was not possible. In addition, the coefficients for reliability for both judges' use of the Movement Task dimension were low. Therefore, re-examination of the categories in the Movement Task dimension is recommended, to determine whether they represent identifiably discreet descriptions of teaching behavior.

Perhaps categories 4a and 4b, the Specific Limitation categories, and 5a and 5b, the Non-Specific Limitation categories, might be combined into two categories, 4 and 5, eliminating the necessity of the judges' differentiating "implied variety" and "continuous variety". Or further, it might be reasonable to simplify description of the verbal behavior used in the presentation and development

of the movement tasks into just three broad categories. One category could be for statements which allow the student no freedom of choice about his response, one for those which allow him complete freedom, and one for those which permit some freedom within limitations. Definitions of these categories might be developed from Bilbrough and Jones' (1963:28-35) descriptions of direct, indirect, and limitation teaching methods.

Category ba, body action, in the Content dimension, was used frequently by both judges, but apparently not in agreement with each other, as this was another category for which disagreement was frequently too great to permit meaningful analysis. This category refers to ". . . movements which are executed to move the body from one place to another . . ." (Appendix E, p. 197). It is recommended that further study be done to insure the clarity of the definition of this category, and its differentiation from categories 4a and 4b, the Specific Limitation categories, and 5a and 5b, the Non-Specific Limitation categories, which deal with ". . . actions of the body . . ." (Appendix E, pp. 193, 194). This is particularly important if these Movement Task categories are retained as four discreet units.

When the categories of the system, particularly those in the Movement Task dimension, and the corresponding ones in the Guidance dimension, are more clearly defined

and identified, new coefficients of the reliability and objectivity of the judges in their use of the system should be estimated. Several suggestions are offered for the attainment of consistent and acceptable estimates of objectivity and reliability:

1. Enlarge the sampling of the spectrum of teaching experience used in preparation of the training tapes, to encompass a range of experience in using the movement education approach to teaching physical education.

2. Increase the number of judges.

3. Select judges who have a strong working knowledge of the movement education approach to physical education.

4. Increase the length and/or number of training sessions for the judges, and/or set a predetermined coefficient (perhaps .90) for acceptable objectivity and reliability which must be achieved before ending training.

5. Have the judges listen to the taped lessons twice through, coding the first time, and making any desired revisions in coding on a second hearing; or, have forced agreement in which the judges listen to and code each tape as many times as necessary until they reach some predetermined, acceptable standard coefficients of objectivity and reliability for each tape.

In future development of the category system, it might be useful to expand the Guidance dimension so that

it would encompass verbal behaviors dealing with organization of students, and positive and negative feedback to students, as well as the amount of freedom for decision-making granted students by the teacher's statements dealing with the development of a movement task. Thus, the dimension would be concerned with the nature of the guidance behaviors, as was Barrett's (1969) original focus, as well as the amounts of freedom given the learner in the development of the task.

Collection of More Data on Teachers Implementing the Movement Education Approach

After consistent and acceptable measures of reliability and objectivity have been obtained, through revision of the system and/or training procedures, further use of the system is indicated in order to collect more information on the behavior of teachers initiating the implementation of the movement education approach to physical education. This study has demonstrated the use of the system, within limitations of the design of the study as well as some weaknesses which appeared in the system, for objectively describing verbal teaching behavior. However, it is impossible to generalize to all teachers implementing the movement education approach, based on the behavior of only two teachers teaching only six lessons, with basketball as the only activity focus of their teaching.

In order for the potential data from further use

of the revised system to be useful to people involved in planning workshops and teaching materials for both pre-service and in-service training, it is suggested that future studies include a wide sampling of teachers. It should include teachers who are working with all levels of students, and in a wide variety of sports and games, dance, gymnastics, and aquatics activities.

Finally, the data obtained from objective descriptions of teaching behavior must be useful to the teachers themselves. It is difficult for people accurately to describe their own behavior in a given situation, particularly if the situation is one of which they are unsure in the first place. Thus, as Barrett (1969:204) pointed out, "It is assumed that the greater the insight teachers have into their own behavior the more their future behavior will be influenced."

It is the hope of the investigator of this study that the description and analysis of teaching behavior included here, limited in scope though it is, will provide a beginning for the collection of information for teachers and researchers dealing with the behavior of teachers initiating the implementation of the movement education approach to physical education. Because the approach, though full of promise for maintaining pace with trends in general education, is yet the subject of such confusion,

it is clear that at both the pre-service and in-service levels of education, objective information about teaching behavior will provide a valuable resource.

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APPENDIXES

APPENDIX A

Outline for Orientation Session

Outline for Orientation Session

I. Purpose of Study

II. Teachers' Responsibilities

A. Teach 6, 30-minute lessons

1. Basketball
2. Two classes per week
3. Three weeks

B. Submit written lesson plan for each lesson

C. Submit written evaluation immediately after each lesson

III. Outline Movement Education Approach, as accepted for this study

A. Content aspects (Stanley, 1969:37-60)

1. Body awareness: basic functions

a. Curling
b. Bending
c. Twisting
d. Stretching

2. Body parts

a. Weight bearing
b. Symmetrical and asymmetrical uses
c. Use in body actions
d. Use in body shapes

3. Force: strong, light, heavy

4. Time: fast, slow

5. Space

a. Direct, as a "punch," direct, straight line
b. Flexible, floating, filling space

6. Flow

a. Bound, stoppable
b. Free, on-going

7. Personal space

8. General space

9. Directions: forward, backward, up, down, left, right

10. Pathways in space: floor and air

11. Manipulative relationship with objects

    a. Send away; throw
    b. Catch; collect
    c. Carry; propel

12. Non-manipulative relationship with objects

    a. Obstacle
    b. Target
    c. Boundary

13. Relationship with people

    a. Alone
    b. Alone in a mass
    c. Partners: cooperative; competitive
    d. Group
    e. Intergroup relationships

B. Instructional: types and amounts of decisions given the learner

1. Continuum, from no freedom for decisions, to complete freedom for decisions

2. Includes initial task, and development

3. Diagram, as per Barrett (1973a)

4. Examples of tasks allowing varying degrees of freedom

IV. Final Instructions

A. Use any written resource desired

B. Use no "people" resources

C. No discussion of plans, lessons, or evaluations with one another

APPENDIX B

Verbalizations from Sample Soccer Lesson

1. "Take the ball. Do what you would like with it in that space. Get the boundaries that you need."

2. "As you're working, still keep going where you want to with the ball, and using your feet as you want, see if you can change the speed. Make obvious changes of speed. Use the whole space. Vary the speed of the ball. You may go any place you want."

3. "Now I'm going to ask you to forget about changes in speed. Go back to the idea of going anywhere you want, but keep changing the direction of the ball. What I mean by 'direction' is the pathway--sideways, backwards, etc. See if you can keep that constantly changing, and try to keep yourself going."

4. "All right, hold it a minute. Now, when you make that ball change direction, what are some things that are happening to you: Getting out of control? Close to you? Far away? Do you find yourself not staying with the ball?"

5. "Try to keep the ball closer to your feet. And keep changing directions. See what you have to do to keep the ball close to your feet, six to eight inches. Focus on what you have to do to maintain it. Go as fast as you can control it. Now see if you can accelerate it. Make your change of direction sharper."

6. "All right. Hold it. Now, I'm going to come to you, and when I get to you, see if you can get by. I won't actually try to take it away. Keep the ball close, changing directions, and get by."

7. "Put one ball away. Do this with each other. You try to get by her. You, try to stay in front of the ball. Still working with the same idea. Switch. Work the length of the field."

8. "What did you do?"

9. "Switch this around. You may not touch the ball, but you (with the ball) try to throw her off balance. Try to throw her off balance by changing direction."

10. "All right. Hold it. Back with the other ball. Refocus on what you need to do to keep the ball close to you and change directions. What do you need to actually do to keep it that close? What are you doing now? Is the force less or more than when you first started?"

11. "Which part of your feet is the best part? Why? In which way? Where does it go when inside is easier?"

12. "I'll send the ball to you. You collect it, gain control, go some place with it, and kick it back to me. Stop it any way you want to. Try different ways. Change direction. Send it right back."

13. "Do it with each other. Change direction before you get rid of it--three different directions. You must always be on the move; collect it while moving. Change its direction at least twice before you get rid of it. Change directions. Keep travelling. Remember, you're playing with each other. Position yourself in relationship to the ball to be in position to receive it. Be alert to what your partner is doing with the ball."

14. "Last thing--same thing, but I'm going to try to get it away from you."

APPENDIX C

Verbatim Lesson Plans for Six Lessons by Teacher A and Teacher B

Lesson Plan I
Teacher A
May 3, 1971
Type Copy

Major Goal: To have the child become aware of the body movements involved in passing a basketball. Emphasis will be placed on the movements of the body rather than of the object (the basketball).

Objectives:

1. Each student should be allowed to experience body movements (bend, curl, stretch, and twist) through the manipulation of the basketball.

2. Each student should be able to identify the body parts used in their throws and know the extent of body involvement in relation to the force of the throw.

3. To know the importance of a wide base of support and the importance of weight transfer in relation to force in passing the basketball.

4. To experience the various forms of locomotion of the body allowed within the framework of basketball:
   (a) running
   (b) walking
   (c) sliding
   (d) lunging
   (e) pivoting

Movement Experiences	Purposes:
1. Pass to self, explore the number of different ways that you can throw and catch the ball	1. to elicit variations of bending, stretching, and twisting.
a. standing still, both feet in place	a, b, c, d, e, will all structure the situation if desired responses are not elicited in complete freedom.
b. keep one foot in place	
c. with partner, one foot in place--make them reach	

Lesson Plan I, cont'd.
Teacher A

d. to self on the move--make yourself reach, bend, stretch

e. release the ball as high as you can--as low as you can

2. Toss the ball as hard and high to yourself as you can--then as soft and low as you can (may have to limit to overhead throw, wait and see)

Identify what body parts are involved and what are the differences

a. throw to partner--different passes--identify body parts involved. Which pass is the quickest and most accurate? Which is the slowest? What is the difference --what different body parts are involved?

2. to have students focus on body parts used in relation to force desired

3. Continue to partner--emphasis on basis of support--change it every time you throw. Throw hard and then soft--what happens to base of support: Throw high then low. What happens now?

3. to have the student experience changes in base of support and understand the wide base of support

to have students experience and identify the transference of weight in throwing

4. Without the balls--walk in one direction then change directions. No limit on space.

Lesson Plan I, cont'd
Teacher A

a. run as fast as you can then change direction--what is the difference?

b. confine space and continuously change direction

c. with a ball, confine space and continuously change direction while tossing the ball to self.

4. to experience the various forms of locomotion--with and without the ball

Lesson Plan II
Teacher A
May 5, 1971
Type copy

Objectives:

Each student should be able to:

1. pass accurately to a partner at various distances while both stationary and moving, with and without a guard.

2. use a variety of passes depending on the situation (with or without a guard).

3. be able to successfully catch a pass in a stationary position and on the move, with and without a guard.

Activities:

1. Competitive game situation--keep-away.

2. Work on catching and throwing with partner.

3. Back to keep-away (in hopes that some carry over will have occurred).

Problems or Experiments:

A. Partner--Stationary

1. Throw the ball in as many different ways as you can--through the air.

   Which part of the hand do you throw with? Fingers or palm? Which allows you more control?

2. Now pass the ball in as many different ways as you can so that it touches the ground on the way to your partner.

   Where is the best place for the ball to bounce so that your partner can catch it?

   Try putting spin on the ball. What does it do to the ball?

3. Pass so that the ball is high, then low.

   What is the difference in your point of release?

Lesson Plan II, cont'd.
Teacher A

4. Now throw so that your partner receives it at chest level.

   When would a high pass or low pass be desirable?

5. Throw with your arm bent (one arm pass). Now throw with your arm extended.

   Which way can you throw the hardest?

6. What do your shoulders do as you throw the ball with one arm?

7. Increase the distance between you and your partner and continue to examine what happens to your shoulders as you throw.

   What effect does this have on your force?

8. Try a two-arm pass, then one-hand pass.

   Which way can you throw it farther?

9. Why use a two-handed pass at all if you can throw farther with one arm?

10. When you throw what happens to the weight supported by your feet? Try a one-arm and two-arm pass. Throw from a short distance and then a greater distance.

    What is the difference in foot action?

11. Is the weight transfer related to the action of the shoulders?

B. <u>Partner--Moving</u>

1. Where is the best place to pass the ball so that your partner can catch it?

2. If the pass is hard how do you catch it so that it will not hurt your hands? What happens to your arms as you catch the ball?

3. What part of your hand do you catch with?

Lesson Plan III
Teacher A
May 10, 1971
Type Copy

Objectives:

Each student should be able to:

1. Pass accurately to a partner at various distances while both stationary and moving, with and without a guard.

2. Use a variety of passes depending upon the situation (with or without a guard).

3. To successfully catch a pass in a stationary and moving position, with and without a guard.

4. Maneuver away from an opponent in order to successfully make or complete a pass.

Activities:

1. Competitive game situation--two against two. Five successful passes constitute one point for a team.

2. Work with partners, stressing passing, catching, and maneuvering.

3. Competitive game situation--identical to one, except that shooting has been added. Once a team has completed five successful passes they are eligible to shoot one shot. They are awarded one point for the five passes and an extra point if the shot was successful. The ball then goes over to the other team.

Problems or Experiments

A. Stationary--Passing:

1. Continue to throw the ball as many different ways that you can think of.

2. Vary the speed of your passes . . .

   As you catch, how can you lessen the force of the throw? How can you catch it so that it will not hurt your hands?

Lesson Plan III, cont'd.
Teacher A

3. Continue to throw hard . . .

   Catch it with a still arm or arms--then allow your arms to bend. Which way is best?

4. Now throw so that your partner must catch the ball in different positions--as many different positions as you can think of--don't pass to the same place twice.

   Where is the best place to catch the ball so that you can throw it quickly? One hand? Two hands?

5. Wherever you catch the ball, try throwing it from there as accurately as possible.

   Where is the best place to catch it? Where can you get rid of it the fastest?

6. Continue to throw to your partner . . .

   What happens to your hand or hands as you throw? Bend your wrist forward--keep it stiff. Which is best?

B. Moving--Passing

1. Continue passing to partner--continually change the distance and direction . . .

   Again, where is the best place to throw so that your partner can catch it?

2. Continue passing--release the ball so that it will go high then low . . .

   When would this be helpful in a competitive situation?

C. Competitive situation--two against two (passer must stand still)

1. Attempt to make a successful pass to your team-mate . . .

   How is a high or low pass helpful?

   When are they not good?

Lesson Plan III, cont'd.
Teacher A

How many different ways can you as a receiver get away from your opponent so that you can successfully be free to catch the ball?

How can you use a change of direction to help you?

How can you use a change of speed to help you?

How can you use parts of your body to help you?

What different body parts can you use to help you?

How can the player with the ball get away from your opponent to successfully make a pass? (You can move one foot).

How can the passer use different body parts to get away from your opponent, or how can you use the different body parts to deceive your opponent or disguising your intent to throw in a certain direction?

Lesson Plan IV
Teacher A
May 12, 1971
Type Copy

Objectives:

Each student should be able to:

1. Utilize the change of direction, change of speed, and different body parts to successfully free themselves to make or receive a pass.

2. To successfully intercept at least one pass from the opposing team.

3. To find a successful method for successfully shooting the basketball (at least four out of five shots).

Problems or Experiments:

Partners--Moving:

1. Continue to pass the ball in a variety of ways--always change direction and speed of body. Throw the ball as accurately and as quickly as possible.

Competitive Situation:

1. Three against two--team with ball has two--player with the ball cannot be guarded--five complete passes constitutes one point.

   When is a high pass, low pass, straight one, bounce, long or short pass good?

   How can you create a space in which to run into and be free from your opponent for a pass?

   How can you use a change of direction to help you?

   How can you use a change of speed to help you?

   What different body parts can you use to help you?

   What does the player on the team without the ball have to do in order to prevent a successful pass?

   When your team does not have the ball, should you watch the ball all the time?

Lesson Plan IV, cont'd
Teacher A

When your team does not have the ball, should you watch the player at all times?

What is the best way to prevent a successful pass?

Competitive Situation:

1. Same as above, except shooting for one shot is allowed once the five passes have been completed. Once the five passes are completed the team without the ball can guard anyone, even the player with the ball.

Individual Shooting:

1. With your own ball, work on finding the most successful shot for you. Try all different ways to shoot and all different distances--what is best for you. For now best is four out of five shots at least. If you have a variety of successful shots--great!

   Be sure to try a variety of shots . . .

Lesson Plan V
Teacher A
May 17, 1971
Type Copy

Objectives:

Each student should be able to:

1. Find a successful method for shooting the basketball (at least four out of five shots).
2. Make a basket during the competitive situation.
3. Utilize at least one of the methods listed below to successfully free themselves from the opponent in order to make a pass and also receive a pass.

Group-moving (co-operative and competitive)

Pass the ball around on the move

Review past comments concerning passing and receiving if necessary. Include also comments concerning maneuvering away from opponent in order to catch or pass.

Individuals-shooting--shoot at basket alone

1. Point of aim:

   How do you hold the ball and aim each time?

   Should you do it the same each time for that shot?

   Where are you aiming--at the rim, backboard, or elsewhere?

   Which works better for you?

   Find out how and where it suits you best to aim.

2. Use of fingers and wrist action:

   What part of your hand do you use in shooting?

   Try fingers, then the palm--which works best?

   Is it the same part of your hand that you use in passing?

Lesson Plan V, cont'd.
Teacher A

What should your wrist do as you release--should it stay straight, bend backward, or bend forward? Which way gives you the most control and force? Try it each way.

3. Use of backspin

Try using spin as you shoot. Does it help? If so, what type of spin are you using?

Try backspin as opposed to no spin--does it help?

When performing a bounce pass what effect did backspin have on the ball? What effect would this have on a shot that hit the backboard? Would this be helpful in shooting?

4. Footwork

Should you have both feet together or one in front of the other as you shoot? Which feels best for you? Why?

5. Use of body

How can you get the most force behind your throw: Is this always desirable? When is it and when is it not?

Try shooting the ball using just your hand (arm completely extended), then your hand and arm (body completely extended), then your entire body, by bending your knees and waist. Which gives you more force? Why?

Competitive situation

Five passes--one shot--one point for passes--three points for shot

Now that you have found your pass [sic]--how best are you going to utilize that in a game situation?

Lesson Plan VI
Teacher A
May 19, 1971
Type Copy

Objectives:

Each student should be able to:

1. Find a successful method of shooting the basketball (at least four of five shots using the same type of shot).

2. Make a basket during a competitive situation.

Tasks:

Individual work at a basket:

Reconsider your ball position each time--concentrate on where you are aiming the shot. Does it stay straight, bend backward, or bend forward? With which method do you get the most force? Which way allows you to impart backspin to the ball easier?

Try imparting backspin to the ball--does it seem to help?

As you shoot, do you have both feet together or one in front of the other? Which allows more force? Is it better for you to keep the same foot forward as the arm you are throwing with, or is it better to have the opposite foot forward?

How can you get the most force behind your throw? Is this always desirable? When is it and when is it not?

Competitive situation:

Employ rules that students have to offer . . .

Use all three baskets today, and a team, after completing five passes is eligible to shoot as long as they have possession of the ball--once possession is lost the team must start over with the five successful passes. One point for successful passes--two for any basket made. Once basket is made, ball goes over to opposite team.

Lesson Plan I
Teacher B
May 3, 1971
Type Copy

Objectives:

Each student should be able to:

1. Throw the ball to any person in any situation so that person can catch it easily.

2. Move with the ball while maintaining control at different speeds and in different directions.

3. Analyze and explain differences in movement in different situations.

Movement tasks:

Free use of balls alone or in pairs

Travel with the ball while maintaining control of body and ball
- change directions
- change speeds

Throw and catch
- different levels
- different speeds
- different distances
- stationary and moving
- partners and groups
- time limits

Analysis of movement

Lesson Plan II
Teacher B
May 5, 1971
Type Copy

Objectives:

Each student should be able to:

1. Avoid an opponent by changing speed and direction.
2. Move with the ball around an opponent while maintaining control of both the body and the ball.
3. Pass the ball to another player with control to avoid an opponent.

Movement tasks

Free use of ball in pairs

Without balls try and move around an opponent using change of direction and/or speed.

What works and why?

Moving with ball, try and move around an opponent.

What adjustments have to be made?

Moving and passing, try to keep ball from opponent (2 on 2), use different passes, change speed and/or direction.

Keep-away

Lesson Plan III
Teacher B
May 10, 1971
Type Copy

Objectives:

Each student should be able to:

1. Move with the ball around an opponent while maintaining control of both the body and the ball.

2. Determine which is the best angle, level and distance for shooting.

3. Use skills in a game.

Movement tasks:

Keep-away:
Emphasize moving with the ball, controlling dribble, changing hands, variety of passes.

Shooting:
Use different levels, different distance from the basket, different angles.

What adjustments have to be made in different situations?

Make up a game:
Use four players, half the court and the basket.

Lesson Plan IV
Teacher B
May 12, 1971
Type Copy

Objectives:

Each student should be able to:

1. Determine differences in movements between shooting when stationary and moving.

2. Maintain control when passing, dribbling, changing direction.

3. Analyze why they do or do not maintain control of both the body and the ball.

Movement tasks:

Shooting while moving:
vary speed
vary distance from the basket
without dribble
with dribble

Pass and dribble
immediate change of direction after receiving ball
move and pass again
CONTROL

Play game modifying any rules they feel necessary to make it a better game.

Lesson Plan V
Teacher B
May 17, 1971
Type Copy

Objectives:

Each student should be able to:

1. Move, dribble, pass at different speeds in different directions with control.

2. Express and apply changes in body movement between outside shots and a lay-up.

3. Change directions quickly and with control to avoid an opponent.

Movement tasks:

Lay-up
shoot at different distances from basket
use different angles
change speed
as close as possible to basket, moving and stationary

Move and pass
all four--change speed, direction
fourth person shoot: with dribble and without,
with guard and without

Dodge opponent
use definite change of direction
CONTROL
change hands while dribbling

Game--any new modifications necessary

Lesson Plan VI
Teacher B
May 19, 1971
Type Copy

Objectives:

Each student should be able to:

1. express and apply changes in body movement in rebounding a basketball.

2. Express and apply changes in body movement in a jump ball situation.

Movement tasks

Rebounding
- from a wall
  - stationary
  - moving
  - speed and level
- from the backboard
  - stationary and moving
  - alone and with partner
  - rebound and move away
  - rebound and shoot again

Jumping
- height--how?
  - against the wall
  - with another person
  - with and without ball

Game
- start with jump ball and modify any other rules necessary

APPENDIX D

Written Evaluations of Six Lessons by Teacher A and Teacher B

Evaluation I
Teacher A
May 3, 1971
Type Copy

In examining the specific objectives for today, I have discovered that I at least attempted to accomplish number one and two. From that point I went off on a tangent and never really got back to the main emphasis of the lesson. I felt very frustrated at the conclusion of today's lesson. I do not feel that I accomplished very much at all.

The fact that only two students were there contributed to my unsure feelings--I'm not used to such a direct relationship. I do not feel that my tasks were sufficiently challenging to them; yet, they did not accomplish any of the objectives. Of course, I'm sure that this was partly due to my inability to direct them. I saw very little freedom of movement in the two students and I felt lost in trying to devise a task that would cause them to experience the various bends, twists, turns, etc. They continued to throw the ball in very stereotyped fashion and I could think of no way to elicit any variety. Once I ventured away from my lesson plan I felt completely lost and began to question what I was trying to accomplish. Yet, I did not feel that my lesson plan was sufficient for the two students.

It appeared as though they could not handle the freedom that they were given (perhaps because basketball is such a structured activity) and I could not give them enough direction to still allow them the freedom to explore. It was very tempting just to verbally tell them what I wanted them to know instead of letting them attempt to discover it.

Evaluation II
Teacher A
May 5, 1971
Type Copy

For lesson two, I decided that a change in method was necessary. I felt that I had not met the age level of the students successfully. Also, I felt that during lesson one they could not adjust to the freedom that I had given them, nor could I. Therefore, I felt that some structure was necessary. In addition, I definitely felt the need for some type of competitive situation, either for motivation or structure. To accomplish these changes I relied heavily on Maulden and Redfern's Games Teaching rather than Stanley, which I had referred to for lesson 1. I found Games Teaching much easier to relate to my task and therefore structured my class within the framework suggested.

Within a more structured situation, allowing some freedom (hopefully), I felt much more secure and I also felt that the students were more relaxed. Yet, I still feel that a sufficient degree of freedom was accomplished. The competitive situation allowed the students to relate to past experience and the work with partners permitted them some freedom in discovering what they were doing as they threw the ball. I returned them to the game situation to determine, if possible, whether or not any of my objectives had been accomplished.

I stayed with this lesson plan throughout the class and felt that the students at least worked toward my objectives. I do not feel that they could have accomplished all three within a one-half hour period--much more practice would be desirable.

I felt more confident today. This is due in part, I'm sure, to the fact that all five were in attendance ("security in numbers"). Also, I'm sure that the increase in structure allowed more confidence on my part.

Evaluation III
Teacher A
May 10, 1971
Type Copy

I continued to follow the format that I used for lesson 2, and I felt as though it went very well. I continued to feel confident within my chosen structure and also felt that the students were given enough freedom to obtain the objectives of the lesson.

I again stressed passing and catching for I did not think that these objectives had been adequately met. I added the maneuvering aspect for in past lessons I detected a definite need for work in this area.

I added shooting to the competitive situation mainly for motivation, but also to detect any needs in this aspect. The structure of the game sufficiently de-emphasized the shooting aspect, but allowed the opportunity which aided in motivation.

I felt that additional progress was made on the passing and catching skills but I still do not feel that they have been adequately developed. I was most pleased with their use of the change of direction and speed in attempting to get away from an opponent. They did not begin to use the different body parts to fake the opponent, but the class time ran short and they actually never had the time to try different ways.

For the first time I saw some changes from the beginning of the class period to the end of class, specifically in regard to their use of change of direction and speed. I was very encouraged!

Evaluation IV
Teacher A
May 12, 1971
Type Copy

Since only three students were present at the beginning of the period, I reversed the lesson plan and started with individual work on shooting in hopes that the other three students would arrive (they never did). I did not go into great detail; however, I did want them to have the chance to experiment with shooting. All three discovered a way of shooting which proved successful for them. Much work needs to be done in this aspect of their skills.

I again stressed the use of change of direction and speed, and also the use of different body parts, to deceive their opponents. I was extremely pleased that all three effectively used a change of speed and especially a change of direction. They still did not grasp the idea of faking with different body parts, but again time ran short and I did not provide adequate situations to elicit that response.

I very briefly introduced the concept of guarding in terms of what the guard should keep her eyes on (ideally both the passer and receiver); however, I think I rushed them too much, and did not give them an opportunity to discover the best way for themselves. Yet, all three demonstrated the ability to intercept passes.

I am encouraged by their gradual improvement--while they are still weak in passing and catching, they have improved in these areas to some degree. They have especially improved in maneuvering away from the opponent.

Evaluation V
Teacher A
May 17, 1971
Type Copy

The students seemed very sluggish today but came to life when a competitive situation was offered. I spent most of my time on shooting and I felt that it went well. However, they still have quite a long way to go. As for the objectives, one and two were not specifically met. One was not achieved because I decided not to stress one successful type of shot as much as I had in the past lesson. Two was not accomplished simply because we ran out of time. Objective three was accomplished completely. The students have learned to use a change of direction and speed very effectively. Some also successfully used a body part to fake their opponent and successfully receive a pass.

I question whether or not my tasks concerning shooting were pertinent and simple enough for their level of skill. Even so, I felt some success in getting the points across. I hope to continue with shooting on Wednesday, during the first part of the period. Time ran out today, and I did not get as far as I had planned.

Evaluation VI
Teacher A
May 19, 1971
Type Copy

I felt that today was successful, even though I did not obtain my objectives for each student. After beginning the lesson, I chose not to emphasize one successful type of shot; therefore, objective one was negated. The competitive situation did not last long enough for everyone to make a basket; therefore, objective two was never really accomplished.

Today, I tried something a little different. Instead of going straight from the tasks into the game situation, I stopped after the tasks and discussed the questions with the students. I felt that this insured getting the points across. It also would have been helpful to go back into the practice and work more after the questions had been answered so that they would have a chance to try the solutions out.

The game that we modified was very strenuous, but allowed the students much success within the framework they structured. They also seemed to enjoy it.

In regard to the entire effort I felt comfortable within my teaching design, however, I'm not sure I satisfied the criteria for a movement education approach. I attempted to follow the patterning of Mauldon and Redfern's Games Teaching and felt comfortable in this approach (or what I felt to be this approach). The students certainly had quite a bit more activity but that could be because of the small number as well as the approach. The students improved but it is hard for me to say whether or not the learning was greater than a more "traditional approach".

Evaluation I
Teacher B
May 3, 1971

This method of teaching is very [sic] frustrating. I had the feeling that no kind of progress in the game of basketball was being made. The students also wondered what in the world they were doing this for.

For the most part they move well and control both themselves and the ball. When they started working with the time limit they lost control and when they were working in pairs trying to move around each other they lost control of everything.

With a little thought they could tell me why or how they had to adjust to different situations. They can move the ball at different levels but they do not change the levels of their bodies at all.

I am not sure but I have a feeling that I was telling them more than I was letting them find their own answers.

Evaluation II
Teacher B
May 5, 1971
Type Copy

When they think about what they are doing, they can explain how or why they move a certain way. But when they start any kind of competition the thinking stops.

The two-on-two idea didn't work--they just ran. Keep-away was better but wild passes and no control [sic].

They began to see that they have to change hands when they dribble and move around an opponent.

A very frustrating morning because they were trying to give the right answers and I probably was looking for one answer.

Evaluation III
Teacher B
May 10, 1971
Type Copy

I found it extremely frustrating today trying to get them to use both hands when they dribble and know why they should. I wanted to tell them what to do and set up a situation in which they had to.

When they were shooting they were thinking about what they were doing and when asked could tell me why this or that worked. It is the first time they have really thought without me pushing and dragging the answers out of them.

The game they made up was excellent, except again when they started playing they stopped thinking. They were often moving too fast and not able to control themselves, let alone the ball.

Evaluation IV
Teacher B
May 12, 1971
Type Copy

Much better class--they were thinking about changes in the way they move. Able to express verbally what they were doing--change of momentum and force, inertia of the ball, angle of the shot, etc.

Dribbling and passing was much more controlled at faster speeds. They all four were moving and passing at their own maximum speed with control and could tell why they lost control when they did.

First thing they did in the game was stop thinking, but they knew it this time. When they went slower and thought it wasn't half bad.

Today was exciting because I think all five of us are beginning to think in different terms. They are beginning to really think and sometimes I can even see what they are thinking.

Evaluation V
Teacher B
May 17, 1971
Type Copy

Tried to get at a lay-up but don't think it was successful. The idea of reaching and extension of the whole body didn't come out.

They were much better on control and ball handling. Thought and action were put together today.

Still did not fully get the idea of keeping the ball away from an opponent. They can say it, but not do it.

Today was a very encouraging day! This method of teaching might even work!

Evaluation VI
Teacher B
May 19, 1971
Type Copy

I ran out of time. The work on rebounding took more time than I thought it would and I am not sure it was productive. Some of the ideas I was working for came out but not all of them.

Because I was rushing the jump ball situation, it was a disaster! I should have just let it go.

Their handling of the ball and their bodies is generally much better than at first. They actually think about what they are doing and apply it.

APPENDIX E

Category System

CATEGORY SYSTEM FOR DESCRIPTION OF TEACHER VERBAL BEHAVIOR IN IMPLEMENTING MOVEMENT EDUCATION APPROACH TO TEACHING SPORTS

This system attempts to deal with only the verbal behavior of the teacher in presenting and developing movement tasks in the teaching-learning interaction. The system is composed of three dimensions: 1) movement tasks, 2) content, and 3) guidance.

DIMENSION 1: MOVEMENT TASKS

The eight types of tasks identified in this dimension are: Explicit Response; Guided Discovery; Selected Response; Specific Limitation: implied variety; Specific Limitation: continuous variety; Non-Specific Limitation: implied variety; Non-Specific Limitation: continuous variety; and Free Exploration. Examples following the description of each type of task are designed to be relevant to the instruction of college women in team sports, using the movement education approach.

EXPLICIT RESPONSE (1)

The teacher designs the movement task so that each student is encouraged to perform specific movements in specific ways. The student has no opportunity to select individual movement responses by himself but rather must perform those selected by the teacher. Inherent in each movement task are limitations which indicate the content being developed, organizational guide lines, and which imply a specific movement response.

In designing the movement task the teacher has a specific movement response in mind. The intent is that all students will perform it the same way with no opportunity for individual decision making (Barrett, 1969:103).

Examples: "Jump and reach to meet the ball as it comes high."[1]

"Hit directly under the center of the ball to make it go straight up."[1]

"Run quickly to the other end of the court."[1]

GUIDED DISCOVERY (2)

The teacher designs the movement task so that each student is free to make his own decisions as to how he is to move, but at the same time, is encouraged to focus his attention toward a more specific movement response. Because of the way these tasks are designed and the purpose behind them it is expected that the responses from the class will be more similar in nature than those responses elicited from tasks defined by categories 3-6. Inherent in each movement task are limitations which indicate the content being developed, organizational guide lines, and which imply a more limited range of movement responses. It is very possible that some or all students in a class may choose similar responses with the differences in performance occurring because of the students' individual differences.

In designing the movement task the teacher has a specific movement response in mind which he is helping the student to perform. The teacher's intent in designing the movement task is for the student to make the decisions himself regarding how he will respond rather than being told by the teacher specifically how to do it. The child is being guided by the teacher to

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[1]If, in presenting these tasks, the intent of the teacher is to have the students vary the way they "jump and reach", "hit", or "run", etc., category 4a or 4b is used (see p. 192). Category 1 is used only when there is no doubt as to how the student is to move. This can only be decided when the context in which the movement tasks are given is known.

discover by and for himself how to perform a particular movement or an aspect about the movement on which he is working. (Barrett, 1969:104).

Examples: "Find the best way to kick the ball, keeping it close to you."

"Using your hand to contact the ball, find the best surface for rebounding the ball with control."

"Find the best body part for striking the ball upward in such a way that it comes down where you can get to it to strike it again."

SELECTED RESPONSE (3)

The teacher designs the movement task so that each student is encouraged to select by himself a specific movement response that he will be expected to repeat. The purpose of selecting and consequently repeating this particular movement response may be for perfecting it or for gaining deeper insight into the movement chosen. Inherent in each movement task are limitations which indicate the content being developed, set organizational guide lines, and which imply the potential for a variety of movement responses from which the student's choice can be made.

In designing the movement task the teacher has no specific movement response in mind. However, the teacher does intend for each student to select by himself a movement response within the limitations of the task and to repeat it (Barrett, 1969:105).

Examples: "Choose one way of sending the ball through the hoop from behind this line, and practice it until you are consistently satisfied."

"Choose one way of sending the ball over the net, and practice it."

"Choose two ways of using your feet to get the ball into your hands, and practice until you can do them easily."

SPECIFIC LIMITATION (4a; 4b)

The teacher designs the movement task so that each

student is encouraged to find different ways of moving in relation to specific limitations of the task. These limitations indicate the content being developed, set organizational guide lines, and imply the potential for a variety of movement responses. Being specific the limitations refer to qualities of movement, actions of the body or parts of the body, or spatial movement.

In designing these movement tasks the teacher has no specific movement response in mind but is interested in having each student develop a variety of movement responses. To accomplish this, variety is encouraged in one of two ways:

4a: by encouraging the student to move in a variety of ways but with either 1) no specific references to changing continuously the way he moves or 2) with a specific number of different ways that he is to move. Because of the way the task is designed the student may repeat the first movement response chosen or he may change it. Since the movement task does not make this explicit the student is free to choose (category 4a is referred to as: implied variety).

4b: by encouraging the student to move continuously in a variety of ways; each time the student attempts to respond to the task he should try to move in a different way (category 4b is referred to as: continuous variety) (Barrett, 1969:105-106).

Examples: "Use your feet in different ways to move the ball." (4b)

"Using your feet any way you want, try to continuously change the direction of the ball." (4b)

"Try to strike the ball up to two different levels." (4a)

NON-SPECIFIC LIMITATION (5a; 5b)

The teacher designs the movement task so that each student is encouraged to find different ways of moving in relation to the non-specific limitations of the task. These limitations indicate the content being developed, set organizational guide lines, and imply the potential for a variety of movement responses. Being non-specific, the limitations refer to generalized movement ideas as

balance, travel, and move, rather than to qualities of movement, actions of the body or parts of the body, or spatial movements.

In designing these movement tasks the teacher has no specific movement response in mind but is interested in having each student develop a variety of movement responses. To accomplish this, variety is encouraged in one of two ways:

5a: by encouraging the student to move in a variety of ways but with either 1) no specific reference to changing continuously the way he moves or 2) with a specific number of different ways that he is to move. Because of the way the task is designed the student may repeat the first movement response chosen or may change it. Since the movement task does not make this explicit the student is free to choose (category 5a is referred to as: implied variety).

5b: by encouraging the student to move continuously in a variety of ways; each time the student attempts to respond to the task he should try to move in a different way (category 5b is referred to as: continuous variety) (Barrett, 1969:106-107).

Examples: "Get the ball in the air in as many ways as you can." (5b)

"Send the ball to another in a different way." (5a)

"Use different ways to move the ball with you as you travel across the field." (5b)

FREE EXPLORATION (6)

The teacher designs the movement task so that the student is completely free to move as he desires. Any limitations that might be placed upon the student by the teacher would be for safety reasons only.

In designing these movement tasks the teacher has no specific movement response in mind that he wishes the student to perform. Inherent in the design of the movement task is the potential for a variety of movement responses. If any apparatus is to be used the teacher may leave the selection of it to the student or he may select it for him (Barrett, 1969:107-108).

Examples: "Take the ball, and do what you would like with it."

"See what you can do with the hockey stick and the ball."

"With a partner and a ball, see what you can do with the ball between you."

DIMENSION 2: CONTENT

The content dimension is conceived to include four major aspects: body, qualities of movement, spatial awareness, and relationship. These aspects have been sub-divided to form fifteen individual categories. Examples, applicable to instruction in team sports at the college level, using content from each category, follow each description.

TIME (t)

Time refers to the speed of the movement and the amount of time needed to complete a movement. At one end of the continuum is sudden or quick movement and at the other end sustained or slow movement (Barrett, 1969:110).

Examples: "Move the ball quickly down the floor."

"Make obvious changes in the speed of the ball."

"Move at a speed at which you can keep control."

FORCE (f)

Force refers to the amount of strength needed to perform a particular movement. To use little force gives a light gentle movement; to use greater force a strong powerful movement (Barrett, 1969:110).

Examples: "Toss the ball to yourself, and allow it to rebound so that it just comes off the body part."

"Kick the ball hard against the wall, keeping it low."

"Throw the ball with just enough force for your partner to catch it."

SPACE (s)

Space refers to the amount of space used by the movement. Direct movements go in a straight line, making linear use of space; flexible movements tend to be wavy, filling the space (Stanley, 1969:59).

Examples: "Swing the bat straight through the ball."

"Try to hit the volleyball so that it floats through the air."

"Throw the ball as directly to your partner as possible."

FLOW (fl)

Flow refers to the movement of the body from one position to another. The movement may be restrained and carefully controlled, in which case the flow becomes bound. Or, it may be easy-flowing, fluid, in which case it is called free-flow (Stanley, 1969:60).

Examples: "Follow through after you contact the ball."

"Catch the ball and send it away again in one smooth motion."

"Stop the swing before your wrists bend."

BODY PARTS (bp)

Body parts refer to the part or parts of the body which are being used, or the relationship between them. In stressing body parts the emphasis is on using different parts for transferring or balancing the body weight, on using different parts to initiate or stop movement, on using different parts to throw, catch or

strike objects, and on recognizing the relationship of body parts to one another and to the center of the body (Stanley, 1969:41-45).

Examples: "Use different parts of your foot to move the ball."

"Lead with different body parts to try to get around your opponent."

"Release the ball when your hands are above your head."

BODY SHAPE (bs)

Body shape refers to the form or position the body is capable of taking. The shape of the body may be twisted, curled, stretched, wide, narrow, symmetrical, or asymmetrical (Stanley, 1969:40, 48).

Examples: "Use wide body shapes to prevent your opponent from passing you."

"Extend to meet the ball above your head."

"Place the ball so that your body position must be twisted before you hit the ball with the stick."

BODY ACTIONS (ba)

Body actions refer to movements which are executed to move the body from one place to another; actions which propel the body upward, removing the weight from the supporting parts; and movements of the body parts which are not intended to move the body from one place to another, such as swinging, swaying, twisting, pushing, pulling (Stanley, 1969:46-47).

Examples: "Get off your feet as you release the ball."

"Travel down the field, using the stick to take the ball with you."

"Unwind your body as you swing the bat."

PERSONAL SPACE (ps)

Personal space refers to the space immediately surrounding the body. It includes everywhere that a person can reach without having to move from that spot (Barrett, 1969:113).

Examples: "Throw the ball so that your partner catches it in different places around her."

"Keeping both feet on the floor, throw the ball from as many different places around you as you can."

"Without moving your feet, see from how many places around you, you can catch the ball in the crosse and send it right back to your partner."

GENERAL SPACE (gs)

General space refers to the total space available in any given situation (Barrett, 1969:114).

Examples: "Move into an empty space to free yourself to receive a pass."

"Use all the space as you move the ball with your feet."

"Spread out so that you create empty spaces between you."

DIRECTION (di)

There are two forms of change of direction; it can be changed by turning to face a different way, or by moving forward, backward or sideways facing the same way throughout (Barrett, 1969:114).

Examples: Move the ball with the stick so that the ball changes direction."

"Change directions at least three times before you pass the ball."

"Find different ways of moving sideways with the ball."

PATHWAY (pa)

Pathway may refer to the tracks, or floor patterns, made by locomotor activity, or to the air patterns made by the body in flight, or by body parts, objects, or implements moving through the air (Stanley, 1969:55).

Examples: "Take the ball in a straight line down the field."

"Shoot the ball in an arc toward the basket."

"Use your feet to move the ball, making a zig-zag path."

LEVEL (le)

Level refers to the position of the body or object in space along an up and down continuum. High and low levels are the extremes with the space in between representing the middle (Barrett, 1969:114).

Examples: "Pass and receive the ball at different levels."

"Rebound the ball high off the body part."

"As you move the ball with your feet, keep it close to the ground."

MANIPULATIVE (m)

Manipulative relationships refer to efforts to control the movement of an external object through isolated, intermittent, or continuous contact with it (as in striking and throwing, catching and collecting, carrying and propelling) (Stanley, 1969:67).

Examples: "Use the stick to move the ball in any way you want."

"Allow the ball to rebound from any body part."

"Control the ball using just your legs and feet."

NON-MANIPULATIVE (nm)

Non-manipulative relationship refers to adaptation of movement to a stationary object, including nets, targets, and extensions, or to a boundary, so as to make the relationship a positive one, or using the object or boundary to advantage (Stanley, 1969:69).

Examples: "Allow the ball to rebound from any body part so that the ball goes over the net."

"Follow through with your arm in the direction of the target."

"Find the best way to get the ball in the basket from behind the free-throw line."

PEOPLE (p)

People refers to the effect upon movement of the relationship with other people also involved in a movement situation. The relationship may range from individuals working alone, to cooperative and competitive relationships between individuals and/or groups (Stanley, 1969:70-71).

Examples: "Working in pairs, one of you try to get yourself and the ball past your opponent."

"Toss the ball high to your partner."

"Each of you work with your own ball, moving quickly wherever you want, but without touching anyone else."

If any content cannot be coded into one of the above fifteen categories, it is recorded as unrelated (u). An outline of the four major aspects of the analysis of movement and their sub-divisions is shown in Figure 1.

Figure 2. Analysis of Movement[a]

BODY
- Body Shape (bs)
  - -achieved as a result of bend or curl, stretch, twist.
- Body parts (bp)
  - -recognition of part used of part stressed
  - -relationship of body parts
  - -balance
- Body actions (ba)
  - -elevation
  - -locomotion
  - -turns

QUALITIES OF MOVEMENT
- Force (f)
  - -firm
  - -strong
  - -light
  - -heavy
- Time (t)
  - -sudden
  - -sustained
- Space (s)
  - -direct
  - -flexible
- Flow (fl)
  - -bound
  - -free-flow

SPATIAL AWARENESS
- General (g)
- Personal (ps)
- Level (l)
- Direction (di)
- Pathway (pa)

RELATIONSHIP
- Manipulative (m)
- Non-manipulative (nm)
- People (p)

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[a]Adapted from Stanley, 1969:39.

DIMENSION 3: GUIDANCE

The major focus of the guidance dimension for this category system is on the types and amounts of decisions given the learner in the development of the original task. The guidance dimension will consist of the same eight descriptions of types of tasks as are included in the movement task dimension. These are: (1) Explicit Response; (2) Guided Discovery; (3) Selected Response; (4a) Specific Limitation: implied variety; (4b) Specific Limitation: continuous variety; (fa) Non-specific Limitation: implied variety; (5b) Non-specific Limitation: continuous variety; and (6) Free Exploration. Verbalizations giving guidance as to organization of students, safety, etc., are recorded as general guidance (G). Guidance verbalizations unrelated to the movement task development are recorded as Unrelated (U).

APPENDIX F

Recording Technique

RECORDING TECHNIQUE

All coding is to be done from the viewpoint of the coder, based on what he hears. All the verbalizations of the teacher are to be interpreted within the context in which they are heard.

Instructions will be presented in detail in an effort to clarify acknowledged complexity. The instructions are presented in two sections, the first dealing with those generally applicable; the second, those specific to each dimension.

General Instructions

1. The unit of analysis is a natural unit with indication given if any teacher verbalization exceeds 15 seconds. A judgment is made and categorized each time the intent of the behavior changes. If, after 15 seconds, there is no variation, the symbols are repeated and circled (see Figure 3, example #3) (Barrett, 1969: 129-130).

2. All unclear sections are coded by the symbol ≷. Those behaviors immediately following such a section are coded as usual unless the meaning is unclear or ambiguous. If the latter happens, the "unclear" symbol is repeated every 15 seconds until the intent of the discourse becomes clear (Barrett, 1969:130).

3. All judgments are coded and placed in two columns, one entry below another, with a blank space left to indicate the previous entry if it was not in the same column, thus maintaining the sequence of the lesson. Movement tasks will be coded, along with content, in the left-hand column; guidance, along with content, in the right-hand column (see Figure 3, example #2).

Figure 3. Sample Coding Sheet

Observer A
Date June 10, 1971
Lesson No. 2
Subject No. 1

EXAMPLES		EXPLANATION
Task	Guid.	
5a m ps		#1 Movement task: non-specific limitation: implied variety (5a), followed immediately by content: manipulative (m) and personal space (ps).
4a le m	4a le m	#2 Guidance: placed in the right-hand column: task-type, specific limitation: implied variety (4a), followed immediately by content: level (le) and manipulative (m).
4b le m		
4b bs le m		
4b bs le m		#3 Movement task: circled to indicate that the same behavior extended beyond 15 seconds.
4a le p di		
	5a p	#4 Guidance: Guidance behaviors which do not deal with the same content are entered according to movement task: non-specific limitation: implied variety, followed immediately by content: people (p).

Instructions Specific to Each Dimension

1. Movement tasks (Barrett, 1969:130, 132):

   a. Movement tasks are categorized into one of eight types: Command (1), Guided Discovery (2), Selected Response (3), Specific Limitation: implied variety (4a), Specific Limitation: continuous variety (4b), Non-specific Limitation: implied variety (5a), Non-specific Limitation: continuous variety (5b), and Free Exploration (6).

   b. The movement task identified and coded is the unit of analysis.

   c. If the movement task is not clear, the symbol MT is used and placed in the appropriate place.

   d. When the content of the movement task is indicated, it is coded simultaneously with the coding of the type of task and placed immediately next to the symbols for the movement task (see Figure 3, example #1).

   e. Many times the actual type of movement task is not known until the very end of the teacher's discourse; wait until the intent is clear before coding.

   f. (Situation specific to this category system) If in using guidance behaviors, the teacher stresses the same content, code as the appropriate movement task reference, placing it in the right-hand (guidance) column. If additional content is being stressed, code as a new movement task in the left-hand column.

      Example:

      Movement task: Use different body parts to strike the ball. (4bmbp)

      Same content: You are using just your hands, try to use different body parts as you continue to strike the ball. (4bmbp) (code in right-hand column)

Additional content:	You are using just your hands to get the ball in the air; try to use different body parts as you continue to strike the ball. (4bmbple) (code in left-hand column)

2. Content (Barrett, 1969:133-134):

   a. Content is coded each time it can be identified in relation to a movement or guidance task.

   b. All content specifically mentioned is coded (e.g. "As you move the ball (m) with your feet (bp), change directions (di)," 4ambpdi; "As you release the ball (m), vary the level (le) and force (f)," 4amlef). It is not necessary to maintain the order in which the content is presented. If any content is not able to be coded into one of the fifteen categories, it is coded as unrelated (u) and placed in the appropriate position.

   c. The content identified and coded is the unit of analysis.

3. Guidance

   a. When the teacher is not presenting a movement task, his verbal behavior is coded in the right-hand column. When the guidance deals directly with the development of a movement idea, focusing the learner's attention to the task at hand, or asking questions for the specific purpose of helping the learner to improve skills in movement, it is recorded using the appropriate movement task designation (see Figure 3, example #4).

   b. Also included in the broad category of guidance are those verbal behaviors which accept or reject the learner's behavior; ask questions which help him to improve knowledge or attitudes about movement; and refer to organization of students and equipment, safety precautions, and specific directions related to the carrying out of a movement task (Barrett, 1969:119-120). All behaviors falling under this description are coded as general guidance (G).

c. Any verbal behaviors not presenting a movement task, and for which the movement task-related reference is unclear (e.g. "Good," when it is not indicated to what this refers) are coded as unrelated (U).

APPENDIX G

Raw Data Totals for Reliability and Objectivity

Table 7. Raw Data for Determination of Reliability: Total First and Second Codings of Three Tapes by Two Judges

Categories	Judge #1		Judge #2	
	first	second	first	second
Movement Task				
1	5	4	7	6
2	20	20	19	34
3	0	0	0	0
4a	16	36	18	5
4b	2	3	1	1
5a	18	5	0	0
5b	0	0	0	0
6	3	5	0	0
Content				
t	11	15	9	9
f	14	15	16	23
s	0	0	0	0
fl	0	0	0	0
ps	0	0	0	0
gs	3	0	3	0
le	3	6	4	3
pa	0	0	0	1
di	16	17	6	4
ba	42	50	51	59
bs	0	0	1	0
bp	43	50	55	52
m	137	156	129	128
nm	30	37	26	50
p	65	73	43	41
Guidance				
1	28	31	25	23
2	52	60	64	68
3	1	2	0	0
4a	1	2	5	1
4b	1	1	1	5
5a	4	2	0	0
5b	0	0	0	0
6	3	5	0	0
G	69	81	82	76
U	62	72	83	91

Table 8. Raw Data for Determination of Objectivity: Total Codings of Nine Tapes by Two Judges

Categories	Judge #1	Judge #2
Movement Task		
1	18	25
2	83	84
3	1	0
4a	46	48
4b	7	14
5a	24	0
5b	0	0
6	3	0
Content		
t	79	73
f	37	36
s	8	0
fl	0	0
ps	0	0
gs	36	16
le	52	53
pa	6	7
di	75	52
ba	147	184
bs	6	5
bp	149	148
m	259	299
nm	133	125
p	230	165
Guidance		
1	167	165
2	199	288
3	7	0
4a	23	7
4b	7	5
5a	11	0
5b	4	0
6	3	0
G	279	243
U	219	262