

INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.
2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.
3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.
4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.
5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

University Microfilms International

300 North Zeeb Road
Ann Arbor, Michigan 48106 USA
St. John's Road, Tyler's Green
High Wycombe, Bucks, England HP10 8HR

7824882

ASKEW, JOAN

A TECHNIQUE FOR IDENTIFYING EDUCATIONAL
BELIEFS OF PRESERVICE PHYSICAL EDUCATORS
RELATIVE TO STUDENT DECISION-MAKING.

THE UNIVERSITY OF NORTH CAROLINA AT
GREENSBORO, ED. D., 1978

University
Microfilms
International

300 N. ZEEB ROAD, ANN ARBOR, MI 48106



1978

JOAN ASKEW

ALL RIGHTS RESERVED

A TECHNIQUE FOR IDENTIFYING EDUCATIONAL BELIEFS
OF PRESERVICE PHYSICAL EDUCATORS RELATIVE
TO STUDENT DECISION-MAKING

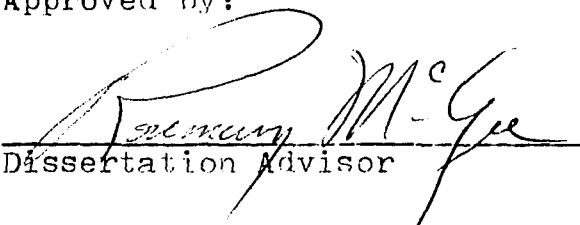
by

Joan Askew

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

Greensboro
1978

Approved by:


Dissertation Advisor

APPROVAL PAGE

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

Dissertation
Advisor

James M. G...

Oral Examination
Committee Members

J. M. G...

R. H. Nelson

E. Davis McKinney

Elizabeth C. ...

June 6, 1978
Date of Acceptance by Committee

May 8, 1978
Date of Final Oral Examination

ASKEW, JOAN. A Technique for Identifying Educational Beliefs of Preservice Physical Educators Relative to Student Decision-making. (1978)
Directed by Dr. Rosemary McGee. Pp. 131.

The purpose of the study was to explore the feasibility of developing a technique for identifying educational beliefs about the degree of responsibility a prospective physical educator would be willing to allocate future students for their own decision-making.

A 30-item situation-response scale was developed to indicate a profile of beliefs held by preservice physical educators about the content of physical education, the nature of the teaching-learning process, the nature of the learner, and the operational setting in physical education.

The procedures followed included writing the items, judging the items, and estimating the reliability of the scale. Fifty situation-response items were developed and submitted to five judges. The judges had three responsibilities: (1) to judge whether or not the item content was appropriate to the purpose of the scale, (2) to rank the four responses for each item from 1 through 4 according to the amount of responsibility allowed for student self-direction, and (3) to make editorial comments.

An intraclass correlation coefficient was computed for each of the 50 items. Any item having a coefficient of .7 or below was eliminated from the final scale of 30 items. Some additional items were eliminated at the discretion of the author.

The scale was administered to 103 preservice physical education majors for the purpose of estimating the reliability. A one-way analysis of variance technique was used to estimate R at .742 if no interaction is assumed and at .795 if interaction is assumed.

The Prospective Physical Educator Belief Scale is an acceptable technique for identifying beliefs about the degree of responsibility a prospective physical educator would be willing to allow his future students. This is substantiated by the following points:

1. It appears to have content validity related to the learner, to the teaching-learning process, and to the nature of physical education as attested to by a jury of experts.

2. It appears to include items which have the potential to provide a range of scores which can distinguish between degrees of responsibility a preservice educator is willing to afford future students. This is evidenced by a potential total distance score range of from zero to 152.7 and a realized range of from 34.98 to 103.05 with a mean of 81.30 for 103 preservice educators.

3. It appears to be reliable as evidenced by a correlation of .795 if one assumes interaction in the analysis of variance procedure, and a .742 if interaction is not assumed.

ACKNOWLEDGMENTS

Deepest appreciation is extended to Dr. Rosemary McGee for her continued guidance and reassurance throughout the planning and completion of this study. Without her gentle encouragement and support the study would not have been completed.

Appreciation is extended also to the members of the doctoral committee, Dr. Kate Barrett, Dr. Doris McKinney, Dr. Tom Martinek, Dr. Roland Nelson, and Dr. Elizabeth Umstead, for their insights, encouragement and assistance with the study.

Special gratitude is extended to the judges, Dr. Virginia Hart, Mr. Joseph Lukaszewski, Dr. Tom Martinek, Dr. Robberta Mesenbrink, and Dr. Martha Sue Taylor, who gave of their time to rank the responses for each item in the scale and offer thoughtful and insightful editorial suggestions.

The writer also wishes to thank the students and faculty at Appalachian State University for their willingness to participate in the study. Two colleagues in particular, Dr. Vaughn Christian and Dr. Larry Kitchens, gave willingly and unselfishly of their time as unofficial statistical consultants for the study.

TABLE OF CONTENTS

	Page
APPROVAL PAGE	ii
ACKNOWLEDGMENTS	iii
LIST OF TABLES	vi
LIST OF FIGURES	vii
CHAPTER	
I. INTRODUCTION	1
Statement of the Problem	2
Definitions	4
Rationale Underlying the Scale	6
Assumptions Underlying Research	10
Significance of the Study	10
II. REVIEW OF LITERATURE	12
Preservice Training of Teachers	12
Affective Considerations in Education	15
Trends in the Future of Education	18
Scales and Scale Construction	22
Guidelines for Scale Construction	30
General Summary	31
III. PROCEDURES	33
Development of the Scale	33
Writing the Items	33
Judging the Items	36
Selecting Final Items for the Scale	37
Administration of the Scale	39
Selection of the Subjects	39
Administration of the Scale	39
Treatment of the Data	40
Scoring the Scale	40
Recording the Scores	42
Summary	43
IV. ANALYSIS AND DISCUSSION	44
Scale Reliability	44
Results of Trainee Responses	47
Discussion	49

TABLE OF CONTENTS (Continued)

CHAPTER	Page
V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	55
Summary	55
Conclusions	56
Recommendations for New Research	56
BIBLIOGRAPHY	58
APPENDICES	66
APPENDIX A CORRESPONDENCE	67
First Letter to Judges	68
Sample Postal Card Enclosed with First Letter to the Judges	69
Second Letter to the Judges	70
Directions to the Judges	71
Third Letter to the Judges	74
Contact Letter Securing Subjects	75
Follow-Up Letter of Appreciation	76
APPENDIX B ORIGINAL SCALE ITEMS	77
APPENDIX C JUDGES' RANKINGS	99
APPENDIX D COMPUTER DISTANCE RATINGS	109
APPENDIX E DIRECTIONS FOR THE FINAL SCALE	116
APPENDIX F SCORING FORMULA AND KEY	119
APPENDIX G PROSPECTIVE PHYSICAL EDUCATOR BELIEF SCALE SCORE SHEET AND PROFILE	124
APPENDIX H MEANS FOR 30 ITEMS	126
APPENDIX I MEANS FOR 103 SUBJECTS	128
APPENDIX J FORTRAN PROGRAM FOR DISTANCE RATINGS BY REBECCA MAY	130

LIST OF TABLES

	Page
Table	
1. Intraclass Coefficients for the Final Scale	38
2. Analysis of Variance Summary Table	46
3. Frequency Distribution of Total Distance Scores	47

LIST OF FIGURES

	Page
Figure	
1. Matrix for Designing Items	34
2. Item Means for 103 Trainees	48
3. Profile for Lowest Score on PPEBS	50
4. Profile for Highest Score on PPEBS	51

CHAPTER I

INTRODUCTION

The ongoing search for efficient ways of learning continues now as it has since the beginning of formal education. The traditional axiom, people learn from the known to the related unknown, is still a legitimate guide for educators. In teacher education, in order to increase the efficiency of learning and possibly hasten professional growth of preservice educators, information relative to current predilection of preservice educators is desirable. Having information of this kind would allow professional educators to design learning experiences that extend the thinking of preservice educators from a particular point on a continuum rather than having to assume a beginning point for designing learning experiences. In effect this would bridge the gap between the known and the related unknown.

Logical assumptions can be made about teacher behavior and the causes of that behavior. In general terms, teacher behavior can be influenced by the beliefs a teacher holds concerning the nature of the learner, the nature of the teaching-learning process, and the nature of the content of the subject area in which he is involved (Combs, 1974). The

development of an instrument for the identification of some of these beliefs was the primary focus for this study.

Teacher education attempts to establish teaching patterns of preservice educators which are consistent with research findings and yet Locke (1977, p. 145) suggested that "for two or three generations, at least, we have been teaching a brand of physical education to trainees that is substantially superior to what they practice when they get out in the schools." This would substantiate a general belief that knowledge alone does not change behavior.

In attempting to identify expressed beliefs, a scale was developed which would project beliefs and preferences of preservice educators toward the elements that comprise a physical education setting. Instruments are available to assess the cognitive and psychomotor levels of physical education. Instruments are available to assess attitudes about physical education. There is no known instrument that directs its purpose toward identifying what a preservice physical educator believes about the conduct of his future classes.

STATEMENT OF THE PROBLEM

The purpose of the study was to explore the feasibility of developing a technique for identifying educational beliefs about the degree of responsibility a prospective

physical educator would be willing to allow his future students.

The criteria used as guidelines for measuring the worth of such an instrument follow.

1. The items should include concepts relative to the learner, to the teaching-learning process, and to physical education.

2. The item responses should reflect a range of alternative behaviors representing a continuum of the degrees of responsibility afforded the student for his own decision-making.

3. The scale should be reliable.

The scale is intended to indicate a profile of beliefs held by the preservice educator during the academic term in which he declares a major in physical education. The content of each item can be construed as reflecting partially what the future teacher believes about students, learning, physical education, or the operational procedures necessary in a physical education setting. The responsibility for decision-making includes cognitive and affective decisions as well as psychomotor, which might occur in a physical education class. There is no value judgement implied in the scale. The intent is to indicate consistency in thinking, rather than impose a standard of rightness or wrongness.

DEFINITIONS

For the purposes of this study, operational definitions are as follows.

Preservice educator. Preservice educator is the term designating a college student enrolled in a physical education teacher education program. Trainee and preservice educator are used synonymously. Since a major in physical education can be declared at varying classifications, classification is disregarded.

Learner. Learner is the term used to indicate a public school student who will be the future student of the preservice educator. Student and learner are used interchangeably.

Professional educator. Professional educator is the term indicating a higher education teacher who teaches professional education undergraduate courses.

Teaching-learning process. The teaching-learning process refers to the cognitive, affective and psychomotor aspects of communication necessary between a teacher and a learner in order for learning to occur.

Physical education. Physical education is that part of education which is directly concerned with the development of psychomotor, affective, and cognitive skills necessary to pursue vigorous participation in wholesome physical activity.

Values. Values are general guides to behavior which meet seven criteria.

- Choosing: (1) freely
 (2) from alternatives
 (3) after thoughtful consideration of the consequences of each alternative
- Prizing: (4) cherishing, being happy with the choice
 (5) willing to affirm the choice publicly
- Acting: (6) doing something with the choice
 (7) repeatedly, in some pattern of life
 (Raths, Harmin and Simon, 1966, p.30).

Value Indicators. Value indicators are goals, purposes, aspirations, attitudes, interests, feelings, beliefs, convictions, activities, worries, problems and obstacles. Each could indicate the presence of a value. Unless they meet the seven criteria of a value, they are considered value indicators (Raths, Harmin and Simon, 1966, p. 30).

Attitudes. Edwards (1957, p. 2) defined an attitude as "the degree of positive or negative affect associated with some psychological object." He accepted Thurstone's elaboration of a psychological object as being "any symbol, phrase, slogan, person, institution, ideal or idea toward which people can differ with respect to positive or negative affect." Although the direct application of Edwards' definition of attitude is appropriate at face value, it does not automatically include the presence of

the seven criteria as suggested by Raths, Harmin and Simon.

Beliefs. The term beliefs represents temporary or permanent positions taken by a preservice educator. These beliefs can be rationally or emotionally based and may represent a considered position or an unthinkingly adopted one. The term beliefs as used throughout this study and in the name of the scale is a loose approximation of true intent of the scale. This idea is explored more fully in the following section on "Rationale Underlying the Scale."

Predilection. Predilection is the term more closely indicative of the true concept of the scale in this study. The Oxford English Dictionary defines predilection as: "a mental preference or partiality; a favourable predisposition or prepossession (1933, p. 1262). Webster's Third New International Dictionary in elaborating on the definition of predilection explained

"prepossession implies a fixed idea or notion, especially a value judgement that dominates and is likely to preclude objective judgement of something seeming to counter to it. . . ."
(1966, p. 1786)

RATIONALE UNDERLYING THE SCALE

The rationale for the scale was developed around several assumptions which fall within three conceptual categories. The categories are: (1) Teachers and Research on Teaching, (2) Process-Oriented Education, and (3) Identification of Values.

Teachers and Research on Teaching. One of the characteristics of an effective teacher that is consistently found among studies is that a good teacher cares. An assumption relative to this finding is that a caring teacher is one who also respects students. A second assumption is: a teacher who respects students is willing to trust them to make decisions relative to their own learning.

Another assumption about teachers is the belief that teacher behavior is limited by past experience as a student, by a lack of alternative behaviors and in some instances by fear. The fear may be of supervisors, parents, legal liability or of students. The fear of losing control of students would reflect a basic lack of respect for students.

Locke (1977, p. 145) has stated that recent graduates are not utilizing the methods and techniques they were taught in professional preparation courses. One explanation for this occurrence could be the failure of professional preparation courses to bridge the gap between the known and the related unknown. A related explanation is supported by knowlege that behavior is not determined entirely by cognition but by feelings as well as facts.

Process-Oriented Education. Within the process-product controversy in education, stems another basic assumption of the writer in developing a rationale for the scale. A teacher who is willing to allocate

responsibility for decision-making to the students is at least as concerned with students learning the processes involved in wise decision-making as he is in students mastering the end-product of a lesson.

Decision-making is a learned skill. In order for a student to learn to make wise and reasoned decisions, he must be provided with opportunities for decision-making and learning experiences in decision-making. A final assumption within the process-oriented category was derived from reflection about the knowledge explosion and a society which is characterized by rapid change. It would appear that the most beneficial knowledge a student could gain through education is that of knowing how to analyze circumstances, project and activate solutions and how to continue learning throughout life.

Identification of Values. The search for a clear description of the complex entity envisioned relative to the abstract findings and beliefs about education, not only for professional preparation but also for public education, led the writer to attempt to isolate the distinction between and among several words. The matter of semantics is important only in relation to an accurate understanding of the concept involved.

Formal definitions reveal the difference between the two words first considered as choices. Attitude, as defined formally, includes as one definition the following: "Position or bearing as indicating action, feeling or mood. . . ." Predilection is defined as "a prepossession in form or something, predisposition to choose or like, partiality." The synonyms (prepossession, prejudice, bias) mean a feeling or idea which inclines one to make a choice or judgement without forethought. Of significance are the concepts of feeling and the concept of "without forethought." Beliefs imply thinking rather than feeling. Therefore, predilection best suits the concept underlying the scale. The term confluent, as defined by educators (Brown, 1976), is a close approximation of the concept in that there is a flowing together of cognitive and affective elements. The assumption that either thought or feelings alone are the determinants of action cannot be made in describing the purposes of the scale. Neither can the assumption be made that expressed beliefs represent values or that attitudes represent values. What can be said is that expressed beliefs may indicate the presence of a value whether that value be of affective or cognitive derivation.

This study cannot assume that the scale reflects a value system primarily because the responses of the scale may not include the preferred choice of the preservice

educator and they were asked to rank all responses. In addition, there is no foreseeable way to verify the presence or absence of the seven criteria required by Raths, Harmin and Simon (1966) for the items in the scale.

ASSUMPTIONS UNDERLYING RESEARCH

The technique for identifying preliminary educational beliefs of prospective physical educators was designed around the following assumptions.

1. Responses to the scale could be indicative of potential teaching behavior.
2. Preservice educators will respond in relation to their current predilection.
3. A situation-response scale can be developed to show a continuum of the degrees of responsibility.
4. A situation-response scale can be developed to indicate the types of behavior exhibited in physical education classes.

SIGNIFICANCE OF THE STUDY

The results of the scale could establish baseline data on the teacher in training. To the professional educator, this information can be used for establishing clear lines of communication as well as designing learning experiences appropriate to the educational positions being expressed by the preservice educator.

To the trainee, this information can offer a basis on which to evaluate current beliefs. The scale could offer some possible ranges of behaviors for his awareness and allow him to focus on his position relative to stated alternatives.

The ability to make cognizant decisions based on congruent beliefs would lessen the chances of situations such as reported by Curwin and Fuhrmann:

Just recently we visited a school that is based on an open-classroom philosophy. The students design their own curricula and work independently, but they wear uniforms. Student creativity is a major topic of conversation there, but all the bulletin boards are products of teacher efforts. We also know a first-grade teacher whose stated major goal is developing responsibility, but she lines her children up to go to the bathroom at the same time every day. (1975, p. 130)

CHAPTER II

REVIEW OF LITERATURE

This chapter focuses on two major categories of literature: (1) Teacher Education and (2) Scales and Scale Construction. The literature available on teaching and teachers is extensive. Therefore, this portion of the review is limited to (A) Pre-service Training of Teachers, (B) Affective Considerations in Education and (C) Trends in the Future of Education.

Pre-service Training of Teachers

Themes predominant in research reports offer several questions for consideration. Does change take place in pre-service educators during their four-year period of training? If so, when does the greatest change take place? In what ways does the change become evident? Is the change permanent or temporary? Is the change toward desirable or undesirable goals? What causes the change?

These are questions professional educators have been asking and attempting to answer since the beginning of formal educational research. The evidence is contradictory and inconclusive at best and only offers conclusions for specific situations. Castek (1970) conducted a study which revealed no significant changes in the attitudes, philosophical views or knowledge of professional secondary

education student teachers during a semester of student teaching. Newsome, Gentry and Stephens (1965) found statistically significant losses in consistency of ideas after student teaching occurred in secondary education majors but not in elementary education majors. Brim (1966) found that "attitudes of some teacher education students were changed while in the undergraduate teacher education program at the University of Denver. The change in this instance was toward a more liberal attitude toward children." On the other hand, Cooper (1977, p. 30) referred to a summary of research in which Borg reported that ". . . student teachers become more authoritative, more restrictive, less accepting of students and more concerned with teaching facts." Lantz (1964) concluded that student teacher experiences resulted in quantitative changes in skills and understandings as well as qualitative changes in self concepts. Mawson (1974, p. 1) found "no significant difference between student teachers' teaching patterns or attitudes toward teaching at the beginning of student teaching and at the end of student teaching."

A variety of approaches has been used to isolate the characteristics of effective teachers. Neither personality, methods of teaching nor attitudes of teachers seems to hold the key to effective teaching. Stern (1975) referred to a conclusion drawn by Fishbein which suggests that instruments should be used which assess the intention to

act in certain ways. This parallels the conclusions drawn from the Florida Studies (Combs, 1969, p. 9):

. . . apparently there is no such thing as a 'good' method or a 'right' method of teaching. . . . the key to the nature of the effective helping relationship is not to be found in what the helper knows or in the methods he used.

The solution, as they hypothesized it, might possibly be found within the perceptual organization of the individuals involved.

Gooding (1969) conducted a study on the perceptual organization of effective teachers and, among his conclusions, is the following one:

A statistically significant difference was demonstrated to exist between groups of effective teachers on the basis of perceptual organization as inferred from observation of the teachers' classroom behavior. (p. 32)

Gooding's summarized findings included the general reference of effective teachers which emphasize that they have an internal reference, a concern for people, a concern with perceptual meanings and a concern for the immediate causes of behavior rather than a historical one. Effective teachers think of people as being able, friendly, worthy, internally motivated, dependable and helpful. Effective teachers perceive themselves as able, dependable, worthy, wanted and preferring to be with people. They perceive teaching as being freeing, revealing, involving and encouraging processes and larger rather than smaller.

This study perhaps implies that the goals of teacher education programs should include an emphasis on developing sensitivity in student teachers by providing rich opportunities for student teachers to interact with students in warm, friendly, cooperative kinds of atmospheres.

Affective Considerations in Education

Some researchers and organizations are beginning to focus attention on affective curriculum and its occurrences and consequences in both public education and professional education. A glance at some of the titles of recent year-books published by the Association for Supervision and Curriculum Development will emphasize this point. Some of the titles include: Perceiving, Behaving and Becoming (1962), Life Skills in School and Society (1969), To Nurture Humaneness (1970), and Education for Peace (1973). Curry (1974) made an appeal for more humaneness in physical education in her article "Self Concept and the Educational Experience in Physical Education." Kneer (1974) reinforced the same position in "How Human Are You?". Hellison (1973) as well as Cassidy and Caldwell (1974) have published books concerned with humanizing physical education.

The lay public is beginning to put pressure on physical educators to be more concerned than previously with the affective outcomes of education. (Leonard, 1975a, 1975b; Tutko and Bruns, 1976.) Tutko and Bruns (1976, p. 201) went

as far as redefining success in sports as "working to your potential" rather than the traditional value of No. 1 being the only successful participant. Leonard (1975a, 1975b) stressed the necessity for emphasis on individual participation and accomplishment rather than humiliation and ranking of class members. With the onset of accountability and the development of the Taxonomy of Educational Objectives: Affective Domain, instructional objectives in the affective domain are becoming more prevalent and more clearly defined, as well as more predominant as a value in education.

Administrators of teacher education programs and principals are beginning to look for pupil-oriented teachers (Harvey, 1970; Olmsted, Blackington & Houston, 1974; Dixon and Morse, 1961; Cross and Nagle, 1969; Simon and O'Rourke, 1975). Concerned individuals are directing strong efforts to closing the "wide gap between our understanding of the nature of human behavior on the one hand and the utilization of such understanding in the classroom on the other (ASCD, 1962, p. 3)."

Curwin and Fuhrmann (1975) have devoted an entire book toward bridging the gap between knowledge and actions. Their first step is to help teachers toward a greater self-awareness relative to the internal aspect of self. The second step is to identify external aspects of the teaching self. One of the value clarifying techniques used involves a comparison

of stated values with actual behavior:

If your actions were not congruent with your stated values, then reevaluate your value priorities or change your behavior in relation to your stated values (p. 32).

Purkey (1970) expressed that, "A basic assumption of the theory of the self concept is that we behave according to our beliefs (p. 256)." He further stated that "if this assumption is true, then it follows that the teacher's beliefs about himself and his students are crucial factors in determining his effectiveness in the classroom (Avila, Combs and Purkey, 1971, p. 256)."

Of particular significance to the development of the scale in this study is the concept of the atmosphere that a teacher creates. Purkey (1971), in the Helping Relationship Sourcebook, identified six factors important to a classroom atmosphere which foster the development of a favorable self concept. The factors are: (1) challenge, (2) freedom, (3) respect, (4) warmth, (5) control, and (6) success.

All of the potential ramifications within the context of the affective domain cannot possibly be identified and categorized within the limitations of this study. The sources cited are intended to be representative of influences emanating from research in the affective domain.

Trends in the Future of Education

Some educators have projected ways in which schools will need to change in order for individuals to meet the demands of society. Louis C. Vaccaro, President of Colby College in New Hampshire, projected that

The principles of personal freedom, equality of opportunity, and democratic government can only be realized, through informed involvement and full participation of an educated populace.

He saw

. . . a gradual but definite shift in responsibility from a rigid system in which the college requires detailed adherence to minute degree and course requirements to a flexible system in which the student is responsible for and, in some ways, shapes his own program of study. (1975, p. 387)

Goodlad (1975) offered support for the same concept:

Today, two central thrusts characterize most widely accepted statements of goals for education in this country: the full development of the individual, and the identification with an ever-widening concept of social and cultural responsibility. (p. 2)

An Illinois Superintendent of Schools (Howard, 1974, P. 11) supported a similar view. "We know that people are more likely to be motivated to learn if they have something to say about what and how they will learn." A Pennsylvania Curriculum Specialist saw the future role of good teachers as being seekers of

. . . better ways to develop thinking, questioning, independent children, responsible for their own conduct and learning, able to develop their own objectives and

purposes, and capable of assessing their own strengths, weaknesses, progress and achievement. This places stress on learning "how" to learn on one's own, "whatever" the learning might be. (Guenther, 1974, p. 15)

This position on roles of good teachers reflects what schools will need to pursue in the future.

Related to future directions in education, Samples (1975) accused the U.S. educational domain as having "a pragmatic bias toward rational, linear modes of knowing" in his article on "Are You Teaching Only One Side of the Brain?" The basic premise explained was that the left side of the brain controls rational structured functions and the right side of the brain controls intuitive function. Schools have been placing emphasis predominantly on the development of the left side of the brain. Samples stated that, "the creativity so badly needed to cope with the complexity of contemporary society is within each of us. It can be released by making it possible for the whole mind to seek - and speak" (p. 28). Similar efforts are being emphasized in the cognitive domain in relation to developing higher levels of cognitive functioning as opposed to recall skills (Guenther, 1974). The articles reviewed to this point relative to trends in the future of education have been general in nature. The remaining reviews are related directly to the concept of decision-making in schools.

As a specific example of Goodlad's "full development of the individual and democratic government" is an article by Chesler (1970) in which he offered a view of "Shared Power and Student Decision Making." His thesis included the necessity of creating systems of shared power with greater student decision-making in secondary schools. He suggested that these systems must offer real power, real authority and real responsibility for educational decisions.

Physical educators have also emphasized the necessity for shared decision-making as well as offering suggestions for ways of accomplishing shared decision-making. Ostrow (1975) described a course at West Virginia University which focused on students studying at their own pace and manner. The students could contract for the kind and amount of work they wished to pursue for a particular grade in the course.

The May 1977 issue of the Journal of Physical Education and Recreation contains an article by Hurwitz entitled "Give Students a Choice." He offered four reasons for giving students a choice:

1. They learn better what they choose to learn.
2. If students share in the decision making process, their attitudes toward participation in physical activity improve, their enjoyment increases, and problems of discipline and non-participation decrease.
3. Students need to practice making decisions and to learn to accept responsibility for their decisions.
4. Humanistic teaching (a must when dealing with human learners) requires the giving of choice. (p. 28)

Hurwitz elaborated on specific techniques for giving choices including choice of skill on which to work, choice of group, location, duration and form.

Graham (1977), author of "Helping Students Design Their Own Games," has said

. . . it is apparent that diversity, rather than conformity, may characterize a significant portion of nonspectator games playing in the future. The physical education teacher will continue to teach prestructured games, but it is becoming increasingly evident that the contemporary physical educator will also be expected to be competent in helping students design their own games.

References to decision-making have not escaped the area of athletics any more than they have the elementary, secondary and professional preparation programs. Nylander (1972) wrote of a young coach who involved his basketball players in decision-making about the team. Players were allowed to make decisions concerning selection of offenses, defenses, strategy, practice schedules and even training rules. This is quite contradictory to the authoritarian situations usually encountered in athletics. Nylander further stated:

If we are to meet the demands of helping young people learn to live effectively in today's world and to be capable of change, then we need to recognize deterrents to these goals that exist within our collective attitudes.

The most recent indication of a trend toward helping students learn how to make decisions is in a new text by Cheffers and Evaul (1978). A crucial issue they described

is one in which children learn measures of independence from parents and environmental factors. They are concerned with increasing the capacity of individuals to make wise and meaningful decisions about personal involvement in physical activity.

Reasons for authoritarianism in physical education need to be reevaluated. Some reasons for authoritarianism might include the appearance of the class from the hallway, need for control over the number of executions of calisthenics, safety or the need of the teacher to be in complete control. Cheffers and Evaul shared an observation:

Surprisingly, however, models of democracy and decision sharing have given indication that they are equally secure, safe, and productive as authoritarian models, and may even be more so. (p. 344)

Scales and Scale Construction

This section of the review of literature will focus on related scales. Synthesis of conceptually related studies was desirable in establishing a frame of reference for the development of the scale in this study.

A search was made for an instrument or instruments designed to measure the expressed degree of responsibility a physical education teacher was willing to allocate students for decision-making. The search revealed no such instrument and only a few references to student decision-making.

A self-determination instrument was constructed by Callahan (1963) and consisted of two forms. Each form used a modification of Thurstone's method of scale construction. Form A consisted of 22 items concerning self-determination in a physical education program. Form B consisted of 22 items related to self-determination of the teacher's own behavior. The discrepancy between how much self-determination a teacher would permit his students and how much he wanted for himself was scored.

Kerlinger developed a Likert-type scale (ASCD, 1969a, p. 92) using 30 items to determine whether attitudes toward education were progressive or traditional. The scale has become known as the Education Scale VII.

Gowin, Newsome and Chandler (1961) developed a scale at the University of Georgia to study the logical consistency of ideas about education. The scale consisted of 100 statements describing the least and most ideal teacher's thoughts and actions.

Affective scales are found predominantly in research among the helping professions. The helping professions are defined usually as including medicine, teaching and clergy. More recently some people include social workers, counselors, human relation experts, school psychologists, public health nurses, psychiatrists, play therapists and various other similar professions (Combs, 1969, p. 3).

Campbell, Kagan and Krathwohl (1971) developed a multiple-choice scale to "measure an individual's ability to detect and describe the immediate affective state of another (affective sensitivity or empathy.)" (p. 407). Using a free-response technique, Arbuckle and Wicas (1957) developed an instrument to measure counseling perceptions. They concluded that the instrument could be used appropriately to compare response behavior of counselor trainees with behaviors of expert counselors.

In 1964, Shostrom reported on "An Inventory for the Measurement of Self-Actualization", which he entitled The Personal Orientation Inventory (POI). It consists of "150 two-choice-comparative-value judgements." The unique element within the POI appears in the stating of values twice. One value is stated as well as its opposite value. The reader does not have to assume the opposite statement.

Dymond (1949) conducted a study using the Rating Test as a scale for measuring empathic ability. The results were promising but not conclusive. Maloney, Ward and Braucht (1975) reported on "A Revised Scale for the Measurement of Ecological Attitudes and Knowledge." Of interest in this study is the categorization of four subscales: verbal commitment (VC) which measures what a person states he is willing to do in reference to pollution-environment issues, actual commitment (AC) which measures what a person actually does in reference to pollution-

environment issues, affect (A) which measures the degree of emotionality related to such issues, and knowledge (K) which measures specific factual knowledge related to ecological issues. The AC subscale concept approaches the implementation of the rationale for the items in this study and further supports Fishbein's suggestion that "intention" is the element to be studied.

Of particular significance to this study is the work done by Robert E. Bills over a period of some twenty years. In 1951, Bills, Vance and McLean published "An Index of Adjustment and Values" which is now a part of a collection of instruments designed partially to assist schools in determining their responsibilities in the affective lives of students and to assist them in assessing the affective learning of students and climates for affective learnings. The fifth and last instrument in the collection, Locus of Responsibility Scale, "provides a means for students to describe the locus of decision making in their classroom (Bills, 1975, p. 3)." The scale consists of 27 multiple choice items descriptive of the nature of classroom interaction. The scale attempts to answer whether the teacher, the students or both are making decisions in the classroom.

No other study was found which used decision-making as a particular emphasis within the scale. There are some studies, however, which made use of decision-making

indirectly. Cheffers, Mancini and Zaichkowsky (1976) devised a scale which was used to compare two human movement programs for elementary school physical education. In one program the teacher made all the decisions and in the other program the children were encouraged to help make decisions. The scale was developed "to measure the attitudes of the children toward the teacher, the facilities, and certain processes evident in the human movement program (p. 31)." In a similar report by the same authors with Mancini as the lead investigator (1976), the results indicated that children in the decision-making class projected more positive attitudes, greater interaction with the teachers, had more initiative and made more contributions in class.

Martinek (1977) with Zaichkowsky and Cheffers compared the effects of decision-making on the motor skills and self concept of elementary age children. The results indicated that a teacher-directed approach appears to be best for the development of motor skills and that a student-sharing approach has a definite positive effect on the development of self concept (p. 349).

Several scales in physical education were selected for review because they related to the affective domain or to format. The content of the scales was not directly related to the emphasis of decision-making in this study.

Wear (1951) constructed a 40-item Likert-type attitude inventory for evaluating attitudes toward physical education as an activity course. In 1953 McCue reported on the construction of an instrument for evaluating attitudes toward intensive competition in team games. The scale consisted of 77 Likert-type items and proved to be objective and reliable.

Simon (1973) under the supervision of Smoll developed an instrument for assessing children's attitudes toward physical activity. The instrument utilized a semantic differential technique appropriate for children in grades four, five and six. The instrument appeared appropriate for group testing.

Mayshark (1956) developed two statistically equal forms of a 60-item multiple choice, situation-response scale to measure the health and safety attitudes of seventh grade students. Myers (1958) developed and further refined a safety attitude scale similar to that of Mayshark.

In addition to the study by Mayshark, four other situation-response scales were reviewed. The earliest study of the four was conducted by Rosander in 1937. An attempt was made to project individuals into real life situations by listing alternative behaviors as solutions to the situations. The individual was to select the behavior reaction he would actually do if found in that particular

situation. Each situation and the responses depicted actual situations that were likely to occur.

Two years later Pace (1939) constructed a situation-response scale concerning radicals and conservatives. Of particular concern to Pace was the elimination of vague, general statements that had previously been used in opinion scales.

Zelfer (1971) developed a situation-response scale to measure attitudes of first and second year college women toward birth defects. In 1973, Sisley (p. 105-106) conducted a study similar in design to that of Zelfer. The scale was designed for the purpose of measuring the attitudes of women coaches toward the conduct of intercollegiate athletics for women. The scale was developed around thirteen sub-areas. The 50-item scale was completed by 246 women coaches and "appeared to indicate very desirable attitudes toward the conduct of intercollegiate athletics for women."

Three studies were reviewed for the purpose of comparing alternative techniques to the situation-response format. The three alternative techniques included: (1) the Q sort, (2) the semantic differential, and (3) the self-anchoring technique.

Gooding and Wilbur (1971) offered support for the Q technique as a measure of teacher attitudes. In their study, a 60-item sort was developed around (1) perception of self, (2) perception of others, and (3) perceptions of

the teaching task. The instrument has an average test-retest reliability of .86.

Young (1974) conducted a study to investigate the relationship between the Purdue Master Attitude Test and a semantic differential test. The compared results were similar which allowed for a conclusion that the tests were "equally effective" as an indicator of attitude change.

The Self-Anchoring Scaling Technique was used by Chiu (1972) to study the effectiveness of teaching. Chiu described a self-anchoring scale as one in which each subject

. . . is asked to describe, in terms of his own perceptions, goals, and values, the top and bottom, or anchoring points, of the dimension on which measurement is desired, and then to employ this self-defined continuum as a measuring device. (p. 318)

The technique used by Chiu offers promise for further research particularly in light of the work done by Combs and associates.

Even though all of the types of scales reviewed had advantages applicable to the purpose of this scale, the situation-response format was deemed most appropriate. The utilization of a situation - response format would take into account the recommendation of Rosander in that an individual could be projected "into a real-life situation" in which he would have to "select the responses which he would make if he actually faced the situation (1937, p.4)."

The vagueness and generality of statements to which Pace (1939) objected could also be lessened through the use of a situation-response format.

An intent of the scale, as presented in the statement of the problem, requires a range of alternative behaviors representing a continuum of the degrees of responsibility afforded a student for his own decision-making. The situation-response format allowed maximum utilization in meeting this requirement. One additional benefit related to the ultimate benefit of the scale as a teaching technique was the potential the responses had for expanding awareness of alternatives available.

Guidelines for Scale Construction

Several authors have offered guidelines for the general construction of scales. Edwards (1957, p. 13-14) summarized suggestions from five previous studies.

1. Avoid statements that refer to the past rather than to the present.
2. Avoid statements that are factual or capable of being interpreted as factual.
3. Avoid statements that may be interpreted in more than one way.
4. Avoid statements that are irrelevant to the psychological object under consideration.
5. Avoid statements that are likely to be endorsed by almost everyone or by almost no one.
6. Select statements that are believed to cover the entire range of the affective scale of interest.

7. Keep the language of the statements simple, clear, and direct.
8. Statements should be short, rarely exceeding 20 words.
9. Each statement should contain only one complete thought.
10. Statements containing universals such as all, always, none, and never often introduce ambiguity and should be avoided.
11. Words such as only, just, merely, and others of a similar nature should be used with care and moderation in writing statements.
12. Whenever possible, statements should be in the form of simple sentences rather than in the form of compound or complex sentences.
13. Avoid the use of words that may not be understood by those who are to be given the completed scale.
14. Avoid the use of double negatives.

Adkins (1974) discussed guidelines for the position of responses for a test. Her suggestion was to "adopt a systematic scheme for setting down all possible orders (p. 95)." The exception to following a systematic rotation of responses occurs when there is a logical order or numerical sequence to the responses. She further suggested:

If two optional answers are very similar but differ in a few words, they may be placed next to each other in order to minimize reading difficulty and to facilitate contrast between them. Likewise, if alternatives contain two pairs of opposites, the members of each pair should appear together to avoid confusing the subject unnecessarily. (p. 95)

General Summary

Literature relative to changes in pre-service educators has been reviewed and offers contradictory evidence. The section on affective considerations in education reveals an

influence toward teachers being more humane as well as including affective objectives in their programs. Persons concerned with the future are asking for schools to give an opportunity for students to learn how to make and be responsible for their own decisions.

Scales related to physical education and the affective domain were reviewed with three underlying purposes: (1) to look at affective scales in print, (2) to look at the organization of previous research, and (3) to look at scales in the area of physical education.

CHAPTER III

PROCEDURES

The procedures followed for the completion of the study are described within this chapter. The major subdivisions include the Development of the Scale, the Administration of the Scale, and the Treatment of the Data.

DEVELOPMENT OF THE SCALE

The development of the scale involved three processes: writing the items, judging the items and selecting the final items for the scale.

Writing the Items

A matrix (Figure 1) was designed by the writer to use as a framework for developing the situation-response items for the scale. The framework categorized situations into four dimensions of content, domain, degree and time. Content indicated decisions about physical education, the learner, the teaching-learning process or the operational setting in a physical education class. The domain indicated decisions as cognitive, affective or psychomotor. The degree was indicative of the quality or quantity of the decision. Time represented whether the decision was made as a pre-class, in class or post-class decision. Decisions could

CONTENT

		Physical Education	Learner	Teaching-Learning Process	
TIME	Pre-class Decisions				Cognitive Affective Psychomotor
	In-Class Decisions				Cognitive Affective Psychomotor
	Post-class Decisions				Cognitive Affective Psychomotor
		Quality Quantity	Quality Quantity	Quality Quantity	
		DEGREE			
					DOMAIN

FIGURE 1. MATRIX FOR DESIGNING ITEMS

easily fall within the cognitive, affective or psychomotor domains. Even though many of the questions could be classified in several content categories, the framework proved helpful in generating stems for items. An attempt was originally made to balance the type of items to keep each category of equal number. The effort to maintain a balance, however, was discarded when it was realized that in order to keep the categories equal, assumptions had to be made about the knowledge underclassmen had concerning technical aspects of physical education and educational psychology.

Sources for ideas for the situations came from physical education and educational literature. Ideas for the situations were also derived from lay literature, related literature, colleagues and preservice educators enrolled in the writer's classes over several years.

Thirteen sample situation-response items, each with four alternative responses, were administered to three Fall 1976 classes at a northwestern North Carolina university as a trial procedure for developing additional situations and a scoring system for the final scale. The members of each class were invited to share thoughts and reactions.

Thirty-six situation items were then developed and submitted to a trial judge for ranking and for editorial comments. The trial judge was a well-read layman and an active member of the Parent Teachers Association. The editorial and technical suggestions offered by the trial judge permitted revision of the items for clarity and continuity. Fourteen additional items were developed. A

total of fifty situation-response items, each with four alternative responses was then submitted to five judges for validation, ranking and editorial suggestions.

Judging the Items

Five persons were invited to act as judges based on their experiences and interest in the field of physical education. The judges included Dr. Virginia Hart, Professor of Health, Physical Education and Recreation at Mars Hill College, Mr. Joseph Lukaszewski, Instructor in the School of Health, Physical Education and Recreation at the University of North Carolina at Greensboro and former Coordinator of Health and Physical Education at Fort Bragg Dependent Schools, Fort Bragg, North Carolina, Dr. Tom Martinek, Assistant Professor in the School of Health, Physical Education and Recreation at the University of North Carolina at Greensboro, Dr. Robberta Mesenbrink, Smith High School, Greensboro, North Carolina and Dr. Martha Sue Taylor, Assistant Professor at Winthrop College, Rock Hill, South Carolina. All five judges returned a self-addressed postal card indicating a willingness to participate in the study. Upon receipt of the acceptance card, packets were forwarded to each of the judges. The packets contained a cover letter, a direction sheet to the judges, the scale and a return envelope (Appendix A).

The judges were asked to react to three aspects of each item:

1. The appropriateness of the item to a physical education setting. Four of the five judges had to agree on the appropriateness of the item for the question to be acceptable for use in the scale.

2. The degree of responsibility offered by each response to each item. A ranking of 1 indicated the most freedom for responsibility and a ranking of 2, 3 and 4 indicated decreasing degrees of responsibility respectively. The judges could utilize duplicate and fractional rankings if necessary. An intraclass coefficient of .7 was required to retain an item in the scale. An intraclass coefficient was computed on each of the 50 items as recommended by Ebel (1951) (Appendix C).

3. Lastly, editorial comments.

Selecting the Final Items for the Scale

The criteria for retaining an item for the final scale included (1) four of the five judges agreeing on the appropriateness of the items and (2) an intraclass correlation coefficient of .7 or higher. As a result of the judging, 20 situation items were eliminated from the final scale (Appendix B). All five judges ruled item 17 inappropriate to the content of the scale. Twelve items were discarded with coefficients of .639 and below. Items number 9, 11, 15, 20, 23, 24, 27, 28, 30, 35, 46 and 47 were discarded because of unacceptable reliability.

Seven additional items were eliminated by the author. Items 8 and 39 needed expansion and refinement. Items 16 and 18 were discarded because of similarity to other items. Item 25 was only distantly related to decision-making. Item 26 was considered to be possibly unclear to freshmen and sophomores. Item 40 was considered by the author to lack clarity in the responses.

The intraclass coefficients of the 30 items retained for the scale are collectively illustrated in Table 1.

Table 1

Intraclass Coefficients for the Final Scale

Intraclass Coefficient	1.0	.97	.96	.92	.90	.88	.82	.81	.75	.73
Number of Items	8	1	3	10	1	1	1	3	1	1

After the 30 items to be retained were established, the order of appearance of the items was checked for degree of difficulty. Items judged by the writer to require a great amount of thought were interspersed with questions requiring a presumed lesser amount of thought.

The order of the responses within each item was then established using the following system. Responses were assigned A, B, C, D in rotating order according to the responsibility ranking assigned by the judges. For instance,

if an order of 4, 3, 1, 2 appeared in one item the next item had an altered rating. Thus, response rankings were generally rotated similar to the technique of establishing a round robin tournament schedule. The exceptions included questions whose responses had similar wording in which case the responses were written in either ascending or descending order as recommended by Adkins (1974, p. 25). The final form of the 30-item scale was titled the Prospective Physical Educator Belief Scale (PPEBS).

ADMINISTRATION OF THE SCALE

Selection of the Subjects

The chairman of the Department of Health, Physical Education and Recreation at Appalachian State University was contacted in September, 1977 to request permission to utilize Appalachian State University students as subjects. This request had been tentatively discussed the previous spring. Permission was confirmed and the dates of October 24 and 25, 1977 were established for administering the scale.

Administration of the Scale

The subjects used for estimating the reliability of the scale included 106 students enrolled at Appalachian State University during the fall term 1977. Eighty-six were enrolled in Introduction to Physical Education. Twenty were enrolled in either Organization and Administration of Physical

Education or History and Philosophy of Physical Education. The sample was considered representative of the population of first year physical education majors. The investigator personally administered the scale on October 24 and 25 at the time specified by the Chairman of the Department. The items in the first scale and the directions may be seen in Appendix B and E.

The directions for the scale required a forced-choice response for all items and all responses. The prospective physical educators were asked to rank each response according to their preference for their future students in the situation specified. A ranking of 1 was their first choice, a 2 was their second choice, a 3 was their third choice and a 4 indicated their fourth choice. They were allowed to use duplicate and fractional rankings as were the judges when assigning responsibility rankings.

TREATMENT OF THE DATA

Scoring the Scale

The technique devised to score the scale was developed from an adaptation of the Standard Algebraic Distance Formula (Marcus and Minc, 1970). The formula produces a number representing the total deviation of the preservice educators rankings of choices from those of the collective judges.

Distance Rating Formula

$$d (S_1 J_c) = \sqrt{(A_s - A_j)^2 + (B_s - B_j)^2 + (C_s - C_j)^2 + (D_s - D_j)^2}$$

As an example, in item number 5 (Appendix B), the judges' consensus ranking was 2, 1, 4 and 3 for A, B, C, D responses respectively. Subject number 37 ranked preferred choices as 1, 2, 4 and 3 respectively. The following substitutions would be made to compute the item distance score where subscript s is the subject's ranking and subscript j is the judges' consensus.

$$A_s = 1; A_j = 2; B_s = 2; B_j = 1; C_s = 4; C_j = 4; D_s = 3, D_j = 3.$$

$$\begin{aligned} \text{Item Distance} &= \sqrt{(1-2)^2 + (2-1)^2 + (4-4)^2 + (3-3)^2} \\ &= \sqrt{1 + 1 + 0 + 0} \\ &= \sqrt{2} = 1.41 \end{aligned} \quad (\text{Appendix D})$$

Therefore, 1.41 is the item distance score for subject number 37, item number 5.

For the purpose of clarity, the following definitions will be used in further discussion. Item distance score refers to the collective distance for A, B, C and D responses for one item. Total distance score refers to the collective total of 30 item distance scores.

A total distance score and/or item distance score of zero would indicate total agreement with the judges and reflect extreme willingness to allocate responsibility to

students. The highest logical item distance rating appears to be 5.09 for each item. This would equate to 152.7 for the total distance score for 30 items. There is no value judgment attached to the scores. A low score represents relative freedom, a high score indicates almost complete teacher control. A score falling within the middle range indicates a fluctuation between being willing to allocate responsibility and not being willing to allocate responsibility. Scores in the middle ranges would require individual analysis.

Recording the Scores

Of the 106 subjects who participated in the study, three were omitted from analysis. One student indicated that she was not majoring in physical education and would not be declaring a major in physical education. Two students omitted one question each which rendered their papers incapable of accurate scoring.

The papers were numbered consecutively from 1 to 103 and submitted to the Key Punch Department of the Appalachian State University Computer Center. The raw scores were transferred to punch cards and verified.

To facilitate key punch operations and eliminate the decimal in fractions, all scores were multiplied by 100 to read in three places. If a score was 1, it was recorded as 100. If a score was $2\frac{1}{2}$, it was recorded as 250. This necessitated the use of six cards for each trainee to record the raw scores. A computer program written specifically for this

study then provided an item distance score for 30 items and a total distance score for each subject (Appendix D).

Distance ratings for 103 subjects were analyzed for internal consistency using the Biomedical Computer Program for a one-way analysis of variance with repeated measures.

SUMMARY

The procedures followed in developing the scale by using the matrix assured that items were related to the concepts of the learner, the teaching-learning process, the nature of physical education and the operational procedures necessary in a physical education setting. This is further reinforced by the judges' acceptance or rejection of the items for appropriateness. The rankings of the items by the judges verified a range of alternative behaviors representing a continuum of the degrees of responsibility afforded the student for his own decision-making.

Responses of the judges represented ranked data and permitted the use of both duplicate and fractional ratings. The decision to use the intraclass correlation coefficient was based on recommendations by Ebel(1951) and Safrit (1976). The conservativeness of this technique as well as its ability to identify specific sources of variance were considered viable components for the measure of the consistency of the judges' rankings. The application of other similar and more liberal treatments, e.g., the Kruskal-Wallis ANOVA and the coefficient of concordance demonstrated similar results.

CHAPTER IV

ANALYSIS AND DISCUSSION

Presented within this chapter is a description of the procedures for estimating the reliability of the Prospective Physical Educator Belief Scale (PPEBS) and the results of administering the scale. The chapter is divided into two basic subdivisions of Scale Reliability and Results of Trainee Responses.

SCALE RELIABILITY

Three techniques were considered for estimating the reliability of the scale in this study. They were (1) equivalent-forms, (2) test-retest, and (3) measures of internal consistency.

The use of equivalent or parallel forms was eliminated as a possibility for two reasons. The difficulty of developing situation-response items which made no assumptions relative to factual knowledge of underclassmen had surfaced in utilizing the matrix for stem development. The number of items necessary for parallel forms was enormous relative to the restrictions of educational experience for which the scale was developed. Of greater importance in rejecting this method was the belief that a learning effect could be a strong influence.

The second method considered was the test-retest method. This method was rejected in an effort to eliminate the learning effect. Suggestions and comments received from the groups completing the 14-item preliminary scale items confirmed this belief.

The methods of establishing internal consistency considered included the Kuder-Richardson formula and Hoyt's analysis of variance (1941). Both of these methods were inappropriate for use with the scoring system devised for the scale. The number of right and wrong answers was needed and, instead, rankings of item responses were available.

Safrit (1976) recommended the use of analysis of variance for estimating reliability of a test when each of the individuals has the same number of trials. Since one administration of the scale was desirable and all subjects scored all responses on 30 items, the one-way analysis of variance with repeated measures was selected for estimating the reliability of the scale.

The Biomedical Computer Program (Dixon, 1973) met the criteria and was selected for use in computing the analysis of variance summary table. Thirty total distance scores for each of 103 trainees were used for the analysis of variance. The 1969 revision, BMD, Analysis of Variance for Factorial Design, Health Sciences Computing Facility, UCLA was used to produce the information for Table 2.

Table 2

Analysis of Variance Summary Table			
Source of Variation	Degrees of Freedom	Sums of Squares	Mean Squares
1 Trainee	102	456.25291	4.47307
2 Items	29	1,851.52432	63.84566
Residual (Interaction)	2,958	3,410.25830	1.15289
TOTAL	3,089	5,718.03510	

As reported by Safrit (1976, p. 31-32), useful estimates of reliability can be computed by the use of two formulas which show a range of R under two conditions. Since this design contains only one score per cell, a true estimate of the interaction is not possible. However, if interaction is assumed, the computation is as follows.

$$R = \frac{MS_s}{MS_s + MS_{int}} = \frac{4.473}{4.473 + 1.153} = .795$$

If no interaction is assumed, the formula utilized would be:

$$R = \frac{MS_s - MS_{int}}{MS_s} = \frac{4.473 - 1.153}{4.473} = .742$$

The use of either formula offered a respectable estimate of the internal consistency of the scale. A coefficient of .795 or .742 was considered acceptable for a scale of this type.

RESULTS OF TRAINEE RESPONSES

The highest logical total distance score was 152.7. The lowest possible total distance score was zero. The highest score represented more decisions being made by the preservice educator. The mean individual distance score for the 30-item PPEBS for the 103 trainees was 2.71. In terms of the total distance score, 2.71 represented a score of 81.30. Distance scores were computed from the mean individual scores by multiplying the mean score by 30 (the number of items.) The composite profile for the 103 trainees is shown in Figure 2. Table 3 summarized the total distance scores for the 103 trainees. Having a mean of 81.30 within a possible range of from zero to 152.7, this particular group could be considered to have scored at about the middle of the possible range. This could be interpreted as a fluctuating position between being willing and not willing to allocate responsibility for decision-making.

Table 3

Frequency Distribution of Total Distance Scores

Score	Frequency
30-39	1
40-49	1
50-59	2
60-69	9
70-79	34
80-89	30
90-99	24
100-109	2
	<hr/>
	103

FIGURE 2
ITEM MEANS FOR 103 TRAINEES

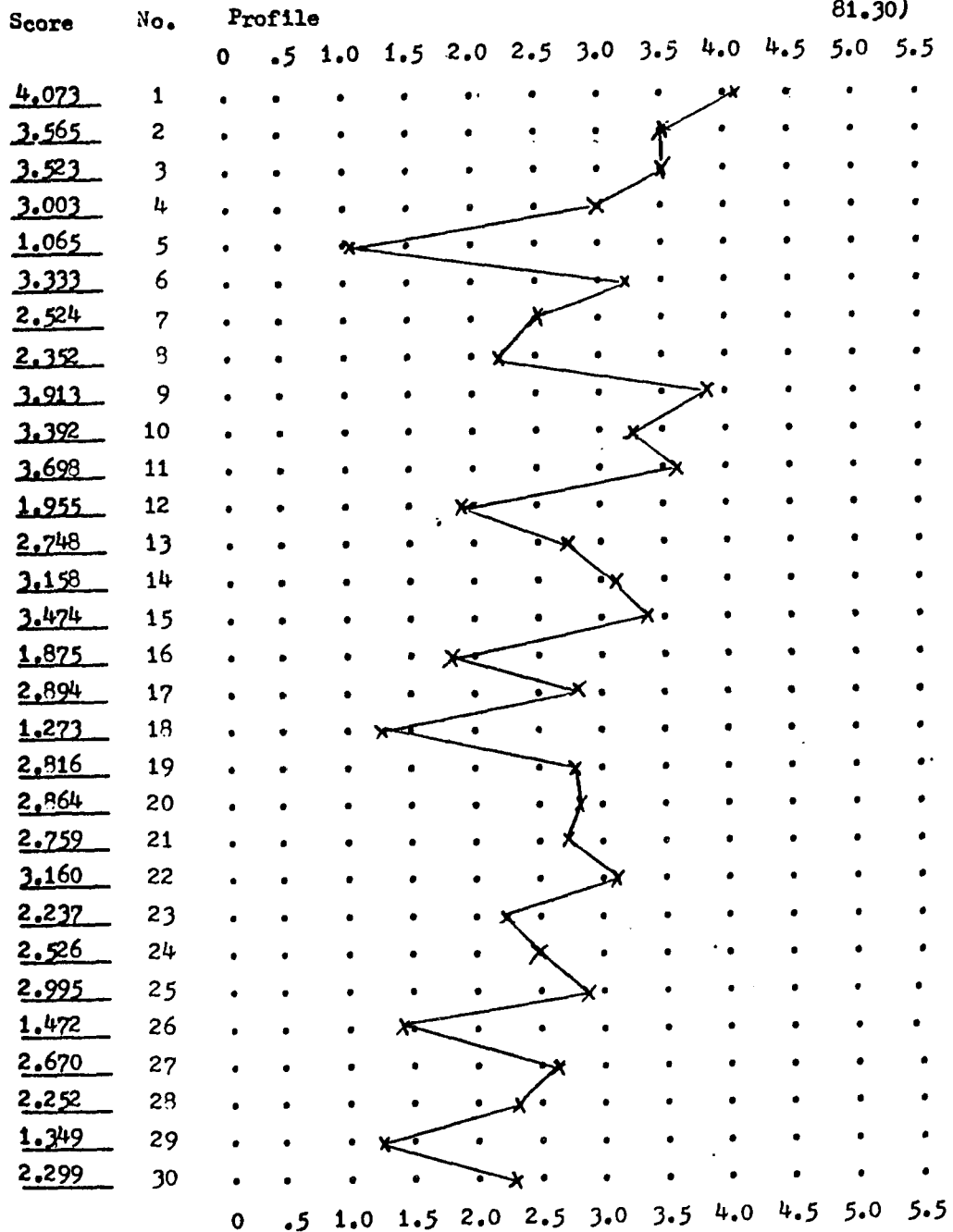
PROSPECTIVE PHYSICAL EDUCATOR BELIEF SCALE SCORE SHEET AND PROFILE

Name FPEBS - October 1977

Total 103 Subjects

Mean Score 2.706 (rounded = 2.71 =

81.30)



The range of means for individual items was 1.066 for item number 5 to 4.073 for item number 1. See Figure 2. Forty-eight of the trainees scored zero on the item distance score for item number 5 showing they were in complete accord with the judges' composite score.

The range of individual means was from 1.166 to 3.435. This gave total distance scores of from 34.98 to 103.05. Figure 3 shows the profile for the trainee who scored the lowest and Figure 4 shows the profile of the trainee who had the highest total distance score.

DISCUSSION

The reliability of the Prospective Physical Educator Belief Scale (PPEBS) was estimated at .742 if no interaction is assumed and at .795 if interaction is assumed. The range of distance scores was from 34.98 to 103.05 for 103 trainees. The scale appears to discriminate the distance and direction of the beliefs of prospective physical educators.

Information about these differences may be useful to the professional educator in designing learning experiences which are appropriate to the current thinking of preservice educators. Information of this nature would allow the planning of progressive learning experiences from the known to the related unknown.

Use of the items as a basis for class discussion may prove to be beneficial in extending the level of consciousness about possible alternatives. McAfee (1955) conducted a

FIGURE 3

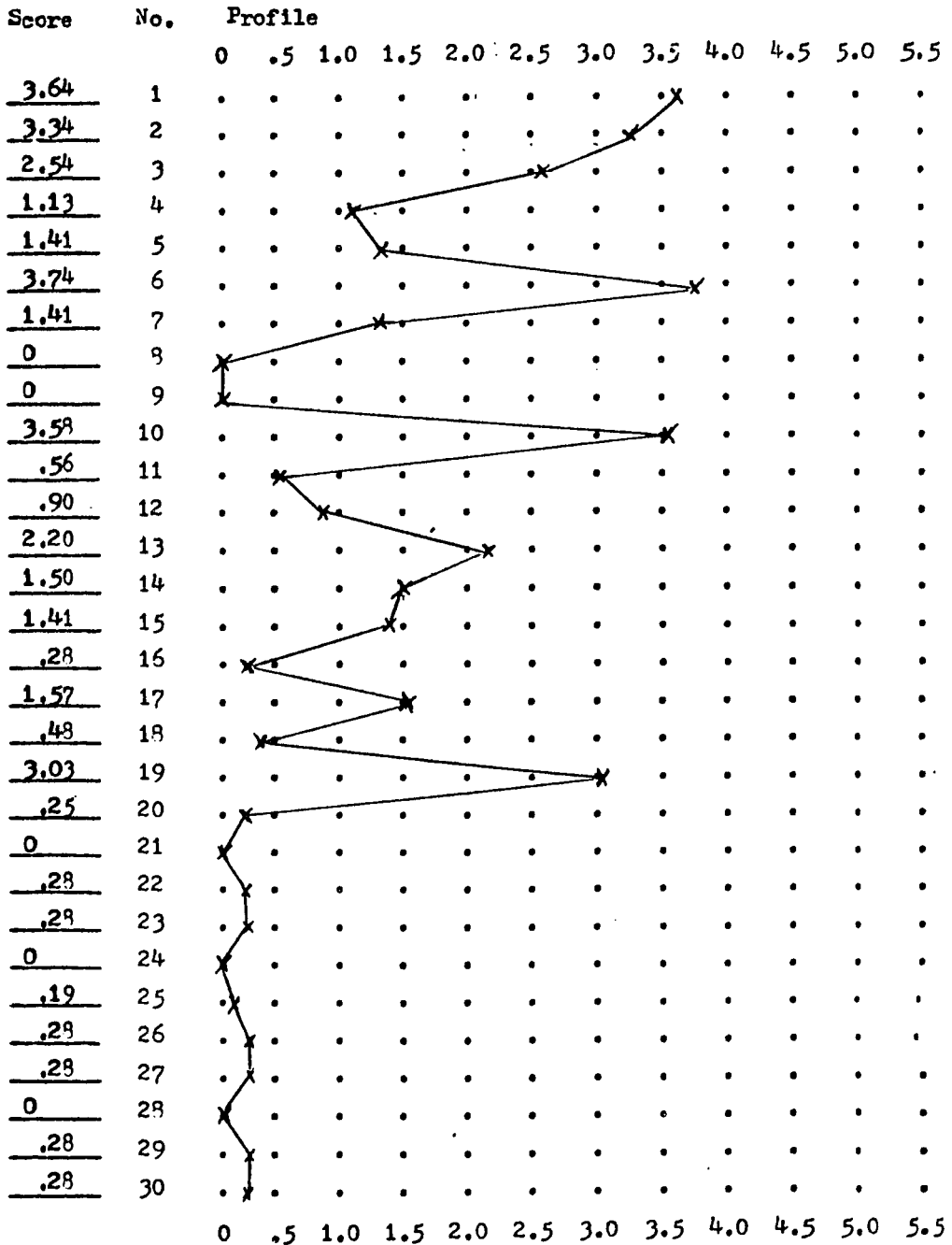
PROFILE FOR LOWEST SCORE ON PPEBS

PROSPECTIVE PHYSICAL EDUCATOR BELIEF SCALE SCORE SHEET AND PROFILE

Name No. 37

Total 34.97 (rounded = 35.10)

Mean Score 1.16567 (1.17)



study on attitudes about sportsmanship of sixth, seventh and eighth grade boys and found that discussion of the 20 items on a sportsmanship situation test proved to be valuable in teaching sportsmanship. Perhaps the use of the Prospective Physical Educator Belief Scale could be equally valuable as a learning device.

Two specific conclusions drawn from the administration of the scale deserve comment. Item number 13 under close analysis appeared to need clarification. The judges intraclass coefficient was .819 and mean score was 2.74. This appeared normal and appropriate but, in reading the individual rankings for each response for each of the 30 items, another perspective was gained. An exceptionally large number of individual rankings did not show a range of preference. Many of the preservice educators ranked the A, B, C and D choices a 1, 1, 1, 4, or 1, 1, 4, 4, etc. Apparently the item needs to be revised, clarified or even eliminated.

The scoring system was established specifically for use in estimating the reliability. With the use of the key and formula (Appendix F) and a hand calculator, scoring can be accomplished by the preservice educator or clerical personnel. This process, however, is very time consuming and laborious. Scoring would be facilitated if responses were limited to first choices only and the use of fractions was eliminated. These changes would require further study and consideration.

Potential revisions of the PPEBS could be considered in terms of scoring, judging and statistical analysis. An intriguing concept repeatedly surfaced throughout the study. An early effort was made and abandoned to equate all responses relative to each other. This is to say that a first choice in all items would be of equal intensity. The closest solution to that concept was to allow duplicate choices of rankings. The solution, of course, was not adequate to meet the full potential. The concept of the self-anchoring technique offered by Chiu (1972) could possibly be used to further eliminate the problem. The writer considered the use of a seven point ranking to be used with four responses. For instance, a ranking for responses A, B, C and D might be 1, 4, 5, 7 respectively, rather than 1, 2, 3 and 4. This procedure was thought to be confusing and inappropriate at this stage of scale development. The seven point ranking system, however, would probably eliminate the problem of fractions and come closer to equating responses for all items.

Decisions made by the writer relative to instructions to the judges need to be reevaluated. The intraclass coefficients were exceptionally satisfying considering the lack of structure imposed on the judges for ranking the responses. The task of judging the items might be simplified if an orientation document were developed. The purpose of the orientation would be to elaborate on the concept of the matrix discussed and illustrated in Chapter III. Particular

emphasis on the kind and level of responsibility in each item would be discussed.

In addition to an orientation to the responsibility ranking, guidelines could be established for identifying the specific content area for each item. The general categories of content were not separated for analysis. It might be desirable to identify each item by the content areas of the teaching-learning process, the nature of learning, the nature of physical education or operational procedures. A sub-score in each area might offer more information than one total distance score. The decision was made to establish the responsibility rankings as a priority over developing the categories for the purposes of this study.

Two additional statistical procedures might produce interesting information about the scale. A factor analysis could be used to analyze the relationships within the scale. A test-retest format might help to isolate whether or not a learning effect occurs as a result of completing the scale.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

A situation-response scale was developed utilizing the unifying theme of degrees of responsibility afforded a student in a physical education setting. Items focussed on the content of the nature of the learner, the nature of the teaching-learning process, and the nature of physical education or a physical education setting. The scale was developed for preservice physical educators to share current thinking on the amount of responsibility they would allow students in their future classes concerning decision-making.

Five judges reviewed 50 items for content validity and offered editorial suggestions. In addition, the judges ranked the responses for each item according to the amount of responsibility offered for decision-making. The ranking provided a key for scoring as well as verifying that a range of alternative behaviors was included in each item. Thirty items were selected for the final scale and for use in estimating reliability of the scale. A moderate estimate of reliability was achieved with analysis of variance using 103 students as subjects.

CONCLUSIONS

The Prospective Physical Educator Belief Scale (PPEBS) is an acceptable technique for identifying educational beliefs about the degree of responsibility a prospective physical educator would be willing to allow his future students. This is substantiated by the following points:

1. It appears to have content validity related to the learner, to the teaching-learning process, and to the nature of physical education as attested to by a jury of experts.
2. It appears to include items which have the potential to provide a range of scores which can distinguish between degrees of responsibility a preservice educator is willing to afford future students. This is evidenced by a potential total distance score range of from zero to 152.7 and a realized range of from 34.98 to 103.05 with a mean of 81.30 for 103 trainees.
3. It appears to be reliable as evidenced by a correlation of .795 if one assumes interaction in the analysis of variance procedure, and a .742 if interaction is not assumed.

RECOMMENDATIONS FOR NEW RESEARCH

The potential for future research using the PPEBS at this point seems exciting and open. Of particular interest to the investigator would be studies of the correlation of PPEBS with several standardized tests. The Minnesota Teacher Attitude Inventory (MTAI) and the Personal Orientation

Inventory (POI) are two of particular concern. The MTAI was designed to measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships and how well satisfied he will be with teaching as a vocation (Cook, Leeds, Callis, 1951). The POI is a diagnostic instrument designed to assess the values and self-perceptions believed to be of importance in the identification of self-actualization (Shostrom, 1964).

Several longitudinal studies might provide interesting results. The comparison of students between the freshman and senior years would be appropriate. Comparisons of before and after student teaching, of male and female students, of coaches and teachers, of seniors and experienced teachers, of student teachers and supervising teachers would all be appropriate.

Selecting or developing cognitive and psychomotor tests to be coupled with PPEBS could offer a battery of tests to be used for counseling and advising students. A comparison of Flanders Interaction Analysis with the PPEBS might offer additional information for devising learning experiences. Lastly, the PPEBS might be used as a tool to begin identification of the hidden curriculum in physical education.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Adkins, D. C. Test construction. Columbus, Ohio: C.E. Merrill Publishing Company, 1974.
- Arbuckle, D. S., & Wicas, E. A. The development of an instrument for the measurement of counseling perceptions. Journal of Counseling Psychology, 1957, 4, 304-312.
- Association for Supervision and Curriculum Development. Education for peace. Yearbook 1973. Washington, D. C.: ASCD, 1973.
- Association for Supervision and Curriculum Development. Perceiving, behaving and becoming. Yearbook 1962. Washington, D. C.: ASCD, 1962.
- Association for Supervision and Curriculum Development. Improving education assessment - an inventory of measures of affective behavior. Washington, D. C.: ASCD, 1969a.
- Association for Supervision and Curriculum Development. Life skills in school and society. Yearbook 1969. Washington, D. C.: ASCD, 1969b.
- Association for Supervision and Curriculum Development. To nurture humaneness. Yearbook 1970. Washington, D. C.: ASCD, 1970.
- Allport, G., Vernon, P. E., & Lindzey, G. Study of values. New York: Houghton Mifflin Company, 1960.
- Alpren, M. Differentiating affective concerns. Educational Leadership, 1972, 29, 627-630.
- Avila, D. L., Combs, A. W., & Purkey, W. W. The helping relationship sourcebook. Boston: Allyn and Bacon, Inc., 1971.
- Bills, R. E. A system for assessing affectivity. University, Alabama: The University of Alabama Press, 1975.
- Bills, R. E., Vance, E. L., & McLean, O. S. An index of adjustment and values. Journal of Consulting Psychology, 1951, 15, 257-261.

- Brim, B. J. Attitude changes in teacher education students. Journal of Educational Research, 1966, 59, 441-445.
- Brown, I., Phillips, M., & Shapiro, S. Getting it all together: confluent education. Bloomington, Indiana: The Phi Delta Kappa Educational Foundation, 1976.
- Callahan, B. L. Self-determination measurement in physical education. Completed Research, 1963, 5, 36.
- Campbell, R. J., Kagan, N., & Krathwohl, D. R. The development and validation of a scale to measure affective sensitivity (empathy). Journal of Counseling Psychology, 1971, 18, 407-412.
- Cassidy, R., & Caldwell, S. F., Humanizing physical education. Dubuque, Iowa: William C. Brown Company Publishers, 1974.
- Castek, J. E. Changes in attitudes, philosophical views, and knowledge of secondary education during student teaching. Ph. D. dissertation, University of Nebraska, 1970.
- Cheffers, J., & Evaul, T. Introduction to physical education: concepts of human movement. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1978.
- Cheffers, J. R. F., Mancini, V. H., & Zaichkowsky, L. D. The development of an elementary physical education attitude scale. Physical Educator, 1976, 33, 30-33.
- Chesler, M. A. Shared power and decision making. Educational Leadership, 1970, 28, 9-14.
- Chiu, L. Application of self-anchoring scaling for study of teaching effectiveness. The Journal of Educational Research, 1972, 65, 317-320.
- Combs, A. W., Soper, D. W., Gooding, C. T., Benton, J. A., Jr., Dickman, J. F. & Usher, R. H. Florida studies in the helping professions. Gainesville, Florida: University of Florida Press, 1969.
- Cook, W. W., Leeds, C. H., & Callis, R. Minnesota teacher attitude inventory. New York: The Psychological Corporation, 1951.

- Cooper, S. H. Hope for the future: a view of research in teacher effectiveness. Quest, Summer 1977, 28, 29-37.
- Cross, J. S., & Nagle, J. M. Student-oriented teachers and how to find them. National Association of Secondary School Principals Bulletin, 1969, 53, 82-88.
- Curry, N. L. Self concept and the educational experience in physical education. Physical Educator, 1974, 31, 116-120.
- Curwin, R. L., & Fuhrmann, B. S. Discovering your teaching self: humanistic approaches to effective teaching. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1975.
- Dixon, W. R., & Morse, W. C. The prediction of teaching performance: empathic potential. Journal of Teacher Education, 1961, 12, 322-328.
- Dixon, W. J. (Ed.) Biomedical computer program. Los Angeles: University of California Press, 1973.
- Dymond, R. F. A scale for the measurement of empathic ability. Journal of consulting psychology, 1949, 13, 127-133.
- Ebel, R. L. Estimation of the reliability of ratings. Psychometrika, 1951, 16, 407-424.
- Edwards, A. L. Techniques of attitude scale construction. New York: Appleton-Century-Crofts, Inc., 1957.
- Gooding, C. P. The perceptual organization of effective teachers in Florida studies in the helping professions. A. W. Combs (Ed.) Gainesville, Florida: University of Florida Press, 1969.
- Goodlad, J. I. Education-yesterday, today and tomorrow: an emphasis on change. The Education Digest, 1975, 40 (8), 2-6.
- Gove, P. B. (Ed.) Webster's Third New International Dictionary of the English Language Unabridged. Springfield, Mass.: G. & C. Merriam Company, Publishers, 1966.

- Gowin, D. G., Newsome, G. L., & Chandler, K. A. A scale to study logical consistency of ideas about education. The Journal of Psychology, 1961, 51, 443-445.
- Graham, G. Helping students design their own games. Journal of Physical Education and Recreation, 1977, 48 (7), 35.
- Guenther, A. R. Will today's children be ready for their world of the future? Educating Children: early and middle years, Spring, 1974, 19, 15-16.
- Guilford, J. P. Psychometric Methods. New York: McGraw-Hill Book Company, Inc., 1954.
- Harvey, P. J. Teacher attitude opinionnaire. Educational Leadership, 1970, 27, 686-691.
- Hellison, D. R. Humanistic physical education. Englewood Cliffs, N. J.: Prentice-Hall, Inc. 1973.
- Howard, E. R. School climate improvement. The Education Digest, 1974, 39 (9), 10-13.
- Hoyt, C. Test reliability estimated by analysis of variance. Psychometrika, 1941, 6, 153-160.
- Hurwitz, D. Give students a choice. Journal of Physical Education and Recreation, 1977, 48 (5), 28-29.
- Kneer, M. E. How human are you? Exercises in awareness. Journal of Physical Education and Recreation, 1974, 45(6), 32-34.
- Lantz, D. L. Changes in student teachers' concepts of self and others. Journal of Teacher Education, 1964, 15, 200-203.
- Leonard, G. The Ultimate Athlete. New York: Viking Press, 1975a.
- Leonard, G. Why Johnny can't run and other gym class scandals. Atlantic Monthly, August, 1975b, 236(2), 55-60.
- Locke, L. F. "Teacher education: one minute to midnight." From Preparing the Elementary Specialist a report of proceedings of National Conference on Professional Preparation of the Elementary Specialist. April, 1972, pp. 87-103. (Washington, D. C.: AAHPER, 1973) in Echoes of Influence. Marie Riley (Ed.) Washington, D. C.: AAHPER, 1977, pp. 145-151.

- Maloney, M. P., Ward, M. P., & Braucht, G. N. A revised scale for the measurement of ecological attitudes and knowledge. American Psychologist, 1975, 30, 787-790.
- Mancini, V. H., Cheffers, J. T. F., & Zaichkowsky, L. D. Decisionmaking in elementary children: effects on attitudes and interaction. Research Quarterly, 1976, 47, 80-85.
- Marcus, M., & Minc, H. Algebra and trigonometry. Boston: Houghton Wifflin Company, 1970.
- Martinek, T. J., Zaichkowsky, L. D. & Cheffers, J. T. F. Decision-making in elementary age children: effects on motor skills and self-concept. Research Quarterly, 1977, 48, 349-357.
- Mawson, L. M. An analysis of the teaching patterns of the student teacher and the attitudes of the student teacher cooperating teacher and supervising teacher during student teaching. Paper presented at the National Convention of the American Alliance for Health, Physical Education and Recreation, Anaheim, California, 1974.
- Mayshark, C. A health and safety attitude scale for the seventh grade. Research Quarterly, 1956, 27, 52-59.
- McAfee, R. A. "Sportsmanship attitudes of sixth, seventh, and eighth grade boys." Research Quarterly, 1955, 26, 120.
- McCue, B. F. Constructing and instrument for evaluating attitudes toward intensive competition in team games. Research Quarterly, 1953, 24, 205-209.
- Myers, F. H. A safety attitude scale for the seventh grade. Research Quarterly, 1958, 29, 320-332.
- Newsome, G. L., Gentry, H. W., & Stephens, L. D. Changes in consistency of educational ideas attributable to student-teaching experiences. Journal of Teacher Education, 1965, 16, 319-323.
- Nylander, J. G. Attitudes that deter change. Physical Educator, 1972, 29, 131-132.
- Olmstead, A. G., Blackington III, F. H. & Houston, R. Stances teachers take: a basis for selective admission. Phi Delta Kappa, 1974, 55, 330-334.

- Ostrow, A. C. More choices to motivate deeper study. Journal of Physical Education and Recreation, 1975, 46 (3), 37.
- The Oxford English Dictionary. Oxford: Clarendon Press, 1933.
- Pace, C. E. A situation test to measure social-political-economic attitudes. Journal of Social Psychology, 1939, 10, 331-334.
- Phillips, M. Confluent education, the hidden curriculum, and the gifted child. Phi Delta Kappa, 1976, 58, 238-240.
- Price, J. A. An instrument for measuring student teacher morale. Journal of Educational Measurement, Spring, 1971, 8, 47-48.
- Purkey, W. W. The task of the teacher. In The Helping Relationship Sourcebook. (Eds.) Donald L. Avila, Arthur W. Combs and William W. Purkey. Boston: Allyn and Bacon, Inc., 1971, 254-278.
- Raths, L. E., Harmin, M., & Simon, S. B. Values and teaching. Columbus, Ohio: Charles E. Merrill Publishing Co., 1966.
- Rosander, A. C. An attitude scale based upon behavior situations. Journal of Social Psychology, 1937, 8, 3-16.
- Safrit, M. J. (Ed.) Reliability-theory. Washington, D. C.: AAHPER, 1976.
- Samples, R. E. Are you teaching only one side of the brain? Learning, February, 1975, 3(6), 25-28.
- Simon, J. A., & Smoll, F. L. An instrument for assessing children's attitudes toward physical activity. A paper received from Motor Performance and Play Research Lab., University of Illinois, Champaign, Illinois, 1973.
- Simon, S. B., Howe, L. W. & Kirschenbaum, H. Values Clarification: a handbook of practical strategies for teachers and students. New York: Hart Publishing Company, Inc., 1972.

- Simon, S., & O'Rourke, R. Every child has high worth-prove it. Learning, December, 1975, 4(4), 46-50.
- Shostrom, E. L. Personal Orientation Inventory. San Diego, California: Educational and Industrial Testing Service, 1962.
- Shostrom, E. L. An inventory for the measurement of self-actualization. Educational and Psychological Measurement, 1964, 24, 207-218.
- Sisley, B. L. Measurement of attitudes of women coaches toward the conduct of intercollegiate athletics for women. Unpublished doctoral dissertation. University of North Carolina at Greensboro, 1973.
- Stern, C., & Keislar, E. P. Teacher attitudes and attitude change. Volume 2: Summary and analysis of recent research. University of California at Los Angeles: Teacher Education Laboratory. 1975.
- Tutko, T., & Bruns, W. Winning is everything and other American myths. New York: Macmillan Publishing Company, Inc., 1976.
- Vaccaro, L. C. The future look of American education. Phi Delta Kappa, 1975, 56, 387-389.
- Wear, C. L. The evaluation of attitude toward physical education as an activity course. Research Quarterly, 1951, 22, 114-126.
- Womer, F. B. Basic concepts in testing. Boston: Houghton Mifflin Company. 1968.
- Young, D. D. The semantic differential: application as an affective measure. Journal of Experimental Education, 1974, 42(4), 86-91.
- Zelfer, G. H. Construction of a situation-response scale to measure the attitudes of Freshmen and Sophomore college women toward birth defects. Unpublished Master's thesis, University of North Carolina at Greensboro. 1971.

APPENDICES

APPENDIX A
CORRESPONDENCE

First Letter to the Judges

Dear :

I am developing a technique for identifying educational beliefs of prospective physical educators. This is in connection with work on my Ed. D. degree at the University of North Carolina at Greensboro.

In order to establish the validity of the instrument and devise a system of scoring, I need the help of five judges. A judge's responsibility would include (1) making a judgement on whether or not the content of an item is appropriate to a physical education setting and (2) ranking four responses for each of fifty questions. The responses would be ranked on the degree of responsibility afforded a student for his own behavior. Editorial suggestions will also be solicited. This might result in a second ranking for some of the questions.

It is my hope that you will be able to serve as one of the judges and that your response to the scale items can be accomplished in July. I am enclosing a self-addressed postal card for your convenience in responding. If possible, please return the card by July 20. Thank you.

Sincerely yours,

Joan Askew

Sample Postal Card Enclosed with
First Letter to the Judges

_____ I will be willing to serve
as a judge.

_____ It will not be possible for
me to serve as a judge in
this study.

Signed: _____

Date: _____

Second Letter to the Judges

July 25, 1977

Dear _____:

Thank you for your willingness to share your time and knowledge to help me formulate a scale on beliefs of prospective physical educators.

Enclosed you will find a copy of the scale items and the directions for the judges. Your tasks are three-fold: (1) judgement on content appropriateness of the questions, (2) ranking of responses, and (3) editorial suggestions.

You may have suggestions for additional questions as well as other responses. These thoughts will be received as gratefully as any editorial suggestions you may have.

If possible, I would like to tabulate the results by August 10. You will find a self-addressed stamped envelope for your convenience in returning the scale.

Thank you again for your willingness to assist in this study.

Sincerely yours,

Joan Askew

Enc.

Directions to the Judges

PROSPECTIVE PHYSICAL EDUCATOR BELIEF SCALE

DIRECTIONS TO THE JUDGES: Herewith are proposed items to be used in a scale for pre-service physical educators. The purpose of the scale is to identify what the prospective physical educator believes about physical education, the learner, the teaching-learning process and the operational procedures necessary in a physical education setting.

There are two basic types of questions: (1) direct and (2) tacit. The direct questions involve the student currently in degrees of decision-making and the tacit questions imply potential for future decision-making. Both types of questions should be judged using the technique described below.

In judging each item, please mark the column to the right of each item, giving your opinion as to whether or not the content of the item is appropriate to the above stated purpose.

The second judgement involves ranking each response for each item. The responses are worded to offer varying degrees of responsibility for decision-making to the student for his own behavior either currently or in the future. The behavior specified may be cognitive, affective or psychomotor. There may be other alternatives which would provide more or less freedom than the ones listed. You might want to add them. But of the ones listed, rank each response according to the

degree of responsibility the response offers a student. A ranking of 1 will indicate the greatest amount of freedom and a ranking of 4 will represent the least amount of freedom. Please disregard any personal feelings you may have about which choice you would prefer and rank each response according to the degree of responsibility the response offers a student. You may use duplicate or fractional rankings if you feel it is necessary.

It may facilitate your task of ranking if you consider some of the following questions. (1) What potential does the content of the item have for allowing self-motivated participation in physical activity at a later date? (2) What present or potential freedom does the item offer for decision-making? (3) What degree of process-orientation is included in the item? Process-orientation, in this instance, has to do with whether or not the teacher is trying to develop a final product or help the students learn the basic processes involved in learning and participating effectively in physical activities or socialization processes.

The third task concerns any editorial suggestions you may have. Record these directly on the scale or attach an additional sheet of paper. You may have suggestions for additional questions as well as other responses. These thoughts will be welcomed just as any editorial suggestions you may have.

Thank you in advance for your help with this study.
If I can be of assistance to you as you work with the scale,
please call me (station-collect) at (704) 963-4795.

The scale begins on the following page.

Third Letter to the Judges

October 8, 1977

Dear _____:

Congratulations and thank you for the excellent job you did on ranking the items for the Prospective Physical Educator Belief Scale. I was very pleased with the results of your judging and appreciate your time and effort in ranking the items and offering editorial suggestions.

I am now in the process of reducing the items from 38 to 30 and will be glad to share the final scale with you if you would like a copy. I am glad to inform you that a second judging will not be necessary.

Thank you again for your assistance with my study.

Sincerely yours,

Joan Askew

Contact Letter Securing Subjects

205 Knollwood Drive
Jamestown, NC 27282
October 1, 1977

Dr. Larry Horine, Chairman
Department of Health, Physical
Education and Recreation
Appalachian State University
Boone, NC 28608

Dear Larry:

Please consider this letter a formal request confirming our conversation about utilizing Appalachian students as subjects for establishing the reliability of the scale I have developed in connection with my dissertation.

The dissertation proposal calls for the use of 90-100 physical education majors who are in their first year as physical education majors. It is possible that the sample could include Freshmen, Sophomores and/or Juniors. I am requesting permission from you and the faculty teaching Introduction to Physical Education to utilize the PE 1550 classes for this study. I anticipate that the scale can be completed in thirty to fifty minutes.

I will be administering the scale personally and will be available at the convenience of your department. If possible, I would like to administer the scale in October either in the individual classes or at a time of your choosing.

I look forward to hearing from you concerning a specific time and location for administering the scale. I extend my deepest appreciation to you and the faculty for all of the assistance you have given me in connection with my study.

Sincerely yours,

Joan Askew

Follow-up Letter of Appreciation

November 16, 1977

Dr. L.E. Horine, Chairman
Department of Health, Physical
Education and Recreation
Appalachian State University
Boone, NC 28608

Dear Larry:

The computer (at last) has released my data and I now feel free to thank you for your willingness to allow me to utilize the students in your department as subjects for determining the reliability of the scale in my study.

Please express my appreciation to Professors Clarke, Larson, Steinbrecher, Watson and Wyatt for their willingness to give up a class period in my behalf. I am deeply indebted to Dr. Garrison and Miss Watson, also, who went beyond the call of duty to help me and to Dr. Larson for introducing me to each class.

I am looking forward to returning to Appalachian next semester and send best wishes for a successful completion of the fall semester.

Sincerely yours,

Joan Askew

APPENDIX B
ORIGINAL SCALE ITEMS

Judges ' Consensus	Intraclass Coefficient
1. *As a secondary school physical education teacher, I would prefer my students to:	.92
<u>4</u> A. Warm up with a specified number of specified exercises.	
<u>1</u> B. Decide whether or not to warm up.	
<u>2.2</u> C. Choose the number of repetitions and the categories.	
<u>2.8</u> D. Choose a specified number of repetitions from several categories of exercises.	
2. *As a secondary school physical education teacher, I would rather my students wear:	.92
<u>4</u> A. Required official uniforms.	
<u>2.8</u> B. Their own clothing of a specified color and type.	
<u>1</u> C. Any clothing they consider appropriate.	
<u>2.2</u> D. Shorts, shirt, tennis shoes and socks.	
3. *As a new physical education teacher, I would prefer to:	.82
<u>4</u> A. Make and announce all rules.	
<u>1.2</u> B. Let the students elect a committee to establish the rules.	
<u>2</u> C. Let the students suggest the rules to me.	
<u>2.8</u> D. Discuss general guidelines and let the students develop the rules.	

*Indicates questions retained for the final scale. If new numbers were assigned, they appear after the original number in parenthesis.

Judges' Consensus		Intraclass Coefficient
4.	* As a secondary school physical education teacher, I would prefer my students to:	.92
<u>1.2</u>	A. Take physical education as an elective.	
<u>3</u>	B. Select from several required activities.	
<u>4</u>	C. Be required to take specific activities.	
<u>1.8</u>	D. Select their entire course work from a wide range of activities.	
5.	* As a secondary school physical education teacher, I would prefer my students to:	1.0
<u>2</u>	A. Wait until explanations are over and then ask questions.	
<u>1</u>	B. Ask questions at any time.	
<u>4</u>	C. Not ask questions at all.	
<u>3</u>	D. Wait until I call for questions.	
6.	* As a 9th grade physical educator, I would:	1.0
<u>4</u>	A. Require showers regularly.	
<u>2</u>	B. Suggest showers after vigorous workouts.	
<u>3</u>	C. Require showers after a vigorous class workout.	
<u>1</u>	D. Recommend that students take showers when they think they need them.	

Judges' Consensus	Intraclass Coefficient
7. * As a physical educator, I basically believe that students in high school:	1.0
<u>1</u> A. Are capable of determining the level of skill they wish to acquire.	
<u>2</u> B. Need some degree of guidance on setting skill goals.	
<u>3</u> C. Need a great deal of guidance on setting skill goals.	
<u>4</u> D. Need to have skill goals set for them.	
8. Generally, students can learn physical skills best with:	.913
<u>4</u> A. Constant directions from the teacher.	
<u>2.4</u> B. Occasional directions from the teacher.	
<u>2.2</u> C. Directions at sparse intervals.	
<u>1</u> D. Directions by request from the student.	

	Judges' Consensus		Intraclass Coefficient
9.		The job of a teacher in public schools in relation to general education is to:	.039
	<u>3.4</u>	A. Give specific directions as to procedures to follow.	
	<u>2.4</u>	B. Point out alternatives and let students choose from the stated alternatives.	
	<u>2.2</u>	C. Discuss general conceptual categories of choices and help students formulate alter- natives from which to choose their own behavior.	
	<u>2</u>	D. Help students learn how to conceptualize the process of formulating alternatives and selecting behaviors.	
10.		*(8) As a physical education teacher, I would prefer:	1.0
	<u>4</u>	A. To officiate games and matches myself.	
	<u>1</u>	B. For the majority of students to officiate at various times.	
	<u>2</u>	C. For approximately half of the students to officiate.	
	<u>3</u>	D. To select a few students to officiate.	
11.		As a procedure after class, I would:	.154
	<u>1.6</u>	A. Have no shower checking system.	
	<u>2.8</u>	B. Have a squad leader check showers.	
	<u>3.2</u>	C. Check showers personally.	
	<u>2.2</u>	D. Have students record their own showers.	

Judges' Consensus	Intraclass Coefficient
12. *(9) When giving directions to a class for practice in passing skills, I would prefer to say:	1.0
<u>4</u> A. Count off by 4's, form circles, and work on the chest pass.	
<u>3</u> B. Count off by 4's, form circles, and work on the chest pass and one other pass.	
<u>2</u> C. Get into groups of 5 or 6 and begin working on two passes of your choice.	
<u>1</u> D. Choose your group size and begin practice on passing skills.	
13. *(10) Except for considering safety factors, as a physical educator I would:	.963
<u>4</u> A. Officially inspect gymnasium attire daily.	
<u>2</u> B. Informally check gymnasium attire daily.	
<u>2.8</u> C. Officially inspect gymnasium attire once a week.	
<u>1.2</u> D. Rarely check gymnasium attire.	

	Judges' Consensus		Intraclass Coefficient
14.		*(11) When developing ball handling skills, I would prefer my students to practice passing in:	.879
	<u>2</u>	A. A circle with a random order of passing.	
	<u>3.4</u>	B. Two straight lines facing center with a set order of passing.	
	<u>3.6</u>	C. A circle with a person in the center as the relay passer passing in a set order.	
	<u>1</u>	D. A scattered formation on the floor passing in random order.	
15.		As a physical educator, I would work toward a class atmosphere that supported:	.639
	<u>1</u>	A. A system of establishing individual goals and having individual success as the reward.	
	<u>2.8</u>	B. An external reward system for accomplishing activities that were not basically fun to execute.	
	<u>3.6</u>	C. A demerit system for failure to participate in an activity.	
	<u>2.6</u>	D. An external reward system for all accomplishments.	

Judges'
Consensus

Intraclass
Coefficient

16. You are trying to formulate the 5th unit for your first year of teaching. What procedure would you follow? 1.0
- 3 A. Select several top students to help with decisions.
- 4 B. Utilize familiar books and plan the unit myself.
- 1 C. Have each class offer written suggestions.
- 2 D. Have a class discussion in your better classes.
17. Out of a class of 35 students, the percentage who will listen attentively will generally be: only
3 of 5
rated
- A. Between 98 and 100%.
- B. Within a range around 80%.
- C. Within a range around 50%.
- D. Within a range around 20%.

Judges'
ConsensusIntraclass
Coefficient

18. You have completed instruction and basic drills on the serve in tennis. One student continually makes contact with the ball at a point close to the ear instead of well over the head. What would you do to correct this error? .96
- 2.75 A. Demonstrate the serve again.
- 3.25 B. Explain the serve again.
- 1 C. Ask the student where contact is being made with the ball and what he thinks about the angle of the path of the ball.
- 3 D. Tell the student to toss and contact the ball at a point higher than the head.
19. *(12) Your 6th period class continually rushes to the door at the end of the day. One day a student is hurt severely. What procedure would you follow? .904
- 3 A. In the future, use a single file with a two-foot spacing for lining up and leaving the area.
- 1.5 B. Ask the students to (1) discuss situations in which large groups leave a confined area, (2) project safe ways that a large group of people can exit through a small area, and (3) decide on the method they think they can make work for their class.
- 1.25 C. Let the students establish an orderly manner to leave the area.
- 4 D. Use four single files with a starting command for each file to exit.

Judges ' Consensus		Intraclass Coefficient
20.	One of your students is habitually late submitting homework. What actions would you take?	.62
<u>2.4</u>	A. Reprimand the student in private.	
<u>3.8</u>	B. Announce to the class that, in the future, papers will not be received late.	
<u>2.6</u>	C. Explain to the class your views on punctuality.	
<u>1.2</u>	D. Initiate a class discussion asking students to share their thoughts on punctuality and suggest a solution to the problem of late papers.	
21.	*(13) The major function of a teacher is:	.819
<u>4</u>	A. To transmit knowledge.	
<u>2.8</u>	B. To stimulate interest in learning.	
<u>2.0</u>	C. To provide an atmosphere conducive to learning in a variety of ways.	
<u>1.2</u>	D. To create a situation in which students can pursue learning at their own pace and style.	

Judges' Consensus	Intraclass Coefficient
22. *(14) At the completion of a unit on social dance, I would expect students to be able to:	.73
<u>4</u> A. Recall the basic steps of the foxtrot.	
<u>2.2</u> B. Analyze an unfamiliar piece of music and execute the basic dance steps for that rhythm.	
<u>2.0</u> C. Design new steps in rhythm with a familiar piece of music.	
<u>1.2</u> D. Design new steps in rhythm with an unfamiliar piece of music.	
23. For a written test in softball, I would utilize questions such as:	.51
<u>3.8</u> A. List and diagram the positions of the players.	
<u>2.8</u> B. List the general duties of the players.	
<u>1.8</u> C. Explain the duties of the first baseman.	
<u>1.6</u> D. Explain the duties of the first baseman in relation to the catcher, pitcher, and second baseman.	

Judges ' Consensus

Intraclass Coefficient

24. You have a student in volleyball class who wears a leg brace as a result of a birth defect. The student walks without crutches but has a limp and moves slowly. The student has medical approval for participation. How would you handle the situation? .601
- 4 A. Let the student keep score.
- 1.5 B. Help the class learn to accept him and his ability as an individual.
- 2.5 C. Discuss the situation with the student and mutually decide on a solution.
- 2 D. Lead a discussion with the student and the class and help the group reach a mutual decision about the participation of the handicapped student.
25. As a secondary school physical educator, I would: .92
- 4 A. Insist that students always keep score during class.
- 3 B. Suggest that students always keep score during class.
- 1.2 C. Not teach scoring until the students requested instruction on score keeping.
- 1.8 D. Teach scoring of games but not stress keeping score.
26. As a secondary school physical education teacher, I would stress participation in: .90
- 4 A. Varsity athletics.
- 2.25 B. Intramurals.
- 2.75 C. Club teams.
- 1 D. Regular voluntary physical activity.

Judges '
 Consensus

Intraclass
 Coefficient

27. Your department has been given a contribution which is ear-marked for the purchase of printed materials for student use. What would you purchase? .639
- 3.2 A. Specific sport magazines.
- 2.4 B. General sports magazines.
- 1 C. Self-help books on a variety of individual sports.
- 3.4 D. Advanced strategy manuals on a variety of team sports.
28. As a 9th grade physical education teacher, I would prefer to develop course offerings around: .0117
- 3.1 A. Team sports
- 2.1 B. Individual sports
- 2.1 C. Mostly team sports with some individual sports
- 2.35 D. Mostly individual sports with some team sports.
29. *(15) As a physical education teacher, I would prefer my students to: 1.0
- 2 A. Sit informally on the floor for roll call.
- 3 B. Line up informally for roll call.
- 1 C. Use a check-in board and begin working.
- 4 D. Have assigned places for roll call.

Judges' Consensus	Intraclass Coefficient
30. You have a student who continually "stands around" and "will not try to work" on the drills. What course of action would you take?	.09
<u>3.5</u> A. Ask what is causing the behavior.	
<u>2.25</u> B. Invite the student for a conference after class and ask what is causing the behavior.	
<u>2.5</u> C. Ask the student to suggest an alternative activity.	
<u>1.75</u> D. Say nothing to the student.	
31. *(16) Most students:	.924
<u>1</u> A. Are innately curious about new activities.	
<u>4</u> B. Need to be required to pursue all activities.	
<u>2.2</u> C. Need to be externally motivated to inquire into new activities.	
<u>2.8</u> D. Need to be required to inquire into most new activities.	
32. *(17) Most students:	.92
<u>2.8</u> A. Will generally follow the rules.	
<u>1</u> B. Can freely formulate necessary guidelines and follow them without being told.	
<u>4</u> C. Must be told all the rules and punished if those rules are not followed.	
<u>2.2</u> D. Can isolate, recognize and follow necessary guidelines with some directions.	

	Judges' Consensus	Intraclass Coefficient
33.	*(18) You are teaching a high school physical education class in which one student continually disrupts class. What would you say to the student?	.75
	<u>3.2</u> A. Sit out of the game for 10 minutes.	
	<u>3.6</u> B. Go to the principal's office.	
	<u>2.2</u> C. Sit out until you can participate properly.	
	<u>1</u> D. Can you participate properly, or do you need to sit out for a few minutes?	
34.	*(19) The major purpose of physical education in high school is to:	.96
	<u>3</u> A. Develop a highly skilled individual.	
	<u>3.8</u> B. Develop a high level of physical fitness.	
	<u>2</u> C. Develop the level of skill that will encourage a person to seek regular participation in physical activity.	
	<u>1</u> D. Develop a versatile mover.	
35.	You have a class that basically refuses to volunteer answers during discussion. Which procedure would you follow?	.159
	<u>2.6</u> A. Call on people.	
	<u>2.4</u> B. Give specific homework to be reported in class.	
	<u>1.6</u> C. Formulate groups and assign each group a specific topic to present.	
	<u>3.4</u> D. Continue the class with lecture.	

Judges' Consensus	Intraclass Coefficient
36. *(20) You have been given the task of re-decorating the locker room. Which procedure would you follow?	.96
<u>2</u> A. Ask the Student Council to appoint a committee to help with the redecorating plans.	
<u>1</u> B. Hold a student body election for committee members.	
<u>4</u> C. Work alone or with the other physical educators.	
<u>2.75</u> D. Select several students to offer suggestions.	
37. *(21) When making an outside assignment to a high school physical education class, I would:	1.0
<u>1</u> A. State a general purpose of the project and leave the topic and form of completion up to the student.	
<u>2</u> B. Suggest general areas and leave the kind of work open to student choice.	
<u>4</u> C. Specify the topic and kind of work.	
<u>3</u> D. Specify general areas and the kind of work.	

Judges' Consensus	Intraclass Coefficient
38. *(22) You are formulating the curriculum for your second year at Red Level High School. What procedure would you follow?	.921
<u>4</u> A. Make changes based on your experience the first year.	
<u>1.2</u> B. Use a class period from each class to get a group consensus.	
<u>1.8</u> C. Have each class elect two representatives to meet with you.	
<u>3</u> D. Select several of your top students to offer suggestions.	
39. As a high school physical educator, I would probably spend most in-class time:	.81
<u>3.6</u> A. Directing	
<u>1.2</u> B. Interacting	
<u>3.2</u> C. Explaining	
<u>1.8</u> D. Guiding	
40. When teaching an activity class, emphasis should be placed on:	.81
<u>1.2</u> A. Student skill progress.	
<u>3.4</u> B. Mastery of exact skills.	
<u>1.8</u> C. Group interaction processes.	
<u>3.6</u> D. Organizational procedures.	

Judges' Consensus		Intraclass Coefficient
41.	*(23) During the period of time when physical fitness is being stressed, I would prefer to have students:	.92
<u>4</u>	A. Execute calisthenics in cadence.	
<u>2.8</u>	B. Keep records of the number of repetitions they accomplish and increase that number of specified exercises each day.	
<u>2.2</u>	C. Identify areas of physical fitness they wish to improve and execute a prescribed kind and number of exercises.	
<u>1</u>	D. Identify areas they wish to improve. Identify exercises that will improve those areas and have students establish their own progressions.	
42.	*(24) The 9th grade class is in a unit on volleyball. One student continually "hogs" the ball. I would:	1.0
<u>4</u>	A. Have the student sit out for five minutes for each occurrence.	
<u>3</u>	B. Tell the student about the importance of team work and playing one's own position.	
<u>2</u>	C. Ask the student to explain some important reasons for playing one's own position.	
<u>1</u>	D. Ask the student about the atmosphere of the game and if it could or should be changed.	

	Judges ' Consensus		Intraclass Coefficient
43.		*(25) When starting a new activity, I would prefer:	.97
	<u>1.8</u>	A. A discussion in which the students raise the questions which should be answered within the unit.	
	<u>3</u>	B. A set program with a variety of learning materials including loops, books and stations.	
	<u>4</u>	C. A set introduction and instruction for all students.	
	<u>1</u>	D. An open period for students to explore equipment, written materials and loops at will.	
44.		*(26) When teaching an advanced class of basketball, I would stress:	.92
	<u>4</u>	A. Mastery of set plays.	
	<u>2.8</u>	B. Development of several plays with emphasis on adapting to court situations.	
	<u>2.2</u>	C. Analysis of court situations and adapting set plays to meet court demands.	
	<u>1</u>	D. Analysis of court situations, learning teammates' individual peculiarities, and making logical play maneuvers in relation to what is happening on the court.	

Judges' Consensus	Intraclass Coefficient
45. *(27) Most students:	.92
<u>1.8</u> A. Would participate in physical education if given the opportunity.	
<u>1.2</u> B. Would willfully seek opportunities to participate in physical education kinds of activities.	
<u>3</u> C. Need to be encouraged to participate in physical education.	
<u>4</u> D. Need to be required to participate in physical education.	
46. The class is in a tumbling unit and the initial instruction has been completed. I would tell the class to:	.639
<u>4</u> A. Develop a routine using a cartwheel, forward and backward rolls.	
<u>1.4</u> B. Develop a routine using a rotating or rolling skill, a skill causing a change of direction and one other skill.	
<u>2.2</u> C. Develop a routine using three of the skills covered in class.	
<u>2.4</u> D. Develop a routine that includes a balance skill, a rolling skill and a change of direction.	

Judges' Consensus	Intraclass Coefficient
47. We are in a basketball unit and have ample equipment. I would prefer to start class by saying:	.6398
<u>1.2</u> A. Each of you get a ball, find a goal and practice shooting.	
<u>3.8</u> B. Count off by 4's, each group get a ball, go to the basket matching your number and practice shooting.	
<u>2.8</u> C. Take a few minutes to warm up with shooting skills and then start a game at your regular court.	
<u>2.2</u> D. Get a partner and one ball, find a goal and practice shooting.	
48. *(28) A student in volleyball class consistently executes an underhand serve into the net, I would:	1.0
<u>4</u> A. Tell the student to make contact with the ball at a point underneath rather than behind the ball.	
<u>2</u> B. Ask the student where contact is being made with the ball and where contact needs to be made in order to have the ball go over the net.	
<u>3</u> C. Tell the student that contact is being made at a point behind the ball and ask where contact needs to be made in order for the ball to go over the net.	
<u>1</u> D. Ask the student what caused the ball to hit the net and what needs to be changed in order to have the ball go over the net.	

Judges' Consensus		Intraclass Coefficient
49.	*(29) In a track and field unit, I would:	.921
<u>4</u>	A. Require all events of all individuals.	
<u>1.2</u>	B. Suggest that students try the events and choose the events they wish to develop.	
<u>1.8</u>	C. Suggest participation in five and proficiency in three events.	
<u>3</u>	D. Require five of six events for all individuals.	
50.	*(30) I am dismissing a class of thirty-five students to go to the locker room, I would:	.819
<u>3</u>	A. Have all leave in an orderly fashion from seated positions at respective playing areas.	
<u>2.2</u>	B. Have all join together as an informal group for closing comments and leave in a cluster.	
<u>1</u>	C. Have all leave at will as each group finishes its work.	
<u>3.8</u>	D. Have all squads line up in straight lines and be quiet before leaving the gymnasium.	

APPENDIX C
JUDGES' RANKINGS

OFFICIAL JUDGES' RANKINGS

Question	Yes	No	J1	J2	J3	J4	J5	Intraclass Coefficient
1A	5	0	4	4	4	4	4	.92
1B			1	1	1	1	1	
1C			2	2	2	2	3	
1D			3	3	3	3	2	
2A	5	0	4	4	4	4	4	.92
2B			3	2	3	3	3	
2C			1	1	1	1	1	
2D			2	3	2	2	2	
3A	5	0	4	4	4	4	4	.82
3B			1	1	1	2	1	
3C			2	2	2	1	3	
3D			3	3	3	3	2	
4A	5	0	1	2	1	1	1	.92
4B			3	3	3	3	3	
4C			4	4	4	4	4	
4D			2	1	2	2	2	
5A	5	0	2	2	2	2	2	1.0
5B			1	1	1	1	1	
5C			4	4	4	4	4	
5D			3	3	3	3	3	

* Yes or no indicates the judges' opinions on appropriateness of the item.

Question	Yes	No	J1	J2	J3	J4	J5	Intraclass Coefficient
6A	5	0	4	4	4	4	4	1.0
6B			2	2	2	2	2	
6C			3	3	3	3	3	
6D			1	1	1	1	1	
7A	5	0	1	1	1	1	1	1.0
7B			2	2	2	2	2	
7C			3	3	3	3	3	
7D			4	4	4	4	4	
8A	5	0	4	4	4	4	4	.913
8B			2	3	3	2	2	
8C			2	2	2	3	2	
8D			1	1	1	1	1	
9A	4	1	4	1	4	4	4	.039
9B			3	2	1	3	3	
9C			2	3	3	1	2	
9D			1	4	2	2	1	
10A	4	1	4	4	4	4	4	1.0
10B			1	1	1	1	1	
10C			2	2	2	2	2	
10D			3	3	3	3	3	
11A	5	0	1	4	1	1	1	.154
11B			3	2	3	3	3	
11C			4	1	4	4	3	
11D			2	3	2	2	2	

Question	Yes	No	J1	J2	J3	J4	J5	Intraclass Coefficient
12A	4	0	4	4	4	4	4	1.0
12B			3	3	3	3	3	
12C			2	2	2	2	2	
12D			1	1	1	1	1	
13A	5	0	4	4	4	4	4	.963
13B			1	2	2	2	3	
13C			3	3	3	3	2	
13D			2	1	1	1	1	
14A	4	1	2	2	2	2	2	.879
14B			3	3	3	4	4	
14C			4	4	4	3	3	
14D			1	1	1	1	1	
15A	5	0	1	1	1	1	1	.063
15B			2	3	3	3	3	
15C			4	2	4	4	4	
15D			3	4	2	2	2	
16A	5	0	3	3	3	3	3	1.0
16B			4	4	4	4	4	
16C			1	1	1	1	1	
16D			2	2	2	2	2	
17A	0	5	0	4	1	1	0	.0
17B			0	3	2	2	0	
17C			0	2	3	3	0	
17D			0	1	4	4	0	

Question	Yes	No	J1	J2	J3	J4	J5	Intraclass Coefficient
18A	4	1	2	2	4	0	3	.96
18B			3	3	3	0	4	
18C			1	1	1	1	1	
18D			4	4	2	4	2	
19A	4	1	3	3	3	0	3	.904
19B			1	2	2	0	1	
19C			2	1	1	0	1	
19D			4	4	4	0	4	
20A	5	0	2	1	3	4	2	.62
20B			4	4	4	3	4	
20C			3	3	2	2	3	
20D			1	2	1	1	1	
21A	5	0	4	4	4	4	4	.819
21B			3	3	3	3	2	
21C			2	2	1	2	3	
21D			1	1	2	1	1	
22A	5	0	4	4	4	4	4	.73
22B			3	3	3	1	1	
22C			2	2	2	3	1	
22D			1	1	1	2	1	
23A	5	0	4	4	4	3	4	.51
23B			3	1	3	4	3	
23C			2	2	2	2	1	
23D			1	3	1	1	2	

Questions	Yes	No	J1	J2	J3	J4	J5	Intraclass Coefficient
24A	4	1	4	4	4	0	4	.601
24B			3	1	1	0	1	
24C			2	2	3	0	3	
24D			1	3	2	0	2	
25A	4	0	4	4	4	4	4	.92
25B			3	3	3	3	3	
25C			1	1	1	1	2	
25D			2	2	2	2	1	
26A	4	1	0	4	4	4	4	.90
26B			0	2	3	2	2	
26C			0	3	2	3	3	
26D			0	1	1	1	1	
27A	3	1	3	3	4	3	3	.639
27B			2	2	2	2	4	
27C			1	1	1	1	1	
27D			4	4	3	4	2	
28A	5	0	4	4	2.5	2	3	.011
28B			3	1	2.5	1	3	
28C			2	3	1.5	3	1	
28D			1	2	1.5	4	2	
29A	5	0	2	2	2	2	2	1.0
29B			3	3	3	3	3	
29C			1	1	1	1	1	
29D			4	4	4	4	4	

Questions	Yes	No	J1	J2	J3	J4	J5	Intraclass Coefficient
30A	4	1	3	4	4	0	3	.09
30B			1	3	3	0	2	
30C			2	2	2	0	4	
30D			4	1	1	0	1	
31A	4	0	1	1	1	1	1	.924
31B			4	4	4	4	4	
31C			2	3	2	2	2	
31D			3	2	3	3	3	
32A	5	0	3	3	2	3	3	.92
32B			1	1	1	1	1	
32C			4	4	4	4	4	
32D			2	2	3	2	2	
33A	5	0	3	4	3	3	3	.75
33B			4	2	4	4	4	
33C			2	3	2	2	2	
33D			1	1	1	1	1	
34A	5	0	3	3	3	3	3	.96
34B			4	4	4	4	3	
34C			2	2	2	2	2	
34D			1	1	1	1	1	
35A	5	0	3	1	3	4	2	.159
35B			2	2	2	3	3	
35C			1	3	1	2	1	
35D			4	4	4	1	4	

Question	Yes	No	J1	J2	J3	J4	J5	Intraclass Coefficient
36A	4	1	2	2	2	0	2	.96
36B			1	1	1	0	1	
36C			4	4	4	0	4	
36D			3	3	3	0	2	
37A	5	0	1	1	1	1	1	1.0
37B			2	2	2	2	2	
37C			4	4	4	4	4	
37D			3	3	3	3	3	
38A	5	0	4	4	4	4	4	.921
38B			2	1	1	1	1	
38C			1	2	2	2	2	
38D			3	3	3	3	3	
39A	5	0	3	4	4	4	3	.81
39B			1	1	1	1	2	
39C			4	3	3	3	3	
39D			2	2	2	2	1	
40A	4	0	1	1	2	1	1	.81
40B			3	3	4	4	3	
40C			2	2	1	2	2	
40D			4	4	3	3	4	
41A	5	0	4	4	4	4	4	.92
41B			3	3	2	3	3	
41C			2	2	3	2	2	
41D			1	1	1	1	1	

Question	Yes	No	J1	J2	J3	J4	J5	Intraclass Coefficient
42A	5	0	4	4	4	4	4	1.0
42B			3	3	3	3	3	
42C			2	2	3	2	2	
42D			1	1	1	1	1	
43A	5	0	2	2	2	2	1	.97
43B			3	3	3	3	3	
43C			4	4	4	4	4	
43D			1	1	1	1	1	
44A	5	0	4	4	4	4	4	.92
44B			3	3	2	3	3	
44C			2	2	3	2	2	
44D			1	1	1	1	1	
45A	4	1	2	2	2	2	1	.92
45B			1	1	1	1	2	
45C			3	3	3	3	3	
45D			4	4	4	4	4	
46A	5	0	4	4	4	4	4	.639
46B			1	2	2	1	1	
46C			3	1	1	3	3	
46D			2	3	3	2	2	
47A	4	1	1	2	1	1	1	.639
47B			4	4	4	4	3	
47C			3	1	3	3	4	
47D			2	3	2	2	2	

Question	Yes	No	J1	J2	J3	J4	J5	Intraclass Coefficient
48A	4	1	4	4	4	0	4	1.0
48B			2	2	2	0	2	
48C			3	3	3	0	3	
48D			1	1	1	0	1	
49A	5	0	4	4	4	4	4	.921
49B			1	2	1	1	1	
49C			2	1	2	2	2	
49D			3	3	3	3	3	
50A	4	0	3	3	2	4	3	.819
50B			2	2	3	2	2	
50C			1	1	1	1	1	
50D			4	4	4	3	4	

APPENDIX D
COMPUTER DISTANCE RATINGS

KEY FOR READING DISTANCE SCORES

The first number or numbers are the identification numbers of 1 through 103.

Distance scores for items number 1 through 26 follow the identification number.

Second row of numbers are for items number 27 through 30. The larger number in column nine of the second row is the total distance score.

1	364	380	254	400	0	141	244	244	282	347	432	90	220	403	424	28	410	101	205	388	200	28	246	100	200	410
163	300	144	284					7432																		
2	364	329	358	323	0	0	200	346	374	358	266	90	393	250	0	157	220	48	190	340	360	254	201	282	316	266
113	0	28	28					6454																		
3	439	425	429	28	244	447	282	244	447	323	207	90	358	314	346	186	246	48	303	361	244	144	220	244	424	28
28	173	181	201					7654																		
4	439	380	311	28	244	282	141	346	447	347	428	207	323	422	346	157	220	48	128	265	282	323	329	282	237	113
415	244	28	410					8172																		
5	439	347	429	358	0	282	0	447	447	129	428	167	220	82	400	28	269	149	142	235	141	410	439	282	369	28
400	316	28	157					7568																		
6	439	439	410	323	0	244	141	282	447	323	428	313	220	377	447	82	403	48	190	143	424	388	186	244	392	28
356	0	28	347					8092																		
7	439	425	323	113	0	141	141	0	447	28	428	90	254	422	346	246	269	149	303	265	244	28	206	244	190	246
28	0	157	254					6426																		
8	425	347	369	297	0	374	346	374	141	400	266	343	400	377	200	347	410	257	358	375	200	181	410	374	374	246
269	447	28	28					8963																		
9	410	398	361	405	122	424	141	316	447	314	164	114	297	106	287	157	383	147	178	482	269	322	229	374	403	203
369	180	82	266					8350																		
10	246	380	410	28	282	374	374	346	282	410	428	343	238	377	374	347	157	48	434	381	244	297	220	346	424	28
297	0	262	429					8806																		
11	439	380	254	28	141	0	141	141	447	429	428	90	28	372	447	28	269	149	190	413	424	254	28	244	341	28
220	346	113	369					7181																		
12	439	329	347	220	141	282	141	141	374	28	356	167	347	242	141	28	113	48	303	25	0	254	28	244	128	28
113	0	28	28					5063																		
13	439	329	380	439	0	141	141	374	400	347	266	422	400	82	282	157	220	265	363	413	424	415	380	282	329	157
262	424	28	28					8589																		
14	410	269	254	358	141	141	173	374	374	323	505	114	333	372	0	28	246	149	237	125	244	385	28	0	237	258
356	160	157	144					6895																		
15	439	380	410	269	282	447	200	447	447	410	356	288	338	377	447	28	220	48	363	400	374	347	380	282	374	28
113	374	28	201					9097																		
16	439	425	323	415	0	424	346	346	447	410	432	90	429	418	374	246	364	224	363	340	400	181	380	244	366	220
150	264	28	28					9116																		
17	425	28	429	323	0	141	200	424	200	347	428	167	347	338	244	157	269	185	303	381	0	301	220	360	352	269
113	374	28	254					7607																		
18	439	398	400	410	0	316	424	346	447	129	432	114	129	242	244	329	157	48	303	361	141	369	246	282	310	82
28	0	28	129					7283																		
19	410	347	323	353	141	244	141	141	282	220	197	55	201	422	447	28	380	48	190	143	424	410	220	282	310	157
28	244	28	129					6945																		
20	364	439	196	425	264	374	447	282	424	429	388	445	364	422	447	347	439	149	190	143	244	410	269	244	128	28
439	374	113	429					9656																		
21	380	347	254	157	0	447	346	0	447	358	428	152	28	338	346	364	269	48	190	265	0	254	113	282	310	113
269	282	113	28					6928																		

43	364	380	380	415	0	360	346	7820	223	424	372	356	167	292	239	374	157	246	48	363	270	360	103	28	141	257	28
113	141	159	359					7465																			
44	439	439	323	415	0	447	282	0	400	358	428	288	216	150	412	439	347	48	369	419	141	347	113	282	156	157	
439	141	28	28					8051																			
45	425	246	429	220	0	374	282	0	400	347	432	313	238	216	346	269	317	162	937	265	173	380	269	424	434	220	
415	0	439	220					8492																			
46	439	380	347	323	244	447	346	0	346	358	56	167	28	175	374	157	269	48	363	143	141	144	28	141	19	28	
157	374	113	201					6356																			
47	364	347	429	220	244	141	0	244	447	358	428	90	220	82	447	157	269	48	190	225	141	297	28	282	297	28	
439	374	28	347					7211																			
48	432	347	429	388	0	282	264	469	447	422	370	114	372	175	360	157	347	349	190	447	141	476	364	244	237	383	
415	173	29	284					9106																			
49	425	425	254	113	244	374	0	400	447	323	432	167	323	418	424	269	410	48	303	325	374	28	425	424	410	269	
415	244	28	28					8769																			
50	364	361	429	410	0	141	316	346	141	358	388	152	201	418	223	157	220	48	303	347	141	347	28	244	283	216	
425	244	103	129					7483																			
51	369	157	254	425	141	424	141	0	141	410	364	167	358	358	331	269	246	149	372	160	387	347	439	223	237	246	
113	244	181	280					7933																			
52	347	347	410	113	141	424	141	0	447	220	398	167	347	393	374	28	269	48	190	388	141	347	269	141	374	157	
415	141	28	254					7459																			
53	410	425	254	358	244	244	141	346	424	347	432	90	129	320	316	347	364	48	358	235	346	347	157	244	352	157	
439	424	28	28					8354																			
54	410	420	369	358	0	424	424	447	400	410	428	167	323	393	374	380	380	162	336	235	424	439	380	282	310	220	
425	141	415	429					10305																			
55	369	369	338	323	316	331	374	244	387	338	301	134	238	254	374	216	361	135	287	246	300	201	364	244	316	369	
163	200	181	294					8567																			
56	439	347	429	323	0	412	244	346	374	358	398	313	372	242	282	157	269	149	190	413	141	380	246	282	156	294	
269	244	28	347					8444																			
57	364	380	297	415	244	447	141	141	424	410	281	313	372	377	374	157	347	149	287	225	244	364	216	282	369	216	
266	0	266	429					8797																			
58	425	380	347	323	244	316	374	0	447	410	281	207	220	163	374	347	364	48	190	235	141	28	439	282	128	28	
181	346	246	400					7914																			
59	439	364	369	28	244	346	0	244	374	410	428	90	129	393	447	229	269	48	363	375	0	254	157	282	424	364	
415	244	242	157					8128																			
60	439	425	220	439	0	424	244	424	282	347	388	55	347	422	447	28	220	162	363	413	424	410	157	282	429	113	
400	374	28	157					8863																			
61	439	329	410	400	141	447	141	346	447	358	428	207	254	393	374	157	329	162	190	265	424	347	380	374	352	113	
415	424	113	28					9187																			
62	347	347	254	220	244	447	141	141	447	254	356	152	220	150	346	28	269	149	303	413	374	347	220	244	128	364	
113	141	28	28					7215																			
63	425	246	347	330	244	435	374	141	447	358	428	261	297	393	447	157	229	149	363	469	346	347	369	244	412	246	
238	173	28	347					9290																			

238	173	28	347	9290	141	374	424	447	323	432	261	410	320	346	113	269	338	190	225	424	439	28	374	410	269					
64	439	329	429	9337	262	244	447	323	432	261	410	320	346	113	269	338	190	225	424	439	28	374	410	269						
410	141	157	369		323	0	447	374	0	447	410	314	167	364	456	447	246	220	48	313	25	0	347	220	479	224	216			
65	476	439	254	7988	323	0	141	0	447	447	410	428	313	323	82	346	28	113	48	190	361	424	347	157	244	19	269			
28	244	113	347	7569	415	0	400	141	141	447	410	408	55	220	393	424	28	269	48	303	265	282	254	157	141	452	113			
66	425	425	254	7322	410	425	400	141	244	141	0	346	410	84	167	254	175	346	157	364	48	745	235	400	28	269	244	434	28	
28	424	269	284	7034	425	0	447	447	429	428	313	254	393	244	269	425	48	303	325	374	254	380	282	310	216					
67	410	347	254	9448	323	0	387	374	0	244	254	428	134	358	377	346	439	246	48	329	419	424	425	28	282	338	28			
220	0	28	297	8348	157	141	0	141	374	0	347	281	167	410	393	244	28	113	101	358	340	424	364	364	282	352	246			
68	410	425	400	7947	415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
400	0	28	201	8930	439	439	439	410	439	141	447	374	447	323	388	167	429	422	424	28	246	162	303	235	424	347	380	282	452	347
69	439	380	410	9948	353	141	412	400	141	424	338	406	313	242	393	374	269	347	185	363	375	346	347	338	141	237	269			
113	424	28	254	9002	415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
70	425	307	429	7813	439	439	439	410	439	141	447	374	447	323	388	167	429	422	424	28	246	162	303	235	424	347	380	282	452	347
181	282	113	380		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
71	347	329	429		403	0	220	28	28	113	244	447	346	141	282	129	432	343	429	367	141	113	246	48	303	340	28			
269	374	415	157		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
72	439	157	410		439	439	439	410	439	141	447	374	447	323	388	167	429	422	424	28	246	162	303	235	424	347	380	282	452	347
28	244	380	129		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
73	439	439	410		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
415	0	410	254		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
74	425	425	347		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
403	0	220	28		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
75	410	347	347		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
269	141	246	347		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
76	439	425	410		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
269	244	220	129		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
77	410	439	347		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
425	244	113	28		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
78	410	425	220		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
439	141	113	284		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
79	410	175	347		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
28	141	28	157		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
80	364	220	347		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
415	282	338	369		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
81	410	380	429		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
113	223	28	157		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
82	410	347	410		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
246	200	269	238		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
83	425	439	410		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
113	244	28	129		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
84	347	380	311		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			
144	141	297	157		415	0	447	200	374	447	358	428	313	220	418	447	113	220	48	363	442	447	410	28	374	385	246			

85	439	157	323	425	244	424	282	0	447	410	388	343	28	418	447	347	364	48	363	413	447	415	28	244	142	28
113	400	220	129					8476																		
86	439	410	410	415	346	447	141	346	447	429	428	357	28	103	424	113	269	48	303	361	424	347	380	282	374	28
113	346	144	410					9112																		
87	113	425	429	297	141	447	424	0	447	410	388	439	410	418	424	220	347	300	303	442	424	425	380	282	434	369
113	173	181	347					9952																		
88	439	380	347	358	141	447	424	346	447	323	432	90	323	393	424	157	347	48	190	340	374	323	246	282	410	258
415	0	28	254					8986																		
89	369	425	347	28	244	424	282	244	424	323	428	90	367	181	374	28	269	48	142	340	0	347	157	282	429	28
28	244	157	82					7131																		
90	364	347	297	113	0	141	346	223	346	358	281	90	338	82	0	28	246	48	363	103	0	238	28	244	156	28
157	141	28	157					5291																		
91	439	380	347	323	282	424	374	141	447	347	388	445	254	403	244	291	364	257	190	225	447	439	364	282	385	246
400	424	358	380					10290																		
92	410	269	410	28	0	141	374	447	447	323	388	90	254	418	141	157	269	265	128	388	424	347	220	244	128	28
269	244	113	347					7711																		
93	439	364	323	415	141	424	374	244	447	358	428	343	358	418	447	347	364	241	190	25	424	410	220	141	156	157
425	141	439	220					9423																		
94	410	439	254	113	141	447	244	141	447	323	152	167	400	103	374	157	246	149	410	213	282	347	157	282	237	28
28	282	28	284					7285																		
95	364	220	410	323	0	447	282	424	424	347	428	90	220	150	374	380	347	149	190	381	447	425	439	244	452	28
415	424	144	254					9222																		
96	410	113	220	439	0	244	244	141	424	347	398	207	129	103	374	157	269	48	303	265	244	347	28	244	253	28
439	244	28	28					6718																		
97	425	157	410	425	0	360	282	424	447	347	403	167	347	206	346	28	364	162	303	340	424	347	347	244	374	220
269	316	28	238					8750																		
98	410	380	410	323	141	0	141	346	447	410	432	357	28	377	424	269	291	149	363	225	374	347	28	141	434	28
246	141	28	429					8119																		
99	269	425	400	439	141	374	282	0	447	323	428	207	220	393	424	364	269	412	363	375	282	364	364	282	424	28
425	0	323	429					9476																		
100	410	380	380	323	141	447	424	0	447	220	356	55	220	418	447	220	380	185	190	442	400	439	113	282	237	28
400	424	113	347					8868																		
101	425	425	410	358	244	374	141	447	447	323	432	313	380	393	447	220	439	48	303	143	200	410	425	282	424	347
262	141	380	311					9894																		
102	439	380	358	364	0	447	0	0	447	129	428	90	347	242	346	103	269	397	190	388	0	250	220	282	237	28
415	0	28	297					7121																		
103	439	380	410	323	0	141	141	374	447	220	398	90	220	377	244	246	220	101	190	25	447	347	28	244	142	246
323	141	28	347					7279																		

APPENDIX E
DIRECTIONS FOR FINAL SCALE

First Page of Final Scale

	Fresh. Soph. Jr. Sr.
Full Name	Classification
Student Identification No.	Year Major was Declared

PROSPECTIVE PHYSICAL EDUCATOR BELIEF SCALE

As physical educators, we all have opinions or beliefs about certain aspects of physical education. The following scale was designed to allow you to share your beliefs at this time in your career. This is not a test; it is merely a chance for you to share your thinking. You may complete this scale again at any time during your training to compare your responses.

Assume that all questions refer to a normal secondary school physical education class of about 25 to 30 students. Your responses should reflect situations that you, as the teacher, would prefer and would try to develop throughout a school year.

DIRECTIONS: Read through each item and its responses. When you have made a decision on the response that best suits your thinking, write a number 1 on the blank to the left of the response, to the left of your second choice write a 2, beside your third choice a 3, and beside your fourth choice a 4. You may use numbers more than once if necessary. You may also use fractions. Be sure that you RANK ALL RESPONSES for all questions.

EXAMPLE: As a procedure after class, I would:

- 3 A. Have no shower-checking system.
- 4 B. Have a squad leader check showers.
- 1 C. Check showers personally.
- 2 D. Have students record their own showers.

If you have chosen the C, response as your first choice, you would mark a 1 in the blank to the left, a 2 in the blank beside your second choice, a 3 beside your

third choice, and a 4 beside your fourth choice. Be sure that you RANK ALL RESPONSES for all questions.

The scale begins on the following page.

APPENDIX F
SCORING FORMULA AND KEY

FORMULA FOR SCORING WITH HAND CALCULATOR

$$d = \sqrt{(A_s - A_j)^2 + (B_s - B_j)^2 + (C_s - C_j)^2 + (D_s - D_j)^2}$$

Example:

KEY

Item No. 1	(Judges' Consensus)	Subject's Response
A	4	4
B	1	3
C	2.2	2
D	2.8	1

$$\sqrt{(4 - 4)^2 + (3 - 1)^2 + (2 - 2.2)^2 + (1 - 2.8)^2}$$

$$\sqrt{0 + 4 + .04 + 3.24}$$

$$\sqrt{7.28} = 2.69$$

Record 2.69 on score sheet for item number 1.

PROCEDURE FOR MANUAL SCORING WITH HAND CALCULATOR
USING A TI 1750 OR EQUIVALENT

CE/C MC

$$A_s - A_j = X = M+$$

$$B_s - B_j = X = M+$$

$$C_s - C_j = X = M+$$

$$D_s - D_j = X = M+$$

$$MR \quad \sqrt{\quad} =$$

_____ Record score on Profile
sheet.

Code:

CE/C MC - Clears machine

A_j = Judges consensus for A

A_s = Student ranking for A

=X= = Results in a squared number

M+ = Store score in memory

MR = Memory recall

$\sqrt{\quad}$ Square root of A + B + C + D

Total Distance Score

KEY

1 A 4
B 1
C 2.2
D 2.8

2 A 4
B 2.8
C 1
D 2.2

3 A 4
B 1.2
C 2
D 2.8

4 A 1.2
B 3
C 4
D 1.8

5 A 2
B 1
C 4
D 3

6 A 4
B 2
C 3
D 1

7 A 1
B 2
C 3
D 4

8 A 4
B 1
C 2
D 3

9 A 4
B 3
C 2
D 1

10 A 4
B 2
C 2.8
D 1.2

11 A 2
B 3.4
C 3.6
D 1

12 A 3
B 1.5
C 1.25
D 4

13 A 4
B 2.8
C 2
D 1.2

14 A 4
B 2.2
C 2
D 1.2

15 A 2
B 3
C 1
D 4

16 A 1
B 4
C 2.2
D 2.8

17 A 2.8
B 1
C 4
D 2.2

18 A 3.2
B 3.6
C 2.2
D 1

19 A 3
B 3.8
C 2
D 1

20 A 2
B 1
C 4
D 2.75

21 A 1
B 2
C 4
D 3

22 A 4
B 1.2
C 1.8
D 3

23 A 4
B 2.8
C 2.2
D 1

24 A 4
B 3
C 2
D 1

25 A 1.8
B 3
C 4
D 1

26 A 4
B 2.8
C 2.2
D 1

27 A 1.8
B 1.2
C 3
D 4

28 A 4
B 2
C 3
D 1

29 A 4
B 1.2
C 1.8
D 3

30 A 3
B 2.2
C 1
D 3.8

APPENDIX G
PROSPECTIVE PHYSICAL EDUCATOR BELIEF
SCALE SCORE SHEET AND PROFILE

PROSPECTIVE PHYSICAL EDUCATOR BELIEF SCALE SCORE SHEET AND PROFILE

Name _____

Total _____

Mean Score _____

Score	No.	Profile											
		0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
_____	1	.	.	.	.	.	.	.	.	.	.	.	.
_____	2	.	.	.	.	.	.	.	.	.	.	.	.
_____	3	.	.	.	.	.	.	.	.	.	.	.	.
_____	4	.	.	.	.	.	.	.	.	.	.	.	.
_____	5	.	.	.	.	.	.	.	.	.	.	.	.
_____	6	.	.	.	.	.	.	.	.	.	.	.	.
_____	7	.	.	.	.	.	.	.	.	.	.	.	.
_____	8	.	.	.	.	.	.	.	.	.	.	.	.
_____	9	.	.	.	.	.	.	.	.	.	.	.	.
_____	10	.	.	.	.	.	.	.	.	.	.	.	.
_____	11	.	.	.	.	.	.	.	.	.	.	.	.
_____	12	.	.	.	.	.	.	.	.	.	.	.	.
_____	13	.	.	.	.	.	.	.	.	.	.	.	.
_____	14	.	.	.	.	.	.	.	.	.	.	.	.
_____	15	.	.	.	.	.	.	.	.	.	.	.	.
_____	16	.	.	.	.	.	.	.	.	.	.	.	.
_____	17	.	.	.	.	.	.	.	.	.	.	.	.
_____	18	.	.	.	.	.	.	.	.	.	.	.	.
_____	19	.	.	.	.	.	.	.	.	.	.	.	.
_____	20	.	.	.	.	.	.	.	.	.	.	.	.
_____	21	.	.	.	.	.	.	.	.	.	.	.	.
_____	22	.	.	.	.	.	.	.	.	.	.	.	.
_____	23	.	.	.	.	.	.	.	.	.	.	.	.
_____	24	.	.	.	.	.	.	.	.	.	.	.	.
_____	25	.	.	.	.	.	.	.	.	.	.	.	.
_____	26	.	.	.	.	.	.	.	.	.	.	.	.
_____	27	.	.	.	.	.	.	.	.	.	.	.	.
_____	28	.	.	.	.	.	.	.	.	.	.	.	.
_____	29	.	.	.	.	.	.	.	.	.	.	.	.
_____	30	.	.	.	.	.	.	.	.	.	.	.	.
		0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5

APPENDIX H
MEANS FOR THIRTY ITEMS

ITEMS	MEANS
1	4.07310
2	3.56514
3	3.52368
4	3.00397
5	1.06554
6	3.33329
7	2.52408
8	2.39204
9	3.91368
10	3.39213
11	3.69824
12	1.95525
13	2.74893
14	3.15863
15	3.47427
16	1.87505
17	2.89417
18	1.27350
19	2.81660
20	2.86485
21	2.75932
22	3.16077
23	2.23738
24	2.52679
25	2.99524
26	1.47253
27	2.67068
28	2.25224
29	1.34952
30	2.29971

APPENDIX I
MEANS FOR 103 SUBJECTS
OCTOBER 1977

SUBJECT	MEANS
1	2.47733
2	2.15133
3	2.55133
4	2.72400
5	2.52267
6	2.69733
7	2.14200
8	2.98767
9	2.78333
10	2.93533
11	2.39367
12	1.68767
13	2.86300
14	2.29833
15	3.03233
16	3.03867
17	2.53567
18	2.42767
19	2.31500
20	3.21866
21	2.30933
22	3.15100
23	2.86300
24	2.69233
25	3.01433
26	3.11633
27	3.06500
28	2.46533
29	3.08033
30	2.61133
31	2.88633
32	3.19333
33	2.61167
34	2.92767

SUBJECT	MEANS
35	2.22367
36	2.40800
37	1.16567
38	2.84367
39	2.61867
40	3.10100
41	2.57533
42	2.60667
43	2.48833
44	2.68367
45	2.83067
46	2.11867
47	2.40367
48	3.03533
49	2.92300
50	2.49433
51	2.64433
52	2.46633
53	2.78467
54	3.43500
55	2.85567
56	2.81466
57	2.93233
58	2.63800
59	2.70933
60	2.95433
61	3.06233
62	2.40500
63	3.09667
64	3.11233
65	2.66267
66	2.52300
67	2.44067
68	2.34467
69	3.14933
70	2.78267

SUBJECT	MEANS
71	2.64900
72	2.97667
73	3.31600
74	3.00067
75	2.60433
76	2.86900
77	2.64567
78	2.63533
79	1.65267
80	3.12367
81	2.30400
82	2.70167
83	2.54500
84	2.70800
85	2.82533
86	3.03733
87	3.31733
88	2.99533
89	2.37700
90	1.76367
91	3.43000
92	2.57033
93	3.14100
94	2.42833
95	3.07400
96	2.23933
97	2.91667
98	2.70633
99	3.15867
100	2.95600
101	3.29800
102	2.37367
103	2.42633

APPENDIX J
FORTRAN PROGRAM FOR DISTANCE RATINGS
BY REBECCA MAY

FORTRAN IV (VER L43) SOURCE LISTING

09/01/78

PAGE 0001

```

1      PROGRAM STAT
2      C
3      C*****
4      C
5      C      WRITTEN BY REBECCA MAY      FOR UNIVAC 70/46      10/26/77
6      C
7      C      PROGRAM TO FIND THE DISTANCE BETWEEN TWO RESPONSE VECTORS
8      C      DISTANCE=SQRT((X(A)-J(A))**2+(X(B)-J(B))**2+(X(C)-J(C))**2+(X(D)-J(D))**2)
9      C      WHERE X(A) INDICATES A STUDENT RESPONSE TO A PART OF A QUESTION
10     C      J(A) INDICATES A JUDGES RESPONSE TO A PART OF ANY GIVEN QUESTION
11     C
12     C      INPUT FOR KEY == JUDGES RESPONSES
13     C      PROGRAM ACCEPTS FOUR RESPONSES TO EACH OF THIRTY QUESTIONS
14     C      IN F3.2 FORMAT IE NO BLANKS OR DECIMAL POINTS
15     C      A TOTAL OF FIVE CARDS
16     C
17     C      INPUT FOR RESP == STUDENT RESPONSES
18     C      PROGRAM ACCEPTS THE STUDENTS SOCIAL SECURITY # IN I9 FORMAT FOLLOWED
19     C      BY THE RESPONSES FOR THE FIRST 5 QUESTIONS (ALSO IN F3.2 FORMAT)
20     C      STUDENT CARDS 2-5 CONTAIN RESPONSES FOR QUESTIONS 6-11, 12-17,
21     C      18-23, AND 24-29 RESPECTIVELY
22     C      STUDENT CARD 6 CONTAINS RESPONSES FOR QUESTION 30 ONLY
23     C
24     C      NOTE: ANY NUMBER OF STUDENTS MAY BE PROCESSED BY CHANGING THE VALUE OF NUM
25     C
26     C*****
27     C
28     C      REAL KEY
29     C      DIMENSION RESP(30,4),KEY(30,4),IDIST(30)
30     C      INITIALIZE KEY      IE READ JUDGES RESPONSES
31     C      DD 2 L=1,30,6
32     C      K=L+5
33     C      READ(5,60)((KEY(M,N)),N=1,4),M=L,K)
34     C      FORMAT(24F3.2)
35     C      PROCESS N SUBJECTS
36     C      NUM=103
37     C      DD 20 I=1,NUM
38     C      DATA INPUT
39     C      READ A TOTAL OF 120 RESPONSES PER SUBJECT
40     C      READ(5,80)((ID,((RESP(M,N)),N=1,4),M=1,5))
41     C      DD 3 L=6,24,6
42     C      K=L+5
43     C      READ(5,81)((RESP(M,N)),N=1,4),M=L,K)
44     C      READ(5,82)((RESP(30,N)),N=1,4)
45     C      FORMAT(19,20F3.2)
46     C      FORMAT(24F3.2)
47     C      FORMAT(4F3.2)
48     C      THIRTY QUESTIONS PER SUBJECT
49     C      ISUM=0
50     C      DD 10 J=1,30

```

FORTRAN IV (VER L43) SOURCE LISTING

STAT PROGRAM

09/01/78

PAGE 0002

```

51     C      D=0
52     C      FOUR RESPONSES PER QUESTION
53     C      DD 5 K=1,4
54     C      D = SUM OF THE DIFFERENCES IN RESPONSES
55     C      D=D+(RESP(J,K)-KEY(J,K))**2
56     C      IDIST = DISTANCE BETWEEN RESPONSE VECTORS
57     C      IDIST(J)=SQRT(D)*100.
58     C      ISUM=ISUM+IDIST(J)
59     C      FORMATTED OUTPUT
60     C      WRITE(6,70)((ID,((IDIST(N)),N=1,26)))
61     C      WRITE(6,71)((IDIST(N)),N=27,30),ISUM)
62     C      FORMAT(1X,I3,26(1X,I3))
63     C      FORMAT(1X,4(13,1X),15X,15)
64     C      CARD OUTPUT
65     C      WRITE(7,90)((ID,((IDIST(N)),N=1,25)))
66     C      WRITE(7,91)((IDIST(N)),N=26,30)
67     C      FORMAT(13,25I3)
68     C      FORMAT(5I3)
69     C      STOP
70     C      END

```