MEASUREMENT OF ATTITUDES OF WOMEN COACHES TOWARD THE CONDUCT OF INTERCOLLEGIATE ATHLETICS FOR WOMEN

by

Becky Lynn Sisley

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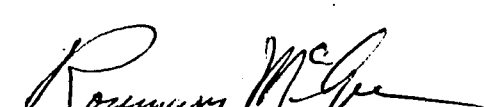

Dissertation Adviser

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 Adviser

Oral Examination Committee Members

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The purpose of this study was to construct a scale to measure the attitudes of women coaches toward the conduct of intercollegiate athletics for women. The situation-response technique was selected as the method for measuring attitudes.

The procedure for constructing the attitude scale involved the identification of areas and sub-areas which served as guides in the development of situation-response items. Five judges assisted in the revision of these areas and sub-areas. The thirteen areas were (1) place of athletics in education and physical education, (2) leadership, (3) financing, (4) public relations, (5) general philosophy, (6) ethics, (7) methods of coaching, (8) team selection, (9) scheduling of events, (10) standards and eligibility, (11) rules and officials, (12) health and safety, and (13) equipment and facilities. The investigator devised one hundred items to represent these areas and sub-areas. Each item contained a brief description of a situation and five alternative responses representing different degrees of attitude toward the situation.

A panel of nine expert judges ranked the responses for each item in order of desirability and also evaluated whether or not the item would contribute to the scale. Judges were instructed to disregard their own attitude toward the situation in ranking the responses. If it were impossible to rank the responses for a particular item on a five-to-one scale, they could assign a duplicate value to two or more responses which they thought were equally desirable or

undesirable. The responses of the judges served as the basis for selecting items for the attitude scale.

The items which met the following three criteria were considered for inclusions in the fifty-item scale: (1) over half of the judges must have considered the item either desirable or essential, (2) the five responses for each judge on each item must have included three different rankings with at least one rank below 3 and one rank above 3, and (3) the average intercorrelation of the response rankings for the item must have been .500 or better. The average intercorrelation, using the z' transformation, was computed by averaging the thirty-six rho correlations for each item ranked by the nine judges. The mean of the average intercorrelations for the fifty items in the scale was .879. This coefficient gave indication of the inter-judge reliability. Content validity was assumed because of the establishment of areas and sub-areas and because of the item-value ratings by the expert judges.

The scale was administered to women coaches at seventy-five randomly selected institutions which were charter members of the Association for Intercollegiate Athletics for Women. Eighty-four percent of the institutions returned completed scales. A total of 349 scales were mailed out and 246 scales were returned. Only 66 percent of the scales returned had each item answered with one of the alternative responses. The data from these 163 scales served as the basis for reliability computation. The reliability of the scale, determined by employing the Spearman-Brown prophecy formula to the Pearson product-moment method of correlation, was computed to be .597.

The coaches were directed to indicate how they would respond if placed in the situations described in the items. The average of the judges' response rankings, to the nearest tenth of a point, was the score for the response selected. The scores of the women coaches on the scale appeared to indicate very desirable attitudes toward the conduct of intercollegiate athletics for women. The mean score was 217.6, out of a possible 234.7, and the range was 196.2 to 230.8.

Within the limits of this study these conclusions are presented:

1. This attitude scale possesses content validity.
2. The index of internal consistency obtained for the attitude scale is acceptable given the heterogeneity of content.

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Sincere appreciation is extended to Dr. Rosemary McGee for her continuous guidance throughout the duration of this investigation. It was, indeed, a privilege to work with this adviser, par excellence. Her wisdom, insight and personal concern were constant sources of encouragement.

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Vital to the development of the attitude scale was the contribution of the nine expert judges. The writer acknowledges the assistance of Ms. Janet Atwood, Dr. Mildred Barnes, Dr. Edith Betts, Dr. Mary Jane Haskins, Dr. Frances Koenig, Dr. Katherine Ley, Dr. Betty McCue, Dr. Frances Schaafsma, and Dr. Charlotte West.

DEDICATION

The investigator wishes to dedicate this study to those who have gone before her and who have instilled within her certain needs:

To Mother, poet and teacher, who instilled the need for literary clarity and continuous education;

To Pop, inventor and engineer, who instilled the need for hope and perserverance;

To Eden, the youngest of four older brothers, who instilled the need for humor and cooperation.

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CHAPTER I

INTRODUCTION

HISTORICAL BACKGROUND

Athletic competition for girls and women had its formal beginning in this country near the turn of the century. At the 1899 Conference on Physical Training, a committee was appointed to make an extensive study of the many versions of basketball as played by women. The committee published "girls' rules" for basketball with special stress on standards safeguarding the health of the participants. (39)

Basketball and field hockey were the principal sports in which intercollegiate competition was held prior to World War I. Field hockey was introduced to this country in 1901 by Constance Applebee, a player-coach from England. It was exciting to be a sportswoman in the college setting in this period. Individual and team merit were recognized with letters, chevrons, sweaters and trophies. However, Coffey made the following point:

> As enthusiasm for girls /sic/ sports spread, leadership was not always of the highest. In many cases health examinations were ignored. Thus the first seed was planted for the ever-present controversy regarding the extent of sports competition for women. (51:39)

The Women's Committee on Athletics was created by the American Physical Education Association in 1917. The philosophy of the committee was

concerned with avoiding the pitfalls which had been demonstrated in men's programs and in keeping sports safe and feminine for girls. The cultural pattern of society so dominated the thinking that there was much pseudobiological evidence presented regarding the differences between men and women. (40) The summary of Lee's 1930 survey of intercollegiate athletics for women included these two disadvantages as well as thirteen other disadvantages to participants:

> "They would be apt to get more 'physical straining than physical training,' showing the most perhaps in nerve fatigue . . . . A question which should not be ignored is that raised by certain members of the medical profession as to the bad effect of intense athletic participation on child bearing." (78:96-97)

In 1923 the National Amateur Athletic Federation (NAAF) was formed to (1) promote physical education in educational institutions, (2) encourage standardization of rules, (3) facilitate the participation of United States athletes in the Olympic Games, and (4) foster the highest ideals of amateur sports. Mrs. Herbert Hoover assumed leadership in the girls and women's division of the Federation. The Women's Committee on Athletics and the Women's Division of NAAF, both dedicated to promoting a wholesome athletic program for all girls and women, merged to become the National Section on Women's Athletics (NSWA) in 1929. (80) These early groups sought to thwart efforts of the Amateur Athletic Union to control athletics for women. (40)

There was virtual elimination of championship competition for women in the early thirties. Lee (78) observed that, increasingly, the vast majority of physical education department directors, staff members and Women's Athletic Associations were opposed to interinstitutional competition. In addition, there

was concerted opposition to participation by women in the 1932 Olympic Games. (40) (120)

During the early 1940's, the Committee on Competition of the National Association for Physical Education of College Women (NAPECW) conducted a membership survey to discern facts about the extent of competition and the philosophy toward competition. The survey revealed the following points related to intercollegiate competition: (1) varsity competition was held in only 16 percent of the institutions reporting and (2) it appeared that in nearly one-third of the institutions the administration had not been concerned with the extent of competition for women between other schools. There was a two to one vote against the need for organized tournaments. The committee reported:

> Those voting in favor consistently stipulated conditions under which they might approve. Those conditions were principally adequate control and competition only in individual sports. (100:69)

Two common reasons given for disapproving of organized tournaments were that too much time was required of staff and students, and that there was the chance of developing some of the problems found in men's intercollegiate athletics related to recruiting and awarding scholarships.

Competitive opportunities began to increase during the 1950's; however, the extent of interscholastic and intercollegiate athletics was limited. The factor that influenced most the participation in sports at high levels of competition was the increased opportunity for women to participate in the Olympic Games.

Leyhe (129) investigated the attitudes of women members of the American

Association for Health, Physical Education, and Recreation (AAHPER) toward competition for girls and women. The majority of women sampled agreed that recent statements of professional groups confused the issue of competition. They agreed that state tournaments would create psychological and physical pressures which were harmful for the adolescent girl. National tournaments were felt to be undesirable. This attitude was strongest among the college teachers.

The NSWA became the National Section for Girls and Women's Sports (NSGWS) in 1952 and continued to broaden its scope. This group reached full stature in the AAHPER when it became the Division for Girls and Women's Sports (DGWS) in 1958. The DGWS and the organizations which preceded it have been the primary sources of rules, guidelines and standards for girls and women's sports in educational institutions. In the late fifties, it was a common opinion among school administrators and people in general that the DGWS was opposed to competition. The 1958 revision of the DGWS standards made it clear that this was not true. Evidence suggested that the DGWS philosophy had been misinterpreted, and this had influenced the development of programs for the highly skilled. One of the standards stated, "The goal of sports is not to find the 'best' team or player but to give opportunity and pleasure to all participating . . . ." (126:10) A goal was to have participation by the largest number of players. Katherine Ley, perhaps the individual to have most influenced competition for women in the past fifteen years, wrote:

> . . . in an effort to do the greatest good for the greatest number, we have emphasized intramural competition but in the process we have not provided competition of sufficient quality and quantity to satisfy the highly skilled girl. (126:10)

Cassidy stressed a similar point of view:

> The belief that girls and women should be shielded from the stresses and evils of competitive sports has deprived the gifted girl not only of the evils but of all the values of achieving the highest potential in sport. (50:17)

An informal group of concerned women physical educators met following the 1956 National Intercollegiate Golf Tournament to coordinate policies relative to intercollegiate competition for women. The following year the group became known as the Tripartite Committee on Golf as it had representatives from NSGWS, NAPECW and the Athletic Federation of College Women (AFCW). It became the National Joint Committee on Extramural Sports for College Women (NJCESCW) in 1959. The main purpose of the NJCESCW was to provide assistance in the development of intercollegiate sports. It was a committee, however, with no official power, and was able to function in only a limited way. (102)

In 1962, the DGWS Executive Council committed itself to the belief that the highly skilled girl must have opportunities for competition that would satisfy her desire to excel. Careful distinctions were made between the forms of competition that were intramural in nature and those that were extramural in nature. Standards were developed for the different kinds of competition and for different grade levels. According to Clifton (121), it was at this time that competition for the highly skilled at the college level was endorsed and wholeheartedly encouraged.

A DGWS study conference was held in 1965 to establish guidelines for the conduct of interscholastic and intercollegiate competitive opportunities for girls and women. The guidelines were helpful, but before long some assistance was needed in their interpretation and implementation. It became apparent that a new structure, specifically designed to assist in the conduct of intercollegiate events, was necessary. The parent organizations of the NJCESCW voted to disband the committee and to delegate its function to the DGWS. (102) Thus, with the increasing concern for excellence, in both skills and leadership, the Commission on Intercollegiate Athletics for Women (CIAW) was established in 1966 as a function of the DGWS with the approval of the AAHPER Board of Directors. The main purposes of the Commission were (1) to provide a framework and organizational pattern appropriate for the conduct of intercollegiate events, (2) to develop and publish guidelines and standards for the conduct of intercollegiate events, (3) to provide sanctioning procedures for closed intercollegiate events, and (4) to sponsor DGWS national championships for college women. (102)

The DGWS and the Commission worked in conjunction with the NAPECW to identify the sports areas in which national championships were needed and in surveying the probable directions of women's sports. The first DGWS National Intercollegiate Championship was held in April 1969. It was for gymnastics. The first track and field championship was held one month later. The Commission also assumed responsibility for the sponsorship of the national collegiate golf tournament which had originated in 1941. National championships in speed swimming, badminton and volleyball were added in 1970. In 1972 the first DGWS National

Intercollegiate Basketball Championship was held.

With programs growing, the Commission could not implement all of its guidelines. Leaders in the profession agreed that it was necessary to move to a membership-type organization in order to effectively guide and control intercollegiate athletics for women. The members of the Commission and regional representatives delegated by NAPECW drafted a preliminary operating code for the proposed Association for Intercollegiate Athletics for Women (AIAW). The 1971-72 academic year was the transition year between the functioning of the CIAW and the proposed AIAW. By moving to a membership organization, women in the profession may be better able to enforce policies and standards which they have worked so long and conscientiously to develop. The purposes of the AIAW are:

> To foster broad programs of women's intercollegiate athletics which are consistent with the educational objectives of member schools.
>
> To assist member schools to extend and enrich their programs of intercollegiate athletics for women.
>
> To stimulate the development of quality leadership among persons responsible for women's intercollegiate athletic programs.
>
> To encourage excellence in performance of participants in women's intercollegiate athletics. (4:6)

Summary

Many matters of interest have emerged during the seventy some years that girls and women have been competing in athletics in educational institutions. Women have united their efforts to control the extent of the programs and to develop rules, guidelines and standards. The quality of leadership has been a

primary issue continually. Today, some of these same concerns are present.

LEADERSHIP QUALITIES OF COACHES

A legitimate concern of intercollegiate athletics for women is the attitudes of the women who give it leadership through coaching. The attitudes of the leaders have an omnipotent effect on both the quality of the program and the behavior of the participants. The attitudes of coaches definitely affect the functioning of their programs. The programs of today lay the foundation for the programs in the future. Competent leadership has long been a vital issue of the professional organizations concerned with sports for girls and women. One of the basic standards set forth by DGWS states that "competent leadership is necessary to assure desirable outcomes." (11:8) The ultimate worth of intercollegiate athletic programs will be dependent upon the knowledges and skills which the coaches possess and upon their basic attitudes toward the conduct of these programs. Primary attention should be devoted to the positive values of sports as educational experiences. Anyone who examines the current sports literature cannot help but realize the seriousness of the unethical attitudes and malpractices which challenge the educational values of intercollegiate athletics. (2)

Where should efforts be concentrated to foster educationally sound programs? There were three trouble spots which the 1965 DGWS Study Conference on Competition identified:

> (1) differences of philosophy as to what is appropriate for girls--women tend to resist studying competition because of tradition, prejudice, ignorance or fear of the unknown;

(2) providing adequate facilities and finances (without relying on gate receipts); and

(3) providing a sufficient number of women leaders or competent coaches and officials. (123:32-33)

Ley felt that the quality of leadership is the most important issue. One of the main guides for constructive competition is that it shall be honestly and expertly led. She said that not all qualified to coach are professional physical educators and not all professionally trained are qualified. In her own words, "The educational outcomes of participation in competitive events is directly proportional to the quality of the leadership." (126:12) She stressed that for leadership to be constructive it must be sound, expert and consistent. The first prerequisite for good leadership is a genuine concern for the welfare of the individual.

Ley told the writer that there are two main factors which contribute to the quality of leadership: (1) professional preparation and experience, and (2) the value systems of coaches. She said, "We used to believe in the integrity of the coach, but times have changed." (127) At an earlier conference she stated, "Nothing is inherently good or inherently bad--the leadership makes it that way." (123:39) She further clarified this point:

> Anyone who does not possess a basic understanding of the reasons why we are extending or expanding women's programs, coaches who seek the self-gratification of winning teams; persons who default on the teachable moments presented during competitive events, these persons miss the whole point of providing competitive programs for girls and women. (123:39)

Standards have been developed by DGWS regarding the leadership

qualities that are desirable. The leader should demonstrate personal integrity and a primary concern for the welfare of the participant. It has been said, "Coaches who train players to beat the rules may train winning teams but they do not build integrity and self-respect in players." (123:39) Ley emphasized the integrity of the coach: "The first essential tool for the leader, teacher or coach is a personal set of ethical and moral values." (128:6) Indeed, the quality of leadership in women's intercollegiate athletic programs is of utmost importance. The profession cannot afford to continue rapid growth of competitive opportunities without looking carefully at the leadership at the grass-roots level.

This investigator is particularly interested in the leadership qualities and attitudes of women coaches. What are some of the traits of a good coach? She knows what she wants; she provides clear-cut instructions; she possesses knowledge of the activity and she is fair. Her value system is coherent. Malpass stated the following at the 1962 Values in Sports Conference relative to the model of the coach:

> A good coach demonstrates all the attributes of a good teacher. He not only is able to teach youngsters how to perform body movements . . . but also gives social significance to them. (2:65)

He also emphasized that a good example "is the best precept in teaching values as well as motor skills. What a coach does speaks more loudly than what he says." (2:64)

Every coach, man or woman, has the job of helping the athlete develop his talent to its fullest potential. This potential includes attitudinal and psychological traits as well as physical skills. The coach "must have some

understanding of his personal attitudes toward his job. He must develop a philosophy for coaching and handling his athletes effectively." (38:3) A skillful leader is a significant factor in group cohesion. The leader must be able to build team morale and the strong desire to achieve within his athletes. Most professional courses, be they for physical education majors or for those interested only in coaching, "strive to develop the individual's technical competence, but rarely emphasize his human-relations role." (104:53)

Why should we be concerned about the attitudes and value systems of the coaches? It has been generalized that the coach has a closer relationship and a greater influence on youngsters than almost any other teacher. Lawther stated, "Behavior codes and attitudes are learned rapidly under group pressure and emotional conditioning." (77:294) This is why he stressed the absolute necessity for careful guidance. Jacob emphasized at the Values in Sports Conference that a value is learned in the heat of the situation:

> The heat of activity and the leadership which is available at the moment can have a lot to do with crystallizing the situation, so that the values emerge and have authority . . . . Students out on a sports field are constantly faced with decisions. The presence of a good leader has a lot to do with what inner commitments they begin to make in their own lives. (2:35)

Educators need to be more specific in defining effective player-coach relations. Undesirable patterns of behavior should likewise be identified.

Malpass stated that there is need to communicate to the coaches the value systems which are important. Coaches and teachers, alike, present models for students to follow. It is vital that these leaders realize the effect of their behavior. (2)

Perhaps there is need to explain why there may be concern about attitude development during the college years. It is generally agreed that many attitudes and even longer lasting values are developed during the earlier more formative years of life. Arsenian (2) pointed out that values can and do change on the college level, but for them to do so there must be a consistently stimulating, supporting and invigorating climate. Coaches and teachers need to personalize education thus giving students a closer touch with commitment and self-identity. The attitudes that are developed because of the coach's behavior may have a long-lasting influence on both the player and the future of competitive sports for women.

Each decision that a coach makes today affects the decisions he will have to make in the future. The direction of the intercollegiate athletic programs of today is guided by the attitudes of the coaches who are at the grass-roots level. They make most of the decisions and they are the ones with whom the implementation of desirable standards and policies rests. Competitive programs are only as strong as the strength and convictions of coaches.

How does one know the attitudes of the coach? Attitudes are formed in relation to particular objects or norms. By observing the coach's verbal and nonverbal reactions in certain situations, his attitudes can be inferred. The common elements in most definitions of attitude indicate that attitude "denotes a functional state of readiness which determines the organism to react in a characteristic way to certain stimuli or stimulus situations." (103:300) Thus, one's attitudes may be judged by the responses one makes.

Coaches, coordinators of intercollegiate athletics, and department chairmen are the primary people who have a voice in the conduct of intercollegiate athletics for women. Their attitudes, as expressed by their behavior, determine the direction and quality of the program. There needs to be assurance that the attitudes of these leaders are educationally sound. How can this be done without some standards with which to compare?

With the recent formation of the AIAW and the expansion of programs, the issue of competitive athletics for women is a timely one. There is a significant need to examine systematically the attitudes of women coaches; however, there have been no attitude scales developed specifically for women coaches. The few related attitude scales found in the literature were developed to measure attitudes toward competition, sportsmanship or required physical education. Players, parents, teachers, and administrators were the subjects of these studies. Two specific recommendations made by Meyne at the conclusion of his study are appropriate:

> A scale to measure the attitudes of teachers, who are coaching, toward coaching varsity sports should be considered . . . . A scale to measure the attitude of women toward the profession of physical education should be developed. (131:97)

The investigator believes that the study of attitudes of women coaches is crucial to the field of physical education. The future of athletics for college women rests within the leadership domain of the coaches. In order to assess the attitudes of women coaches toward the conduct of intercollegiate athletics for women an appropriate tool must be developed. It is for this purpose that this study was undertaken.

CHAPTER II

STATEMENT OF THE PROBLEM

The purpose of this study was to construct a scale for measuring the attitudes of women coaches toward the conduct of intercollegiate athletics for women.

ASSUMPTIONS UNDERLYING THE RESEARCH

In developing this study the investigator accepted five basic assumptions:

1. Attitudes can be measured.

2. Attitudes are action oriented.

3. Judgments obtained in the ranking of responses can reflect expertise and experience in the area of philosophy and standards for girls and women's sports.

4. The women coaches selected as subjects can respond as they believe they would behave in the situations described.

5. Attitudes toward a number of specific situations related to intercollegiate athletics for women can provide a reliable index of a general attitude toward the conduct of intercollegiate athletics for women.

DEFINITIONS OF TERMS

The following definitions have been assigned to terms which will need interpretation in this study:

Attitude--a predisposition to respond to a specific stimulus in a certain way based upon acquired beliefs.

Intercollegiate athletics--athletics which involve college and university teams which are trained and coached and which compete in a series of scheduled games with other colleges and universities. (107)

Coordinator of Intercollegiate Athletics for Women--the director of the women's intercollegiate athletic program in a college or university.

Situation-response--a type of attitude scale item in which a situation is briefly described and five alternative responses are given. The responses represent different degrees of attitude toward the situation. The subject is to select the response which best indicates what he would do if he were faced with the situation. (133)

SCOPE OF THE STUDY

The attitude scale was designed to cover many aspects comprising intercollegiate athletics for women. These following major headings served as a guide in the development of scale items: (1) athletics and education, (2) leadership, (3) financing, (4) public relations, (5) philosophy, (6) ethics, (7) methods of coaching, (8) team selection, (9) scheduling of events, (10) standards and

eligibility, (11) rules and officiating, (12) health and safety, and (13) equipment and facilities.

The judges used in the selection of items and in the determination of response weightings represented all six districts of the American Association for Health, Physical Education and Recreation. The judges were knowledgeable women in the profession of physical education and had special competencies in intercollegiate athletics and/or attitude research. The women coaches represented a random sample of charter member institutions of the Association for Intercollegiate Athletics for Women.

The investigator is aware that there are men who coach women's intercollegiate athletic teams. This scale, however, was specifically developed to be used by women coaches.

SIGNIFICANCE OF THE STUDY

Research to date has revealed the importance of continued attention to the assessment of values and attitudes. A number of authors such as Carr (49), Wear (114), Scott (101), Moawad (132), and Meyne (131) have encouraged attitude research. Lalas (125) emphasized that actual progress in measurement of attitudes will continue to lag unless reliable methodology for testing attitudes is developed or adapted to meet the needs of physical education research. Pace (93) said the value of an attitude measure is largely dependent on knowing what behavior is associated with it. Zelfer (133) stressed that "the situation-response technique does not depend on what the respondent says he believes, but what he

says he will do in a variety of specific situations." (133:29)

June 1, 1972, marked the beginning of the first national membership organization for governing intercollegiate athletics for women. The Association for Intercollegiate Athletics for Women developed out of the need for control and guidance in the administering of athletic programs. In this first year of governance of intercollegiate athletics for women by a national membership organization, it is particularly fitting to address research to leadership qualities. This topic has long been a concern of the women in physical education who have strived for educationally sound sports programs. It is hoped that, as a result of this study, a scale will be developed that can be used to measure the attitudes of women coaches toward the conduct of intercollegiate athletics for women.

CHAPTER III

REVIEW OF LITERATURE

The review of literature covers three broad areas to provide adequate background for this study. These areas are (1) the nature of attitudes, (2) measurement of attitudes and (3) review of selected studies. The third section contains a review of studies related to sports competition for girls and women and studies related to administration of athletics and coaching.

THE NATURE OF ATTITUDES

Definitions of Attitudes

In order to have a basis for understanding the nature of attitudes, it is necessary to consider some of the many definitions of the term "attitude." There is a general agreement among social psychologists that "an attitude is a certain subjective state of preparation to action. It is the foreshadowing of what the individual will likely be doing with respect to the object in question." (57:447)

This definition cuts through many of the superficial differences which Droba (57) found in his synthesis of the elements common to most definitions. There are real differences, however, about the meaning of "preparation to action." Droba differentiated among these interpretations in his classification of four theories: organic set theory holds attitudes as physical preparation for

action; general theories consider attitude as a general preparation to action; behavior theory views attitude as identical with behavior; and mental-preparation theories define attitude as readiness to act in mental, rather than in neural or physical, terms.

Some writers stressed the element of readiness in their definitions. Allport said,

> An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related. (1:810)

According to Oppenheim, an attitude "is a state of readiness, a tendency to act or react in a certain manner when confronted with certain stimuli." (26:105) He thought that attitudes were present, but dormant, most of the time and that they were expressed in speech or other forms of behavior only when the object of the attitude was perceived.

Cantril stated that an attitude is,

> . . . a more or less permanently enduring state of readiness of mental organization which predisposes an individual to react in a characteristic way to any object or situation with which it is related. (48:13)

Similarly, Lundberg said that an attitude denotes "the general set of the organism as a whole toward an object or situation which calls for adjustment." (22:212) Thurstone, one of the earliest psychologists to delve into the nature of attitudes, stressed that an attitude is a subjective and personal affair. In one of his definitions he used attitude to denote "the sum total of a man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions

about any specific topic." (110:531) Thurstone also defined attitude as "the intensity of positive or negative affect for or against a psychological object." (111:39) By a psychological object he meant any symbol, phrase, slogan, person, institution, ideal or idea toward which people can differ with respect to positive or negative affect. He used the term "affect" interchangeably with "feeling."

Summarizing the definitions of many psychologists, Barrow and McGee wrote that attitudes may be defined as "the beginning of feelings or ways of thinking about something which results in emotionalized tendencies to respond in certain ways." (5:132) They thought that attitudes were important to the total development of the individual because they were predispositions to actions.

Several other physical educators have put forth definitions of attitude. Brownell and Hagman defined attitudes as "emotionalized feelings about anything." (7:371) Bookwalter defined attitude as a "relatively constant tendency to act in a certain direction and in accord with certain mental patterns or beliefs. Attitude is the reflection of a mind set toward or against some object." (6:12) Cowell stated that "attitudes reflect the readiness of the organism to respond in certain specific ways when the proper situation arises." (9:114) He further clarified this meaning of attitude:

> . . . the fact that the organism is oriented and "triggered" to respond in a certain manner has resulted in speaking of attitudes as "mental sets" which exert a selective function, often without the aid of conscious consideration. (9:114)

In line with the concept of mental set or a state of readiness, North, as cited by Droba, defined attitudes as "the totality of those states that lead to or

point toward some particular activity of the organism." (57:451) North thought attitude was the dynamic element in human behavior and the motive for activity. Droba wrote, "Attitudes point out the direction an activity will take; motives are the starters of the activity." (57:451) Faris stated, "The term attitude designates a certain proclivity, or bent, a bias or predisposition, an aptitude or inclination to a certain type of activity." (60:277) He felt that attitudes exist as tendencies to act and that they are very subjective.

According to Thomas and Znaniecki, by an attitude one can understand the "process of individual consciousness which determines real or possible activity of the individual in the social world." (35:22) Allport's definition paralleled this as he wrote, "Attitudes are individual mental processes which determine both the actual and potential responses of each individual in the social world." (1:802)

Doob's definition stressed the role of previous learning. He stated that an attitude is

> . . . an implicit response which is both anticipatory and mediating in reference to patterns of overt responses, which is evoked by a variety of stimulus patterns as a result of previous learning or of gradients of generalizations and discrimination, which is itself cue- and drive-producing, and which is considered socially significant in the individual's society. (56:136)

Despite the wide variety of interpretations of the meaning of attitude, there are four areas of substantial agreement which Summers (34) has summarized: (1) an attitude is a predisposition to respond, (2) an attitude is persistent over time, (3) an attitude produces consistency in behavioral outcroppings (the more persistent the attitude, the more consistent the behavior),

and (4) attitudes have a directional quality.

Development of Attitudes

Almost all writers agree that attitudes are learned. They also stress the developmental characteristic of attitudes. Droba made the following statement:

> There is nothing in attitudes that is not acquired. From early childhood on, attitudes are modified and developed into a relatively constant system of dispositions to determine the directions of activities that are to follow. (57:452)

One of the main ways in which attitudes are developed is through the integration of numerous specific responses of a similar type. (1) Remmers clarified the definition of integration:

> Integration is the development of an attitude through accumulation of a large number of experiences over a long period of time all of which influence the individual in a given direction. (28:171)

In addition to integration, Remmers mentioned three other ways in which attitudes are developed: differentiation, shock and adoption. By differentiation he meant there is a splitting off of a specific attitude from a more general one, as when an individual has an unfavorable attitude toward history as a result of his unfavorable attitude toward all school subjects. An attitude may be developed by shock due to an unusual, violent or painful experience. In adoption the individual merely follows the example of friends, teachers, parents, newspapers and other opinion molding agencies.

Allport (1) concurred with Remmers (28) when he indicated that the learning process is crucial to an understanding of the behavior of attitudes. Attitudes may be formed through integration, individuation, trauma or adoption or

ready-made attitudes of others.

> The genesis of almost any attitude is undoubtedly more or less unique. Society sets the rewards and punishments regarding much of overt behavior; the individual being socialized then is forced into one of the end products--the attitude--he may share in large degrees with others. (1:138)

Doob stated that if it is true that attitudes are learned,

> . . . then the learning, retention, and decline of an attitude are no different from the learning of a skill, a piece of prose, or a set of nonsense syllables; and they must also involve the problems of perception and motivation. (56:135)

Brownell and Hagman emphasized that research on attitudes has indicated that attitudes can be acquired in many ways. The very complexity of an attitude supports the assumption that it is a composite of a variety of experiences. A continuous long exposure to accumulative experiences, or one strong incident with a factor may shape an attitude. Emulation of a parent, or some other person held in high esteem may be the influencing factor. The main implication for education arises from the conclusion that attitudes are learned: "Education must be concerned with attitudes because they are learned or acquired and can be influenced by directed teaching." (7:371)

Several other physical educators have written on the acquisition of attitudes. Cowell (9) wrote that attitudes are developed only in situations which call forth the attitudes. In agreement with the view that attitude learning must be an active experience, Kozman, Cassidy and Jackson (20) stated that attitudes are gained in interaction with others and they are learned through acting and being acted upon.

Dimensions of Attitudes

Dimensions of attitudes are important in understanding the role attitudes play in our society. Remmers and Gage (29) have elaborated on six different dimensions. Allport (1) and Hartley and Hartley (16) have listed various dimensions of attitudes. Favorableness indicates the direction for or against the object. This dimension is the most often considered and measured. Intensity means the strength of the feeling with which the individual holds the attitude. People may hold attitudes of the same intensity, but the attitudes might be in opposite directions. Salience refers to the importance of the attitude or the ease with which the attitude can be aroused. Generality or range of consistency refers to the number of objects toward which an individual has an internally consistent overall attitude. Public versus private indicates that there are some attitudes which people feel free to talk about as compared to those which a person does not feel free to talk about in just any social situation. This dimension of attitude ranges on a continuum. There is no sharp distinction between public and private attitudes. There are common attitudes that are shared by many people and also individual attitudes which perhaps no one else cares about.

Relationship of Attitudes to Values and Beliefs

Oppenheim (26) summarized the rough distinction made by social psychologists between attitudes, values and beliefs. He said that some attitudes are more enduring than others. Those which are most superficial are called beliefs, below these are attitudes; at a deeper level are values or basic attitudes, and at

a still deeper level is personality. As one moves down the level the

> . . . attitudes are more enduring and relatively stable. There are relationships and patterns of connection among the levels. Attitudes are reinforced by beliefs (the cognitive component) and often attract strong feelings (the emotional component) that will lead to particular forms of behavior (the action tendency component). (26:106)

Attitudes, values and beliefs involve the interaction of individuals with the social and physical environment. Cormier defined an attitude as a manner of acting, a way of responding, to a certain object. She said that value is the worth attributed to an object, act, event or person for any of a number of reasons. Values are closely related to attitudes and beliefs. She further stated,

> If we were automata and could apply our beliefs, attitudes, and values to fixed situation, then we would have few problems. But unfortunately we cannot ignore the factor of change. (52:19)

This same concept, that the relationship of attitudes and values is an immediate one, was emphasized by Droba. He wrote, "An attitude does not exist in general but always has an object of reference, and the objective of reference may be called a value." (57:454)

Woodruff and DiVesta undertook a study to find the relation between values, concepts, and attitudes. They hypothesized that

> An individual's attitude toward any object, proposition, or circumstance will be favorable if, according to his concepts, that object seems to favor the achievement of his strong positive values. (117:648)

The reverse was also hypothesized. They felt that the strength of the attitude expressed would be a function of the importance of the values that are related to the object. As a result of their investigation, the hypotheses were accepted.

They concluded that attitudes will change when either concepts or values change:

> Since patterns appear to be fairly resistant to change, it seems likely that most changes produced in attitudes will be brought about by making changes in the concept of the object toward which the attitude is expressed. This emphasizes the role of education in producing changes in behavior, but offers a realistic explanation for the fact that educational practices which do not really change concepts, and which do not take into account value patterns, are futile. (17:659)

Sherif and Cantril wrote on the relation of attitudes to values:

> . . . the socialization which occurs when an individual becomes a member of a group consists mainly in the achievement of conformity in experience and behavior to social values, standards, or norms already established. And the process of achieving conformity is, if we analyze it closely, nothing more nor less than the formation of appropriate attitudes in relation to these socially standardized values or norms or other criteria of conduct. (103:296)

An important characteristic of an attitude is the degree to which it is linked to a value system. Katz and Stotland emphasized this point:

> Individual attitudes are frequently organized into larger structures called value systems which are integrated about some abstractions concerning general classes of objects. (17:432)

They further clarified this statement by saying the individual has an organized system of some logical hierarchy of attitudes. The system probably contains additional beliefs and evaluations which justify and enrich the logical generalizations.

Relationship of Attitudes to Behavior

Many writers have felt that attitudes are true indicators of behavior. Droba wrote, "An attitude will, in general, be followed by a type of activity indicated in the attitude." (57:459) Bain reported that "we cannot speak of the

existence of attitudes or wishes or sentiments or any other phenomena of consciousness except as they are manifested in overt behavior." (43:950) His views represented an exception with respect to an appreciation of the value of attitudes as forerunners of behavior. For he felt that the only test of a future conduct was how the person behaves at present. Bain thus wrote, "An attitude is the relatively stable overt behavior of a person which affects his status." (43:950)

Bass and Rosen stated, "Traditionally, attitude has been characterized as a multidimensional construct, having affective, cognitive, and behavioral aspects." (44:331) Morgan stated, "Attitudes are literally mental postures, guides for conduct to which each new experience is referred before a response is made." (24:47) Allport summarized:

> As a rule in psychological literature attitudes have been regarded as determining tendencies and not as the main-springs of conduct. They are generally considered to be channels through which a motive is expressed but not in themselves to be true motives. (1:817)

Lalas (125) reported that role and attitudes are inseparable. Roles and specific assignments determine one's identification with groups. Conversely, by group identification, specific roles are given meaning. He felt that attitudes are only directed toward particular objects and situations are significant in terms of the individual's role.

In discussing behavior as the expression of attitudes, Katz and Stotland (17) considered attitudes, which have little or no action orientation, not necessarily good predictors of behavior. Predicting behavior from the knowledge of a single attitude is difficult because the same object may be tied to more than one

attitude. Faris (60) stressed that those studying attitudes must be interested in behavior, in what men are about to do, and in what they can be induced to do. Thus it is extremely necessary to consider attitudes as tendencies of action.

The definition of attitude used by Myers showed the relation between behavior and attitude: "An attitude is partial or symbolic behavior preparatory to overt adjustment and is transformed into true overt adjustment behavior as the adjustment proceeds." (90:321) Mayshark wrote, "Attitudes have meaning only as they are expressed in terms of verbal and/or observable behavior." (84:53)

Significance of Attitudes

Burnstine (119) completed an historical and interpretive survey of attitudes and attitude research and concluded that the significance accorded to attitudes is apparent by the sheer bulk of the literature available. Indeed, attitudes have a considerable influence on behavior. According to Remmers, attitudes are "theoretically a component of all behavior, overt or covert." (28:3)

Allport regarded attitude as the precondition of behavior. That is, "attitudes determine for each individual what he will see and hear, what he will think and what he will do." (1:806) Thorndike, who formulated the laws of learning, considered what he called "set" or "attitude" a characteristic of learning secondary only to the Laws of Readiness, Exercise and Effect. He stated, "Any process of learning is conditioned by the mind's 'set' at the time." (36:13)

MEASUREMENT OF ATTITUDES

Introduction to Measurement of Attitudes

There are several concepts which are fundamental to the development of techniques for measuring attitudes. These permeate the whole process of measuring attitudes. Before reviewing the basic methods of attitude measurement it seems appropriate to introduce these concepts. They will be amplified when applied to specific techniques.

Unit of Measurement. Thurstone commented that the object of an attitude scale is to obtain a metric which enables one to describe the dispersion of attitudes in a group as a frequency distribution. (111) According to Oppenheim, our attempts at measurement of attitudes have concentrated on

> . . . trying to place a person's attitude on a straight line or linear continuum, in such a way that he can be described as mildly positive, strongly negative, and so on--preferably in terms of a numerical score or else by means of ranking.' (26:107)

However, he said there is no proof that this model of a linear continuum is necessarily correct. A linear quality does make it easier for measurement purposes, but for all we know, attitudes may be shaped more like concentric circles or overlapping ellipses or three-dimensional cloud formations.

Thurstone and Chave stated the following:

> The ideal unit of measurement for the scale of attitudes is the standard deviation of the dispersion projected on the psychophysical scale of attitudes by a statement of opinion, chosen as a standard. (37:19)

Allport concluded that the most significant event in the history of the

measurement of attitudes was the application of psycho-physical methods by Thurstone. Allport assumed an attitude to be "a degree of affect for or against an object or a value with which the scale is concerned." (1:830)

Bain wrote in 1928 concerning the study of attitudes: "The best method is the statistical treatment of indirect evidences of overt behavior in carefully defined or experimentally controlled situations." (43:957) Since that time a variety of methods employing statistical procedures have been developed to measure attitudes. Some of the specific methods will be described later.

Social Desirability. It is appropriate to mention the problem of social desirability when discussing the measurement of attitudes. One must always be aware of the social pressures that may induce the subjects to hide their true feelings. Thurstone wrote on the difficulty of assessing attitudes:

> As between verbal statements and overt actions, it is probably easier to arrange situation where a man may reveal his attitudes verbally. In dealing with controversial issues about which there is a good deal of pressure, we must depend largely on the skill of the examiner in arranging situations in which people will reveal their attitudes with the least possible distortion. It is a serious error to assume that a man's attitudes are clearly indicated by what he says, merely because that agrees with what he does. Both may be wrong. (111:40)

A commonly debated question is that of validation of an attitude scale by relating it to overt behavior. Man may find it expedient to act in a manner not indicative of his feelings and likewise he may make statements which are inconsistent with his preferences. (111)

Recent research on personality measurement indicates that test-taking

behavior is highly influenced by group norms of social desirability. Taylor (109) undertook a study to investigate the influence of social desirability on attitude items and on attitude scale scores. He reported that socially desirable statements are more apt to be endorsed and there is evidence that people differ in their willingness to endorse socially undesirable statements.

Construction of Scales. There are several general principles underlying the construction of attitude scales. This assumption, presented by Edwards, is basic to the construction of attitude scales:

> One of the major assumptions involved in the construction of attitude scales is that there will be differences in the belief and disbelief systems of those with favorable attitudes toward some psychological object and those with unfavorable attitudes. (13:10-11)

Another primary concern involving construction is that of developing appropriate attitude statements. Wang emphasized that the collection of attitude statements is a crucial task:

> . . . this is not a technical part of the construction method, but the success or failure of the scale depends much upon how well the initial list of statements is compiled and edited. (113:367)

Oppenheim stressed a similar point of view: "The writing of successful attitudes statements demands careful pilot work experience, intuition, and a certain amount of flair." (26:116)

Reliability and Validity. A few comments relative to reliability and validity of attitude questions are appropriate to mention at this point in the review; more specific comments will be given in the discussion of actual techniques of measuring attitudes. Sets of questions are more reliable than

single opinion items, according to Oppenheim:

> By using sets of questions, provided they all relate to the same attitude, we maximize the more stable opponents while reducing the instability due to the particular items, emphasis, mood changes, and so on. (26:74)

He wrote further directing himself to the concept of validity:

> The chief difficulty in assessing the validity of attitude questions is the lack of criteria. What we need are groups of people with known attitude characteristics (criterion groups), so that we can see whether or not our questions can discriminate between them . . . . (26:75)

Guttman wrote that internal validity is really a problem of definition:

> In defining a universe of behavior, the test of "internal validity" for each item in the universe is its content. Does the content of the item belong in the universe? Only a judgement of the content can answer this, according to our approach . . . . What questions go into each of such universes is determined by the content involved. Each item with proper content of the universe has "internal validity" for that universe. (15:57)

He further stated that external validity is a problem of prediction. A universe has only one internal validity but many possible external validities since they can be used for different predictive purposes.

Methods of Measuring Attitudes

Attitudes play an important part in daily living. Because of this, there have been numerous attempts to measure them. Several basic techniques of attitude measurement have predominated. Comments on the techniques will be given here as well as samples of research in physical education which have employed these techniques. The research will be presented in chronological order within each sub-heading. Studies more closely related to coaching and athletics

will be reviewed later.

Thurstone or Equal-Appearing Interval. This method, which was developed in 1928, has served as a basis for other techniques. Pace wrote in 1939 that the Thurstone method "enjoys the sanction of psychophysical acceptability and wide usage." (92:331) This method

> . . . is an attempt to arrive at a method that would place representative attitudes gathered from a universe on a special problem on a frequency distribution scale--extended on a line from least favorable to neutral to most favorable. (125:21)

The technique is long and tedious. First, approximately one hundred statements on an object are gathered from various sources. Then each of these statements is ranked into eleven categories by fifty to three hundred judges. Each category represents essentially the same degree of attitude. Those statements for which the judges have good correlation, in other words high agreement as to category, and which give a reasonable distribution throughout the eleven-point scale, are selected for use. The scale value for each item is the median of values assigned by the judges. The scale is then administered and the respondents check whether they agree or disagree with each statement. The respondent's score is the arithmetic mean of the scale value of the items with which he has agreed. The score represents the individual's central tendency of favoring or opposing something. (58), (110), (125)

Thurstone summarized the major aspect of his measuring technique:

> The essential characteristic of the present measurement method is the scale of evenly gradiated opinions so arranged that equal steps or intervals on the scale seem to most people to represent equally noticeable shifts in attitudes. (110:554)

He stressed that if the scale is to be regarded as valid, the scale value of the statements should not be affected by the opinions of the judges. In addition to the influence of the attitudes of the judges themselves in assigning values and the relatively difficult and complex way to construct the test, Thurstone thought that different attitude patterns could not be expressed by score. The intensity of the attitude could not be shown, only agreement or disagreement.

According to Edwards (13), the major unsolved problem in the Thurstone scaling method is the problem of selecting the most discriminating items among those having approximately the same scale value. Items of approximately the same scale value may vary markedly in discriminatory value.

Rambo (96) said a major criticism of the method of equal-appearing intervals is that the attitudes of the judges may influence their judgment. Early studies demonstrated that scales derived from the Thurstone procedure maintained their interval properties in spite of significant variation in the attitudes of subjects from whose judgments the scales were constructed. Hovland and Sherif (66) reported results, however, which indicated definite nonlinear components in the relationships between scales from judges who differ in own-attitude position.

> The contradictory results found in these studies leave unresolved an important problem since much work done in the area of social attitudes is based on measuring instruments developed under the assumption that scale values are unaffected by the attitudes of the judging group. (96:839)

In 1933 Stalnaker (106) used the Thurstone method to study attitudes toward intercollegiate athletics among students, athletes, faculty,

administrators, parents, alumni and assorted groups from the general public. This was the first attitude study reported in physical education. Studies by Carr (49), Nemson (91) and Richardson (98) have also used the Thurstone technique. Carr constructed an attitude scale and then compared attitude ratings with final grades of high school freshman girls in physical education classes. Richardson used the Thurstone scale for measuring attitudes of college students toward physical fitness and exercise. Nemson related student attitude in physical education classes to specific annoyances within the physical education situation.

Likert or Summated Ratings. Using the Likert (81) method, a large number of statements are collected to express attitudes ranging from extremely favorable to extremely unfavorable. The respondents check on a five-point scale whether they strongly agree, agree, are neutral, disagree or strongly disagree with each statement. Numerical values are assigned to each category; the highest value for each item is given to the category which would indicate the most favorable attitude. An individual's score is the sum of the values assigned to his responses. (58) The score yielded can be interpreted only in terms of where the individual's score falls relative to the distribution of scores of other people; the score does not have absolute meaning. (21) Those twenty or so items which discriminate most between groups which score high and low are selected for the final attitude scale. (58)

Lalas (125) summarized four advantages which the Likert technique has over the Thurstone method: (1) it is more easily constructed, (2) it is more reliable, (3) it allows more freedom in selection of final items, and (4) it

enhances a greater range of responses which leads to more precise information. Pace further emphasized the advantages of the Likert method:

> Likert's simplified five-step opinion scales and his studies showing the comparability of arbitrary scale scores and sigma scores have successfully met the difficulties of over-complexity which characterizes Thurstone's methods. So far as results are concerned Likert's method is as satisfactory as any. (92:331)

A variety of studies have involved the development of attitude scales using the Likert method. Drinkwater (122) and Kappes (69) designed scales to measure attitudes of college women toward physical education. Cutler's (59) study was designed to measure attitudes of males toward physical education in selected junior colleges. Adams (42) constructed equivalent forms of an attitude scale to be used in required physical education courses. Meyer (88) developed a scale to measure physical education attitudes of fifth and sixth grade pupils. Smith and Bozynowski (105) constructed a Likert type scale to measure student attitude toward warm-ups and then investigated the effect of attitude on performance of an obstacle race.

Two studies used the Likert method in constructing attitude scales related to athletics. Of particular interest was Harres' (63) investigation of attitudes of college students toward women's athletic competition. It will be discussed in the third review section. Lakie's (74) competitive attitude scale was designed to reveal to what degree various sports groups subscribe to the "win-at-any-cost" philosophy of athletics.

Wear (114) developed an attitude scale in 1951 using the Likert method. The scale was designed to assess the direction and intensity of attitudes toward

physical education as an activity course. Initially statements were developed relative to the outcomes sought in physical education. After a revision of items and an item analysis, the final inventory consisted of 120 statements. It had a reliability of .96 and a correlation of .80 with graphic self ratings. Wear believed that the inventory would place individuals in rank order regarding intensity of attitude toward physical education and also indicate the direction and extent of shifts of individual and group attitudes.

Several years later Wear (115) developed a set of equivalent forms that could be administered after a lapse of time to determine if attitude responses had changed. Wear considered the use of equivalent forms an advance in attitude testing.

A number of studies have used the Wear Physical Education Attitude Inventory as the tool for gathering attitudes data. Some of the first studies were conducted by Bell (45), Broer (46), and Broer, Fox and Way (47). Bell's study was designed to evaluate the physical education program at the University of Michigan. A background check sheet, questionnaire on objectives and the Wear inventory were used to gather data. In Broer's evaluation of the basic skills program for women students of low-motor ability, the Wear inventory was used to measure attitudes toward physical education at the time of entrance to college and after each activity course was taken. Broer, Fox and Way surveyed the attitudes of freshman women toward physical education activity at the University of Washington. In 1962, Keogh (72) analyzed the attitudes of students enrolled in coeducational physical education classes at the University of California at Los

Angeles. More recently Murry (89) measured the attitudes of male college freshmen in Louisiana and Texas toward physical education classes. In 1971 Floyd (62) used the short form of the Wear Inventory to investigate the attitudes toward physical education of intercollegiate athletes and non-athletes at selected state universities in Illinois.

Kenyon (18), (71) used the Likert method in the development of scales to measure attitudes toward physical activity. His work started with the formulation of a structural model for characterizing attitude toward physical activity. The findings of his research suggested "that a single continuum is probably not sufficient for representation of attitude toward physical education." (71:58) For each sub domain of the multidimensional model postulated, a moderately reliable scale was developed consisting of a relatively small number of items. The dimensions of the model included physical activity as (1) a social experience, (2) health and fitness, (3) the pursuit of vertigo, (4) an aesthetic experience, (5) a catharsis and (6) an ascetic experience. Lockhart (82) and Cunningham (10) have used Kenyon's Attitudes Toward Physical Activity (ATPA) scales.

Combinations of the Thurstone and Likert methods have been used in the development of attitude scales. The combination compensates for the major weakness of the Thurstone method of not providing for degrees of agreement. McCue's (86) study was the forerunner for others by Scott (101), McGee (87), and Galloway (124). McCue used a combination of the two methods in selecting items. The response to each item was indicated by the degree of approval or disapproval as in the Likert procedure. The construction of the scale involved a

definition of sub-parts of the general area and the preparation of statements appropriate to each sub-part. Also included was the weighting of item responses in terms of favorability expressed by the stem statement. McCue's scale was designed to measure attitudes toward intensive competition in team games for high school boys and college men. Studies by Scott and McGee were designed to compare the attitudes of parents, teachers and administrators toward intensive competition. Scott's study involved competition in team games at the elementary school and McGee's study involved competition for high school girls. Galloway's scale was designed to explore the effectiveness of physical education experiences in the development of attitudes of college women toward sociological, psychological and spiritual values.

Semantic Differential. The semantic differential is based upon a theory of measuring meaning. (118) It is more of a technique for measuring social phenomena than a finished instrument. In essence it is a combination of association and scaling procedures to differentiate the connotative meanings of objects and concepts. (108), (112) The basic structures of the semantic differential instrument include the following: (1) a concept to be considered, (2) a number of polar adjectives, and (3) a scale or distance between the adjectives so that both direction and intensity of feeling may be indicated. (118) Osgood, Suci and Tannenbaum have called this distance semantic space, "a region of some unknown dimensionality and Euclidian in character." (27:25) Each semantic scale, defined by a pair of adjectives which are opposite in meaning, is assumed to represent a straight line function that passes through the origin of

this space.

Using the semantic differential, the subject is presented with a number of pairs of polar adjectives such as good-bad, kind-cruel, wise-foolish. The scale between every pair of adjectives has seven places. The subject is then given a concept, e.g., strength, and is instructed to place it in one of the seven places on each scale. A semantic profile is formed by connecting the checked points on each scale. By comparing the rating of another concept on the same set of scales, the generalized distance between the concepts can be computed, giving the calculated difference in "semantic" profiles. (33)

Based on correlations with scores gathered by the Thurstone, Likert and Guttman types of scales, the validity of the differential scales appears to be high. (33) Kaufman (70) described several aspects of the semantic differential technique: (1) it requires no verbalization on the part of the respondents, (2) it measures emotional reactions rather than rational reactions, in this way it taps unconscious responses, and helps to get around people's tendency to give well-reasoned, logical, socially acceptable replies, and (3) it is particularly valuable as a measure of reactions to objects and experiences that are essentially non-verbal in nature. Vallery thought this method was generally successful in predicting behavior because

> . . . behavior depends upon the meaning of pertinent variables, and meaning relations in turn can be determined by analysis of an abstract "semantic space" defined by the technique. (112:18)

Lemen (79) used the semantic differential technique to determine the relationships of selected educational and social background factors to the attitudes

of college women toward physical education and certain sports and activities. Eleven pairs of polar adjectives were chosen after a pilot study was conducted and favorability ratings were assessed by a panel of judges. Attitudes were determined by summing the values to each response; thus, the possible range was from eleven to seventy-seven. The reliability coefficient for the scale using the test-retest method ranged from .61 to .93. Validity was determined by the use of general opinion questions and the Wear Physical Education Attitude Inventory. Validity coefficients ranged from .48 to .92.

Brown (118) used the semantic differential to study the feminine image of girls who participate in competitive sports and other school-related activities. La Grand's (73) study was a semantic differential analysis of the behavioral characteristics of athletic coaches as reported by athletes.

Guttman Scale Analysis. Guttman's scale analysis is a method for evaluating sets of statements to determine if they meet the requirement of unidimensionality. (21) The items in the scale must be cumulative. Lalas explained this characteristic with the following statement: "If an individual can rightfully answer affirmatively to a given item he can rightfully answer affirmatively to all other items below this item in rank order." (125:30)

> The central idea of Guttman scaling is to arrange both the items of and the respondents to the test in a formal order and then to apply to this ordering certain criteria for scalability. (125:30)

The degree to which the items are cumulative is expressed by a coefficient of reproducibility. A coefficient of .85 or higher is believed adequate for judging a

set of items to be a scale. Because of this procedure, scale analysis becomes a technique only after establishing a set of items. (58)

Snider and Osgood (33) stated that the Guttman scale can be useful in testing dimensionality of the selected adjectives and in ordering individuals in the dimensions. Festinger (61) thought it was an excellent technique to use with paper and pencil tests where the situation permits the inclusion of several questions centering on the same topic. This method will provide useful information about the degree of departure from unidimensionality. Lalas (125) emphasized one very definite advantage of the Guttman technique; it enables the investigator to dispense with pretesting or trial runs. If the items are carefully selected, the manipulations necessary to establish the scale may be made after the data have been gathered. However, there is very little guidance for selecting items that are likely to form such a scale. Guttman, as cited by Krech, et al., asserted the following: "The selection of a sample of statements is a matter of intuition and experience. The content validity of cumulative scales is impossible to estimate." (21:155) Perhaps this is because cumulative scales have a very narrow content range.

Lalas (125) investigated the possible application of Guttman scale analysis to a selected area of physical education research. He attempted to demonstrate the value of applying social psychology concepts to physical education research problems.

Edwards and Kilpatrick Scale-Discrimination. This method is based upon investigations which have shown that the cutting point of an item is related

to the discriminating power of the item. A large set of dichotomous items are sorted by judges into categories according to degrees of favorableness. Unambiguous items are then responded to by subjects on a six-point scale from strongly agree to strongly disagree. An item analysis is carried out, as in the Likert method. The discriminating items are then dichotomized and subjected to cumulative scaling. (58)

The scale-discrimination technique was used by Johnson in the construction of sportsmanship attitude scales. The procedure involved the development of items describing ethically critical sportsmanship behavior. Within the procedures, "The initial items set was successively treated with the equal-appearing interval, summated rating, and scale analysis methods for developing attitude scales." (68:312) Alternate form sportsmanship scales were developed. Moderate to high reliability, reproducibility and validity coefficients were derived for the scales. Johnson thought that much of the difficulty in constructing accurate scales was due to the complex relationship between attitude and behavior.

Hutter (67) also used the scale-discrimination technique. In 1970, he studied the attitudes affecting behavior of the administration of intercollegiate athletics for men. Details of this investigation will be presented later.

Situation-Response. On the assumption that opinions may not be the best indicators of attitudes, Pace (92) attempted to use, as an indicator, what the subject says he would do in a variety of specific situations. A situation is described and a number of responses, usually four or five, are given. The responses represent varying degrees of attitude concerning the situation. The subject is to

select the response which best indicates what he would do if he were confronted with the situation. This calls for a degree of identification with the situation.

Rosander thought there was no reason why the technique of attitude scale construction should be limited to those in which short statements of opinions are employed as the scale elements. He defined the seven steps involved in the construction of a situation-response scale:

> . . . the collecting and editing of scale elements, the preliminary sorting, the final sorting, the scaling, the selecting of parallel forms, the determining of the reliability and the determining of the validity. (99:4)

He constructed an attitude scale to measure attitudes toward the Negro. Rosander concluded that this type of scale is more specific than an opinion scale and that one obtains a sharper picture of an individual's attitude pattern toward the Negro.

Pace (92) gave four reasons for using the situation-response technique: (1) it may be possible to obtain more truthful results because attitudes may be measured more subtly, (2) this technique helps eliminate vagueness and generality of the statements, (3) an attitude inferred from the situation-response scale would be less extreme than one inferred from other measurement techniques, and (4) it is more difficult for a subject to consistently choose similar responses in a situation-response scale. He used this method to measure social, political and economic attitudes.

A number of physical education studies have used the situation-response method to measure attitudes. McAfee (85), in 1955, developed sportsmanship attitude scales for boys in grade six, seven and eight. There were twenty

situations encountered in junior high school physical education classes with four responses for each item.

In 1956 Mayshark (84) developed a situation-response scale to measure health and safety attitudes of seventh graders. He used an analysis of textbook material and information from a jury of experts to determine curricular validity. The original two hundred statements were submitted to thirty graduate students in health education for the purpose of ordering the alternatives. Responses were assigned values; five was the most desirable and one was least desirable. Ambiguous statements and those in which there was not consistent agreement on the rankings were eliminated. One-half of the remaining 150 scale items were assigned to each of two preliminary forms. After administering the forms, an item analysis revealed the critical ratio for each item. The best 120 items were selected and divided into two equivalent forms. Mayshark concluded that the final forms were valid measures and that the reliability was "sufficiently high to meet requirements of good test construction." (84:57) He found that there was a statistically significant difference between health attitudes of seventh grade girls and boys.

Myers (90) developed a scale to measure the attitudes of seventh graders toward safety. He used a procedure similar to that used by Mayshark. There were sixty items in each of the two equivalent forms with four responses randomly placed with each item.

Haskins' problem-solving test of sportsmanship was reported in 1960. In support of her selection of this kind of attitude scale, she wrote the following

observation:

> Sportsmanship is a quality which defies exact definition. We can be most accurate when we attempt to determine sportsmanlike behavior in a specific situation. Determining proper behavior in specific situations can lead to generalizations which can be applied in other instances in sports and other life situations. (65:601)

Her jury of experts included three men and two women representing administration, teaching, coaching and officiating. The sixty best items were given to eighty women physical education majors and 120 men and women service course students for the purpose of determining items which discriminated. Item analysis eliminated twenty items. Two sociometric instruments were devised and administered to the major students to determine how students prejudged each other with reference to their general understanding and judgment inherent in sportsmanlike behavior. Correlations between scores on the forty test items and sportsmanship ratings were positive and significant at the .05 level for the criterion groups. Alternative forms of the tests were constructed. Haskins thought there were certain restrictions inherent in the test; scores would not necessarily indicate the degree of sportsmanship to be expected in a sports situation with its accompanying pressures and emotional involvement. It is possible for a student to know the best response but fail to react in the same manner in an actual situation. She concluded that, "Knowledge alone does not guarantee result in action, but knowledge must accompany attitude formation and precede action." (65:605)

The purpose of Moawad's (132) study was to establish a valid, reliable and objective physical education attitude scale for sophomore boys in Indiana high

schools. The techniques used for establishing curricular validity were the analysis of textbooks and the judgment of competent persons. The physical education program in the high school was classified into eight areas and scale items were constructed to represent these areas. Each item consisted of a stem and five alternatives. Preliminary editing of the items was performed by Moawad's doctoral committee. The ninety-five items retained were put into two forms. Weighting of alternatives was done by a group of eight judges selected because of their special ability and experience in the field of test construction. They were to disregard their own personal attitude in ranking the alternatives. The average ranking for each alternative was taken as the final ranking for a particular alternative. The preliminary forms were administered to 336 sophomore boys.

Moawad performed an item analysis to determine the critical ratio of each item. Only statistically valid items were selected for use in the final form. The agreement among the judges' weightings was determined by use of average intercorrelations. For all items in the final scale, the average intercorrelation was at least .40. Subjects from thirty schools of varying sizes were given the final form containing seventy items. The reliability of the final scale was found in terms of internal consistency, using the split-halves method. Using the Spearman-Brown prophecy formula for correction, the reliability was found to be .915. Norms for the high school sophomore boys of Indiana were established in terms of percentile ranks and T scores.

In 1964 Meyne (131) reported the construction of a scale to measure the attitudes of college men majoring in physical education toward the profession of

physical education. He followed procedures similar to those used by Moawad. Items were developed using selected areas and sub-areas as a guide. Fifteen judges assisted in weighting responses. The average intercorrelation was used to determine the degree to which the fifteen judges agreed in weighting the responses. The judges also rated the items as indispensible, essential, desirable or undesirable. The agreement in weightings and in item worth was used in determining which items would be retained in the final form.

Meyne constructed two preliminary forms and gave them to freshmen and sophomore major students at seven midwest colleges and universities. Criteria were established to determine items to be included in the final form: (1) items must discriminate at the .05 level of confidence and (2) that for each item, all responses must be used by at least five persons. The final form, containing forty items, was administered at three different midwest colleges and universities. Reliability on the final form was .766 when the Spearman-Brown prophecy formula was applied.

The most recent study using the situation-response technique was completed by Zelfer (133) in 1971. She constructed a scale to measure the attitudes of freshmen and sophomore college women toward birth defects. The procedures she followed were similar to those used by Moawad (132) and Meyne (131). Areas and sub-areas were clarified and used as a guide in the development of items. A preliminary set of five judges ranked the responses in order of desirability and made suggestions for the items. One different technique she used was that of allowing the same ranking value to be used more than once if a judge felt a

response was of equal desirability with another response. The rank difference (rho) method of correlation was used to determine the degree to which the judges agreed with each other in weighting the responses for each item. An item coefficient of correlation was computed by averaging the five judges' intercorrelations for each item. The judges' weightings for each response were totaled and averaged to determine the ranking of responses in order of desirability.

Zelfer prepared a preliminary form which included forty-four items developed on the basis of data for the original items. It was sent to a different set of five expert judges for ranking of responses and rating of importance of each item. Similar statistical procedures were carried out on these data as were completed for the original items. She selected the following criteria to determine which items would be included in the final attitude scale: (1) the average item coefficient of correlation had to be .850 or better, (2) four of the five judges must have considered the item either desirable or essential (there was no "indispensible" rating), and (3) the five responses for each item had to include three different rankings, with at least one rank above three and one rank below three. Applying these criteria, thirty items were selected for the final form. A validity of .920 for the scale was found by averaging the item coefficients of correlation for the thirty items. The test-retest method was used to determine reliability as the test was administered to thirty freshmen and sophomore college women. The coefficient of correlation, using the Pearson product-moment formula, was .807.

Summary of Measurement of Attitudes

Some of the more commonly used methods of measuring attitudes were described within this section of the review of literature. There was reference to many of the attitude studies in physical education to illustrate the various methods. No attempt was made to present an exhaustive review or to give a complete summary of the studies which were mentioned. The specific methods which were described included the following: (1) Thurstone or equal-appearing intervals, (2) Likert or summated ratings, (3) semantic differential, (4) Guttman scale analysis, (5) Edwards and Kilpatrick scale-discrimination, and (6) the situation-response.

REVIEW OF SELECTED STUDIES

Those studies more specifically related to the conduct of intercollegiate athletics will be discussed in this section. The first sub-section of the review will include studies related to sports competition for girls and women. The second and third sub-sections will contain studies more specifically related to administration of athletics and coaching. All of the research cited in these two sub-sections has been done in the realm of men's athletics. The research will be discussed in chronological order within each sub-section.

Studies Related to Sports for Girls and Women

Attitude Studies. Perhaps the earliest study which might be classified in this area was reported by Lee (78) in 1931. She surveyed the case for and

against intercollegiate athletics for women. Her information was gathered from questionnaires sent to directors of physical education for women in 154 colleges and universities throughout the United States. She observed that the vast majority of women in the profession were opposed to intercollegiate competition. It was felt that the sense of values of the women participants would become distorted and that undesirable newspaper notoriety would come to the participants. Other disadvantages and some advantages were concluded in the report.

Leyhe (129) surveyed the attitude of women members of the American Association for Health, Physical Education, and Recreation toward intensive competition for girls and women in 1955. Data were collected on attitudes toward the leader, the participant and the program of sports. Some of the conclusions follow: (1) the majority of women surveyed thought that recent statements of professional groups confused the issue of competition for girls and women, (2) the respondents believed that, in the near future, sports programs for girls and women would be directed, coached and officiated by trained women in school situations, (3) attitudes toward competition were influenced by the fact that the respondents were former participants or non-participants on out-of-school teams, (4) the respondents working on the senior high school level agreed that state tournaments were harmful for the adolescent girl, and (5) all of the respondents agreed that national tournaments in team sports were undesirable, but the college teachers agreed more strongly.

McGee (87) compared attitudes toward intensive competition for high school girls as expressed by teachers, administrators and parents. She used a

combination of the Thurstone and Likert methods in the construction of a seventy item attitude scale. Subjects for the study were from Iowa and Illinois communities with varying degrees of athletic programs for girls. Some sponsored intensive competition and others did not sanction any competition. A general conclusion of the study was that administrators and teachers were much less favorable to intensive competition than were parents and coaches.

Brown compared the profile images of the feminine girl, the girl who participated in competitive athletics, and the girl who participated in other school-related activities. She used the semantic differential technique in gathering data from three hundred men and 267 women at Valparaiso University and made the following conclusion:

> It is certainly not true that a girl is unattractive, awkward, cold, or poorly mannered because she is athletic, but precautions must be taken so that athletes do not develop habits of dress and/or behavior which create an unattractive, awkward, cold, rude appearance. It seems imperative that the emphasis in competitive sports for women not be directed toward creating girls who play like boys, but rather toward finding ways in which sports can fit into the new feminine image which seems to be evolving. (118:85-86)

Harres (63) surveyed the attitudes of men and women undergraduate students at the University of California, Santa Barbara, concerning the desirability of intensive athletic competition for girls and women. She used the Likert method in the development of a thirty-eight item attitude scale. The respondents had favorable attitudes; however, there were considerable differences of opinions. Those who had participated in athletic competition felt athletic competition was most desirable. Indicating the activities in which it was most desirable for girls and women to compete, the following preferential ranking

of activities was summarized: swimming, tennis, volleyball, track and field, softball and basketball.

A more recent study by Remley (97) traced the attitude toward sports competition for college-age women in the United States during the twentieth century. The author gathered information from a critical analysis of material written by women about sports competition. She concluded that women physical educators expressed ambivalent attitudes toward sports competition for women in the years 1918 to 1968. In the early years, attitudes could be described on a scale with extreme opinions on either end. A shifting emphasis toward more approval appeared in later years.

Other Studies. A NAPECW Committee on Competition report was summarized by White (116) in 1954. The committee surveyed practices, policies and problems in the conduct of extramural participation of women in 230 colleges and universities. A total of 28 percent had varsity-type competition. Approximately ten years earlier the same committee reported this type of competition in only 19 percent of the institutions surveyed. (100) Of the sixty-four colleges reporting varsity-type competition in 1954, 39 percent had competition in only one sport and 7 percent reported the use of men coaches. Teams were chosen by faculty and students jointly in the majority of colleges and chiefly on the basis of skill. An undesirable effect of varsity programs was the restriction on facilities and staff for intramural programs.

Daves (55) studied the practices of women's athletic associations in Illinois colleges when conducting extramural sports programs. Her study

involved the following procedures: (1) identification of principles of the conduct of extramural sports programs, (2) description of current practices, (3) appraisal of practices, (4) identification of factors detrimental to the programs and their specific influences, and (5) proposal of policies for the effective conduct of extramural sports. She used an analysis of literature and a panel of experts to develop the principles. Current practices were appraised by defining strengths and weaknesses and by noting conformity of practices to principles. It was concluded that the weakest areas of the programs were publicity, officiating, balance of team and individual activities, lack of emphasis on social activities, and standards for practice and participation time. The following recommendations for intercollegiate athletics for women were made: (1) use of a standardized system for rating teams, (2) adoption of minimum and maximum practice times, (3) requirement of minimum amount of practice before the first competitive event, (4) establishment of reasonable amounts of daily and annual participation time, (5) development of more competent officials, (6) placing of more emphasis on social activities, (7) improvement of eligibility requirements, (8) scheduling more time for individual sports, and (9) changing in the time schedule of sports days.

McNutt's (23) investigation was designed to ascertain the degree to which colleges in the midwest followed DGWS guidelines in the conduct of their athletic programs and the relative value attached to these standards. She gathered her information from a questionnaire. The guidelines concerning rules and regulations for the scheduling of competitive events and for medical provisions received

the most favorable overall responses for both importance of practice and present status of practice. She concluded, as cited by Resick, Seidel and Mason (30), that, on the whole, small colleges did not follow the DGWS guidelines to the same extent as did the medium- and large-size colleges even though the majority of colleges consider the guidelines to be important.

Massie (83) completed a similar investigation in Kentucky. She studied the practices that were followed in the conduct of women's intercollegiate athletics at twelve colleges. A panel of twenty-eight women physical educators rated the value of selected practices. They unanimously agreed that scholastic eligibility for full-time undergraduates was desirable and that competition scheduled against men competitors was undesirable. There was strong agreement among the jury in favor of the following practices: (1) medical examination by college physician before the start of the sport season, (2) blanket accident insurance purchased by the institution, (3) physician in attendance at competitive events, (4) uniform practices concerning entrance requirements, college employment and grant-in-aid for all students, (5) amateur status eligibility determined independently by each sport, (6) competitive scheduling with college teams of comparable ability, (7) schedules of competition arranged to avoid examination periods, (8) travel by chartered bus, and (9) maximum one-way travel time of two hours or less. It was reported that conditions existed in some of the colleges which endangered the health and safety of the women participants.

Studies Related to Administration of Athletics

Stalnaker (106) surveyed the attitudes toward men's intercollegiate

athletics at the University of Minnesota in 1933 to articulate a committee assignment made by the president of the institution. The committee was to gather facts about men's physical education and athletic program, study and analyze the facts, and then propose a ten-year program of athletics which would fit into the whole educational program of the university. Stalnaker's scale was given to faculty, students and athletes at the university; college and university presidents throughout the United States; alumni of the university; high school executives and newspaper editors in the state; parents of University of Minnesota students; and the general public. According to the opinions expressed by all groups, except the presidents, it was found that athletics at the University of Minnesota were not in an objectionable state. Stalnaker concluded that favorable attitudes toward intercollegiate athletics do not serve as proof that intercollegiate athletics are valuable.

Crawford (53) collected information on ethically critical conduct demonstrated in actual game situations by personnel connected with intercollegiate athletics. A total of 815 useable replies were gathered from administrators, coaches, and officials. He attempted to identify types of conduct and to derive standards for professional ethics. The majority of incidents were categorized in the areas of officiating, opponent relationships, and player relationships. Coaches were reported as instigators in 92 percent of the total incidents. Eighty-two percent of the actions reported involved football and basketball. After studying the types of unethical action and the statements of suggested ideal conduct supplied by respondents, Crawford derived 134 ethical standards. Each

statement was supported by illustrations of types of critical incidents to which standards should apply.

The primary purpose of Hutter's (67) study was to determine the relationship between expressed attitudes of those associated with the administration of intercollegiate athletics and the practices in effect in their respective institutions. The scale-discrimination technique was used in developing a scale to measure the attitudes of administrators toward the administration of athletics. An inventory was made of the administrative policies and practices that were in effect in sample colleges. The responses that accompanied each item on the practice inventory were scaled to correspond with the attitude scale. There was a correlation of .49 between the practice inventory and the mean attitude score of an institution. Significant differences at the .05 level were found between the attitudes of presidents, faculty representatives, athletic directors and coaches. The data were gathered from thirty-one Ohio colleges during 1970.

Aceto (41) compared role expectations of the athletic director in selected colleges and universities in 1971. Role-behavior expectation was determined by a seventy-seven item behavioral instrument that measured expectations of administrative leadership, administrative planning, consideration, initiating structure and staff relations. The role, as perceived by the incumbent, the university president and the athletic chairman, was measured with the Athletic Director's Behavior Scale. The respondents differed significantly, at the .05 level, on ten of the seventy-seven expectations.

Ellis (59) studied practices in administering athletics in selected

two-year colleges. A questionnaire was used to gather information on the planning, organizing, staffing, directing, coordinating, reporting and budgeting functions of the director of athletics. The responses of 153 directors of athletics in junior colleges were compared to standards determined by thirty-one experts. Several of the standards are appropriate to mention here as they relate to practices in administering women's intercollegiate athletics: (1) departments of athletics and physical education should not be separate, (2) academic credit should be given for participation on athletic teams, (3) statements of purposes underlying athletic programs should be included in institutional catalogs and handbooks, (4) policies governing athletic programs should be written, (5) athletic directors and coaches should greet and care for the needs of visiting teams and establish qualifications for athletic awards, (6) coaches' win-and-loss records should be considered occasionally in hiring and retaining practices, (7) the dean of administration should be responsible for the certification of eligibility of student athletes, and (8) budgets for athletics and physical education should be separate.

Studies Related to Coaching

In 1953 Latham (75) reported an investigation of the relationship between selected personality traits and success in athletic coaching. He attempted to discover the value of a forced choice rating scale for measuring behavioral characteristics related to success in coaching football. Success was determined by percentage of games won. It was found that the high school principals, coaches, and players who did the ratings interpreted the phrases differently and

thus there was lack of consistency of relationship between the same phrases when used by the different groups.

Harvey (64) made an evaluation of the practices of selected ethically questionable actions by college athletic coaches. Crawford's (53) earlier study served as a reference for ethically critical conduct. The source of information for Harvey's investigation was responses from 728 graduated varsity lettermen from twelve schools in the midwest. They indicated the extent to which eighty-six coaches in baseball, basketball, football, and track practiced ethically questionable actions. More unethical practices were made by basketball coaches under maximum pressure than by any other coaches. Of particular interest to this writer were Harvey's three recommendations:

> Administrators should make certain that athletic programs are conducted according to aims and objectives of education.
>
> Associations and conferences should assume more responsibility for the elimination of malpractices in athletics.
>
> Teacher-training institutions should emphasize to prospective coaches the importance of developing desirable professional attitudes. Coaches should be mindful of their responsibilities for proper ethical conduct. (64:1068)

The semantic differential technique was used by La Grand (73) in his investigation of responses of athletes to the behavioral characteristics of their coaches. The subjects for the study were four groups of college athletes who participated in basketball, soccer, tennis, and wrestling. There were seventy-six in each group. Significant differences were found between the profiles of the two individual sports, the two team sports and between the combined groups. La Grand established a hierarchy of behavioral characteristics of coaches for

each sport. "Knowledge of the sport" received the highest rating in each hierarchy and "enthusiasm" was also rated consistently high. Written responses indicated that "coaches should give special concern to developing a sensitivity and understanding of the individual attitudes and needs of the athletes." (73:4524-A)

Lauffer (76) administered the Haskins-Hartman Action-Choice Test for Competitive Sports Situations to coaches and faculty members at colleges and universities in NCAA District Two. His purpose was to measure their stated sportsmanship attitudes. He found that attitudes did not differ between coaches and faculty members nor between coaches of different sports. It was concluded, however, that sportsmanship attitudes of coaches and faculty members in public institutions were superior to sportsmanship attitudes of coaches and faculty members in private institutions.

Pease (95) attempted to investigate player-coach compatibility and its role in cutting students from athletic teams. He wanted to determine the effect of differences in interpersonal-need orientation between athletes and their coaches on athletic exclusion. The subject were coaches and prospective baseball players from sixteen junior high schools in one urban school system. The findings indicated that athletic exclusion was a result of either cutting or quitting. Athletes who were cut appeared not to be affected by interpersonal compatibility; however, the compatibility factor appeared more crucial than playing ability as a criterion for quitting.

Patrow (94) studied the psychosocial characteristics of coaches and their

relationships to coaching success. Selected baseball and track coaches from Wisconsin were used as subjects. There was no significant difference between the two groups in terms of acceptance of self, acceptance of others or dogmatism. For the baseball coaches, the greater the degree of dogmatism and acceptance of self, the less they experienced coaching success. Track coaches showed a positive relationship between acceptance of others and coaching success. Patrow concluded, "It seemed appropriate that more careful consideration should be given to the personality dimensions when determining what individuals should guide and coach youngsters." (94:3078-A)

Summary

Many of the studies on intercollegiate athletics have centered on either the topic of administrative or coaching policies and procedures. Women have been primarily concerned that the athletic programs are educationally sound and have competent leadership. Attitudes toward competition for girls and women have been measured by several investigators in the past fifty years. These studies have indicated a gradual change in attitudes in favor of more competitive participation for girls and women. Findings from studies related to men's athletics may prove to provide valuable information for women involved in the coaching and administration of athletics.

CHAPTER IV

PROCEDURES AND ANALYSIS OF DATA

This chapter presents a detailed description of the procedures followed in the construction and administration of the attitude scale. The analysis of data which was necessary to finalize the scale is also given. Five major headings serve to categorize the material: (1) selection of a suitable technique for measuring attitudes, (2) development of items for the scale, (3) evaluation of items and ranking of responses by expert judges, (4) administration of the attitude scale to women coaches and (5) treatment and analysis of data from the coaches.

SELECTION OF A SUITABLE TECHNIQUE FOR MEASURING ATTITUDES

The investigator studied a wide variety of techniques for measuring attitudes prior to the selection of the technique to be employed in this study. There really is no way in which attitudes can be measured directly. According to Myers (88), the two recognized ways in which an attitude may be expressed are in non-verbal or verbal behavior. It was thought that the most appropriate technique would be one which would be both practical and oriented toward action. If the purpose of this study were to measure the attitudes of women coaches toward the conduct of intercollegiate athletics for women, why not put the respondent

(coach) in a situation and see how she would choose to react? As far back as 1928 Thurstone wrote, "There has been a suggestion that a man's action rather than his opinion is a safer index of his attitude." (108:532)

Pace wrote that "The value of an attitude measurement is largely dependent on knowing what behavior is associated with it." (91:411-412) The situation-response technique does not depend upon what a person says she believes, but on what she says she will do in a variety of specific situations. This technique is behavior oriented. The research cited in the review of literature gives evidence that the situation-response technique is a well-established and creditable method of measuring attitudes. In view of the specific nature of the attitudes to be measured, it was thought that the situation-response technique would be appropriate to use in this investigation.

DEVELOPMENT OF ITEMS FOR THE SCALE

Selection of Areas and Sub-areas

Areas and sub-areas were identified as a guide in the development of scale items. The investigator used as a frame of reference an analysis of current literature and information gained from professional meetings and from personal interviews. Thirteen major areas were designated: (1) place of athletics in education and physical education, (2) leadership, (3) financing, (4) public relations, (5) general philosophy, (6) ethics, (7) methods of coaching, (8) team selection, (9) scheduling of events, (10) standards and eligibility, (11) rules and officials, (12) health and safety, and (13) equipment and facilities.

Revision of Areas and Sub-areas by Five Selected Judges

The areas and sub-areas were revised with the assistance of five judges to insure that the guide was appropriate to command content validity. These judges met the following criteria:

1. Five years of coaching experience
2. Ten years of experience in the field of physical education
3. Graduate degree in physical education
4. Available for a personal interview

The names of the five women who assisted with the revision of areas and sub-areas follow:

Ms. Margarite Arrighi	University of Maryland
Ms. Norma Boetel	South Dakota State University
Dr. Leotus Morrison	Madison College Harrisonburg, Virginia
Ms. Lee Sadler	Capital University Columbus, Ohio
Ms. Lu Wallace	Brigham Young University

These five judges, along with the investigator, were representative of the six geographical districts of AAHPER.

Each judge was contacted and the purpose of the study explained. A personal interview was conducted in the following manner:

1. The purpose and scope of the study were explained.
2. The fact that attitudes were being investigated rather than knowledge was mentioned.

3. A sample situation-response item was shown to the judge and the situation-response technique was explained.
4. A sample of an area, such as General Philosophy, was given and several of its sub-areas were mentioned.
5. The use of areas and sub-areas as a basis for content validity was explained.
6. The judge was shown a copy of the original areas and sub-areas. Each area and sub-area was discussed.
7. Using the original areas as a guide, the judge was asked for her ideas concerning areas and/or sub-areas which should be included.
8. The judge was asked whether or not she felt the initial guide, along with the additional suggestions, could serve as a valid basis for creating attitude-scale items.

Notes were recorded during each interview. Each of the judges felt the original list of areas and sub-areas, along with her suggestions for additional sub-areas, would adequately serve as a guide for the development of a valid attitude scale in the area under investigation. On the basis of information gained in the interviews, a final guide of areas and sub-areas was formulated. Appendix A contains a complete list of the areas and sub-areas.

Formulation of Original Scale Items

The development of scale items was based on the past experience of the investigator as well as on consultation with colleagues, an analysis of current problems in the field, and a study of the most recent literature on the topic of

intercollegiate athletics for women. Related studies by Haskins (65), Moawad (132), Meyne (131), and Zelfer (133) served as a guide. No attempt was made to develop a situation for each sub-area nor was there any attempt to equate the number of situations that could be categorized in each of the areas. However, as each item was created it was classified by area and sub-area. The position, i.e., administrator or coach, in which the situation placed the respondent was also classified. Thus the investigator attempted to describe a wide variety of situations which would adequately represent the revised guide of areas and sub-areas.

After each situation was described, it was necessary to develop five alternative responses. These responses represented attitudes of different degrees of desirability. Suggested criteria for writing attitude statements by Wang (113) and Oppenheim (26), and rules for constructing multiple-choice questions by Ross and Stanley (31) were taken into account in the formulation of scale items and responses. One hundred items were developed with the following criteria for evaluating and reviewing in mind:

1. Use parallel construction and consistency of verbs, nouns, focuses and persons.
2. Do not substitute knowledge or judgment for behavior.
3. Avoid using modifiers such as always, only or never.
4. Uncommon terminology should be avoided.
5. Situations should be brief, but descriptive.
6. Only one concept should be contained in each item.

7. Make responses approximately the same length.
8. Make all responses plausible.
9. Whenever possible, responses should be equal distances apart.
10. Responses should be relevant to the stem.

The one hundred situation-response items appear in Appendix A.

EVALUATION OF ITEMS AND RANKING OF RESPONSES BY EXPERT JUDGES

There were nine judges selected as the panel of experts who ranked the responses for each situation in order of desirability. There were two reasons for ranking the responses: first, to obtain an order of desirability of behavior as expressed by the responses, second, to obtain a numerical weighting for each response so that respondents' scores could be calculated and treated statistically. The judges also rated the value of each item as it might contribute to the total scale.

Selection of the Expert Judges

The following criteria served as a basis for the selection of the expert judges:

1. Represent different geographical areas
2. Represent varying age groups
3. Active interest in philosophy and standards of girls and women's sports
4. Published work in the area of attitudes toward physical education

5. Currently involved in coaching or administration of women's athletics

All judges were not expected to meet these five criteria, but the group of judges was to collectively meet the criteria. Members of the investigator's doctoral committee assisted in the selection of possible judges. Letters were sent to ten women asking them to serve on the jury of experts. The purpose of the study was explained and the role of the judges was defined. They were asked to return an enclosed post card indicating whether or not they would be willing to serve. Appendix B contains a copy of the letter sent to the prospective judges. Nine women consented to serve as judges:

Ms. Janet Atwood	The Pennsylvania State University
Dr. Mildred Barnes	Central Missouri State College
Dr. Edith Betts	University of Idaho
Dr. Mary Jane Haskins	Lamar University
Dr. Frances Koenig	Central Michigan University
Dr. Katherine Ley	State University of New York, College at Cortland
Dr. Betty McCue	University of Oregon
Dr. Frances Schaafsma	California State College at Long Beach
Dr. Charlotte West	Southern Illinois University

None of the judges, at the time of her selection, was connected in any way with the Association for Intercollegiate Athletics for Women (AIAW); however, one judge had served as chairman of the Commission on Intercollegiate Athletics for Women (CIAW) and another had been the Commissioner for National Championships for one year. Three of the nine judges had completed terms as

Chairman of the Division for Girls and Women's Sports (DGWS) and a fourth will serve in this capacity for 1973-74. Seven of the judges had been members of the DGWS Executive Council. After completing their responsibilities related to this investigation, two of the judges were later elected to serve as AIAW Regional Representatives. In addition, two judges had been chairman of the DGWS Philosophy and Standards Area.

This information on the professional experiences of the nine expert judges provides adequate indication of their breadth and depth of service related to the DGWS. In addition, all of the judges were currently involved with coaching and/or administrative responsibilities. The doctoral dissertations of two of the judges dealt with the construction of attitude scales related to athletics.

Evaluation of Items and Ranking of Responses

The one hundred situation-response items were duplicated for distribution to each of the judges. Included in the mailing was a letter of appreciation and a detailed sheet of instructions. A copy of this letter and the instructions appear in Appendix B. The judges were asked to make two judgments on each of the items.

First, the judges were to rate the responses for each item ranking from the most desirable behavior to the least desirable behavior. A value of five points was given for the most desirable behavior and so on down in order of desirability. One point was assigned to the least desirable response. If a judge felt it was impossible to rate the responses for a particular item on a five-to-one scale, she could assign a duplicate value to two or more responses

which she thought were equally desirable or equally undesirable. The judges were instructed to disregard their own personal attitude toward the situation in ranking the responses.

The second judgment involved evaluating each total item. The judges were to indicate the value of the item in view of its contribution to the total scale. This was a method used to check the content validity of the scale. Each item was to be rated as either (1) E (Essential)--should be included, (2) D (Desirable)--acceptable, or (3) U (Undesirable)--should not be included. These ratings and the response rankings of the judges appear in Table 7, Appendix C.

The letter, scale items, and complete instructions were sent to the expert judges in mid-January, 1972. They were asked to complete the ranking of responses and evaluation of items within three weeks and to return the materials to the investigator in enclosed self-addressed, stamped envelopes. Upon receiving the completed ratings, the investigator sent a personal thank-you note to each judge expressing appreciation for her assistance with the study.

Treatment and Analysis of Data from Judges' Responses

The criteria used to determine which items would be considered for inclusion in the attitude scale follow:

1. Over half of the judges must have considered the item either desirable or essential.
2. The five responses for each judge on each item must have included three different rankings with at least one rank below 3 and one rank

above 3. For example, an item ranked 5, 4, 4, 3, 3, was not considered; neither was an item ranked 5, 5, 2, 2, 2.

3. The average intercorrelation of response rankings for the item must have been .500 or better.

Evaluation of Items. The judges were instructed to rate each item on its contribution to the total scale. Items which were rated undesirable by over half of the judges were eliminated from further consideration. One item, number sixteen, was eliminated on the basis of this criterion. Table 1 indicates why items were eliminated.

Variance of Responses for Each Judge on Each Item. The five responses for each judge on each item were reviewed. Each judge had to include three different rankings with at least one rank below 3 and one rank above 3 for an item to be retained. There were seventeen items eliminated on the basis of this criterion. The numbers of these items are indicated in Table 1.

Average Intercorrelation of Response Rankings. The Spearman rank difference (rho) method of correlation was used to determine the degree to which the nine judges agreed in ranking the responses. The intercorrelations for all possible combinations of judges for each remaining item were computed on an IBM system 360 model 165 computer. The rankings of each judge were correlated with every other judge for each item. There were thirty-six intercorrelations for each item. For items ranked by only eight judges, there were twenty-eight intercorrelations. To determine the average intercorrelations for each item the

Table 1

Average Intercorrelation of Judges' Rankings
for Original One Hundred Items

Item	r	z'	Item	r	z'
1*	.926	1.629	31*	.831	1.190
2*	.846	1.243	32	.086	.087
3*	.891	1.428	33	.799	1.097
4	.265	.271	34	.063	.063
5*	.920	1.587	35*	.952	1.854
6 e	.825	1.171	36*	.777	1.037
7*	.895	1.446	37 a		
8*	.677	.827	38 a		
9	.034	.034	39* c	.890	1.422
10	.171	.173	40*	.804	1.111
11	.584	.667	41 d	.850	1.258
12 a			42*	.870	1.337
13*	.855	1.400	43 c	.052	.052
14	.667	.805	44 a		
15*	.962	1.979	45	.656	.786
16 b			46*	.837	1.210
17 a			47*	.931	1.667
18	.485	.530	48*	.973	2.145
19*	.839	1.219	49*	.774	1.030
20*	.835	1.204	50*	.847	1.244
21 a			51*	.844	1.235
22*	.719	.902	52*	.945	1.790
23 a			53*	.950	1.827
24*	.863	1.306	54	.657	.788
25	.612	.713	55*	.762	1.001
26	.375	.394	56*	.832	1.193
27*	.778	1.040	57*	.887	1.406
28	.661	.795	58*	.910	1.528
29*	.614	.716	59*	.910	1.529
30	.791	1.075	60*	.805	1.112

Table 1 (continued)

Item	r	z′	Item	r	z′
61 a			81 a		
62	.721	.910	82	.625	.734
63*	.783	1.054	83	.660	.792
64	.652	.779	84 a		
65	.695	.858	85 a		
66*	.905	1.502	86 a		
67 a			87*	.701	.868
68*	.923	1.610	88 a		
69* c	.749	.971	89*	.970	2.097
70*	.973	2.145	90 d	.870	1.332
71 a			91*	.932	1.677
72 a			92	.568	.637
73*	.856	1.278	93	.725	.918
74*	.933	1.679	94*	.856	1.279
75	.721	.911	95	.626	.735
76*	.911	1.533	96*	.841	1.230
77*	.816	1.145	97	.675	.821
78	.550	.619	98*	.905	1.501
79	.665	.801	99 a		
80*	.812	1.134	100	.676	.822

* Selected for use in the scale

a Eliminated because each judge did not have at least one response above 3 and one response below 3 and use three different responses

b Eliminated because over half of the judges did not value the item as either desirable or essential

c One judge did not rank the responses; therefore, the average intercorrelation was calculated from the ranking of eight judges

d Eliminated because the situation was too specific to a sport

e Eliminated to balance the content of the scale

rank order correlations were transformed into z' values and then averaged. (12) The average z' value was then converted back to the correlation coefficient. The investigator realized that the Fisher transformation was designed to convert the Pearson r to z' values. In using this procedure, it was thought there would only be a negligible difference in statistics since rho is an approximation of r and the difference between the two never exceeds .018. Table 1 shows the average intercorrelations of judges' rankings for the remaining eighty-two items. The range of average intercorrelations was from .034 to .973. Only eight items had an average intercorrelation below .500. This was one of the criteria used in determining which items would be further considered for inclusion in the attitude scale. Items with an average intercorrelation below .500 were eliminated from further consideration. Eight items were eliminated on the basis of this criterion.

Selection of Items for the Attitude Scale

There were seventy-four items which met the criteria related to (1) item value, (2) variance of responses from each judge, and (3) average intercorrelations. At this point, a decision was made to include fifty items in the attitude scale. Four factors served as the basis for this decision: (1) the need for sufficient data for calculating reliability, (2) the time necessary to respond to a scale containing fifty items, (3) the number of items with average intercorrelations above .500, and (4) the feasibility of duplicating and mailing the scale.

A preliminary selection was made of all the items with an average intercorrelation above .800. Forty-three items met this criterion. The investigator carefully scrutinized each item in view of (1) the comments from the nine judges,

(2) the need to adequately represent the different areas in the scale, and (3) the distribution of administrator and coach positions in which the respondent was placed in the situations. The item-value ratings were also considered in the screening process; it was thought that any remaining item rated undesirable by three or four judges should be eliminated.

As a result of the editing, three items with an average intercorrelation above .800 were eliminated. Item number six was eliminated because there were two other items with higher average intercorrelations representing the same sub-area. Items number forty-one and number ninety were eliminated because the situation described was too specific to a sport; only those coaching that sport would have sufficient knowledge to indicate how they would behave if placed in that situation.

To insure adequate representation of the thirteen areas and the positions in which the respondent was placed in the situations, ten items were added which had average intercorrelations between .600 and .800. Table 2 shows the distribution of the items in the areas for both the original one hundred items and the fifty items finally selected for the attitude scale. Table 3 indicates the distribution of positions in which the respondent was placed in the fifty attitude scale items.

Inter-Judge Reliability

The range of average intercorrelations for the fifty items selected was from .614 to .973. The mean of these averages represents a measure of the inter-judge reliability. To compute the mean, the z' values for the fifty items

Table 2

Distribution of Items in Areas

Area Headings	One Hundred Original Items	Fifty Scale Items
1. Place of Athletics in Education and Physical Education	7	3
2. Leadership	11	7
3. Financing	5	3
4. Public Relations	7	4
5. General Philosophy	8	4
6. Ethics	9	3
7. Methods of Coaching	20	10
8. Team Selection	3	2
9. Scheduling of Events	6	3
10. Standards and Eligibility	6	2
11. Rules and Officiating	7	4
12. Health and Safety	10	4
13. Equipment and Facilities	1	1

Table 3

Distribution of Positions in Which Respondent Was Placed in the Fifty Attitude Scale Items

Positions	Total Number of Items	Specific Items*
Department Chairman	5	31, 42, 59, 63, 76
Coordinator of Women's Intercollegiate Athletics	5	5, 20, 36, 55, 57
Coach	5	39, 52, 77, 80, 98
Coach of a Specific Sport:		
Badminton	1	91
Basketball	9	2, 3, 7, 9, 35, 46, 48, 73, 96
Bowling	1	13
Fencing	2	24, 60
Golf	3	40, 87, 89
Gymnastics	2	27, 94
Hockey	4	1, 22, 51, 66
Lacrosse	1	53
Softball	2	47, 69
Swimming	4	8, 56, 68, 70
Tennis	3	19, 58, 74
Track and Field	2	49, 50
Volleyball	1	15

*Number refers to the original number from the one hundred items.

were averaged and then this figure was converted back to the correlation coefficient. The z' values appear in Table 1. The inter-judge reliability for ranking the responses of the selected scale items was computed to be .879. According to arbitrary standards presented in measurement textbooks, this coefficient indicates very acceptable reliability. (5)

Validity of the Attitude Scale

An effort was made in the construction of the attitude scale to guarantee content validity. The use of judges to evaluate the adequacy of the areas and sub-areas from which the items were developed was one way of checking content validity. Another method was having the expert judges evaluate each item as it might contribute to the total scale. Content validity will be discussed in further detail in Chapter V.

Final Weighting of the Attitude Scale

The judges' rankings for each response were totaled and averaged. Weightings were then assigned to each response by rounding the average weight to the nearest tenth of a number. For example, a response which received the rankings of 5, 3, 5, 4, 3, 4, 3, 3, 4 would have an average weight of 3.8. The possible weightings ranged from 1.0 to 5.0. The most desirable responses were represented by higher weightings. These weightings were computed on an IBM system 360 model 165 computer. The average weightings for each response were used to later score the scale; they appear as part of Table 7, Appendix C.

ADMINISTRATION OF THE ATTITUDE SCALE TO WOMEN COACHES

The fifty items selected for inclusion in the scale were prepared for distribution to the women coaches at a randomly selected sample of institutions. In addition, a copy of the attitude scale was sent to each of the nine judges who evaluated the original items and ranked the responses. The five judges who assisted with the revision of areas and sub-areas were also sent a copy of the attitude scale.

Selection of the Women Coaches

The investigator used the listing of Charter Members of the Association for Intercollegiate Athletics for Women (AIAW) in selecting the women coaches. The list was being prepared in chronological order as membership applications were received in the DGWS office in Washington, D. C. The investigator visited this office to make the random selection. Every third member school as of February 25, 1972, was selected. This was the cut-off date set for charter membership in order to vote on the first slate of AIAW officers. Seventy-five institutions were selected from the 225 charter members as of that date. The women coaches at these randomly selected colleges and universities served as the respondents who were asked to complete the attitude scale.

Included within the sample of institutions were colleges and universities of all sizes and from all of the AIAW nine regions. There were junior colleges, community colleges and private and public institutions. Thirty-five states were represented. Thirty-one of the institutions had participated in at least one of the

1970 or 1971 DGWS National Intercollegiate Championships. The list of schools which comprised the random sample appears in Appendix D.

Part of the AIAW membership application form contained space to list the names of the coaches by sports. It was from these lists that the investigator was able to determine the number of women coaches at each institution and thus the number of scales to send. The number varied from one to eleven. The investigator had to guess at the number of coaches at eight institutions because this portion of their membership form was incomplete. There were 349 scales sent out; however, the actual number of women coaches at these institutions may have ranged from 340 to 360.

Administration of the Attitude Scale

A letter was sent to the coordinator of intercollegiate athletics for women at each of the selected institutions asking her to administer the attitude scale to the women coaches. A copy of this letter may be found in Appendix D. The exact name of the coordinator was secured from the AIAW membership application form. In some cases the coordinator was a man and in some cases it was the women's physical education department chairman. It was thought that communicating with the coordinator would provide a more direct line to the coaches and thus enhance the number of returns.

The attitude scales were mailed on April 5, 1972, in the envelope containing the letter to the coordinator. Attached to the front of each scale were the directions and a form requesting identification information from the coach. A copy of this page may be found in Appendix D. The coordinator was asked to

have each woman coach complete an attitude scale, to collect them, and to put them in the mail by May 1, 1972. A stamped, self-addressed manila envelope was provided for the scales to be returned to the investigator. On May 9, 1972, a post card reminder was sent to the coordinators whose attitude scales had not been received. A copy appears in Appendix D. Table 4 shows the percentage of institutions which returned the attitude scales and the percentage of coaches who completed the scales. The number of scales sent to each school and the number returned appear in Table 8, Appendix D.

Table 4

Percentage of Attitude Scales Returned

Classification	Number Mailed	Number Returned	Number Useable	%
Institutions	75	63		84
Women Coaches	349*	246		70
			163	66

*The actual number of women coaches may have ranged from 340 to 360.

A reason for the relatively high figure of 84 percent may have been attributed to the timeliness of the issue of intercollegiate athletics for women. The fact that the investigator was a member of the Commission on Intercollegiate Athletics for Women, and so stated in the letter to the coordinators, may have enhanced the number of returns also. Only 70 percent of the coaches returned

the scales. However, this figure is not exact. The investigator had to guess at the number of scales sent to eight of the institutions. There were also indications of errors in the number of coaches at institutions where complete application forms were on file. One school requested four additional scales and all were returned to the investigator. Another school had more coaches listed in its regional directory than on the AIAW form.

TREATMENT AND ANALYSIS OF DATA FROM THE COACHES

The treatment of the data involved the scoring of the attitude scales and the determination of the reliability of the scale. All 246 scales returned were manually scored by the investigator. The reliability of the scale was determined by employing the Spearman-Brown prophecy formula to the Pearson product-moment method of correlation.

Scoring the Attitude Scale

All of the coaches' responses were recorded directly on the scale. Errors may have occurred in recording if they had used an answer sheet. A master scorecard was prepared to facilitate scoring. This can be found in Appendix E. The process of scoring involved converting an "X" response to the appropriate numerical value which was the average weight of the judges' responses for that particular alternative. The values of the odd-numbered and even-numbered items were totalled separately to obtain the data for determining the reliability of the attitude scale. These two sums were added to produce a

coach's total score on the scale.

Because of the variation among average weights for each item the distances between the most desirable response and the second-most desirable response, between the second-most desirable response and the third-most desirable response, and so on down to the distance between the two least desirable responses, varied. In some cases the second-most desirable response had a value only one tenth of a point below the most desirable response, and in other cases the value was as much as one and nine tenths points lower. This factor had an effect on the total score which was possible. Table 5 shows the range of values for the responses in order of desirability.

Table 5

Range of Average Weight Values for Responses in Order of Desirability

Order of Desirability of Response	Odd-Numbered Items		Even-Numbered Items	
	Range of Values	Total for All Items	Range of Values	Total for All Items
Most Desirable Response	4.1 - 5.0	116.8	4.1 - 5.0	117.9
Second-Most Desirable Response	3.2 - 4.4	97.6	3.1 - 4.3	94.6
Third-Most Desirable Response	2.0 - 3.8	71.1	1.8 - 4.1	73.9
Fourth-Most Desirable Response	1.3 - 2.6	50.3	1.2 - 2.9	50.1
Least Desirable Response	1.0 - 1.7	28.7	1.0 - 1.8	29.1

The maximum score possible was 234.7. This score would have been attained if a coach selected the most desirable response for every item. There were 246 attitude scales returned; however, only 163, or 66 percent, had every item completed. The scores on these scales ranged from 196.2 to 230.8. The mean score was 217.6. The data indicated that there was very little variance among the scores of the coaches and that the mean score was quite high. Possible reasons for these findings will be discussed in Chapter V.

Treatment of the Data to Determine the Reliability of the Attitude Scale

The total score of all odd-numbered items was correlated with the total score of all even-numbered items for the 163 completed scales. These scores appear in Table 9, which is part of Appendix E. The correlation coefficient, computed on an IBM system 360 model 165 computer, was .426. The reliability of the entire scale was estimated by means of the Spearman-Brown prophecy formula; it was computed to be .597. The reliability data appear in Table 6.

Table 6

Reliability of the Attitude Scale

	Odd-even	Spearman-Brown
Fifty-Item Attitude Scale	.426	.597

A reliability of .597 appears low at face value. This figure seems to indicate that the internal consistency of the attitude scale may be questionable. Some reasons for this reliability and its possible credibility will be discussed in Chapter V.

CHAPTER V

DISCUSSION

Within this chapter the investigator relates some comments and reactions about the procedures used in the development of the attitude scale and also the results of administering the scale. Many of the topics are interrelated. In order to facilitate presentation of these comments, the following major headings are designated: (1) development of the attitude scale, (2) administration and scoring of the attitude scale, and (3) a scale for measuring attitudes of women coaches.

DEVELOPMENT OF THE ATTITUDE SCALE

The investigator chose to use the situation-response method of measuring attitudes on the basis that the technique was both practical and action oriented. Thurstone (110) had implied that perhaps a man's action was a safer indication of his attitude than his opinion. The investigator thought it would be possible to obtain a more truthful and subtle measure of attitudes by using the situation-response method.

The Use of the Situation-Response Method

A situation-response item involves the brief description of a situation and

five alternative responses representing different degrees of attitude toward the situation. The women coaches who served as respondents were instructed to indicate how they would behave if placed in the situation described. They were restricted to the exact wording in the five responses. It was possible that a coach's choice of action was not described in one of the responses. This factor could have forced a coach to select a response which was not how she would act if she were placed in the situation. Thus it was possible that a coach's true attitude, as indicated by her choice of response, may not have been adequately reflected.

Pace (93) said that the situation-response method depends on what a person says she will do in a variety of situations. If, however, the respondent's real choice of action is not one of the alternatives, this assumption is incorrect. The investigator recognized that the attitudes measured by the scale were limited by the specific wording in the situations and responses. The degree to which the coach identified with the situation was another related factor affecting the credibility of the measurement. Still another factor which deserves mentioning is that in using the situation-response method the respondent is not forced to meet the consequences of her choice of action. The investigator questioned whether or not the coach would have behaved the way indicated if she were really in the situation described. The answer to this question can not be determined.

A considerable amount of time is required to complete a situation-response scale because of the nature of the items. In view of this factor and the comments from several of the responding coaches, the investigator thought that

the number of items in the scale should have been reduced. This attitude scale, containing fifty items, was too lengthy. A more precise scale containing approximately thirty items may have proved more effective.

A number of the situations described were in the realm of administration. The investigator thought that many of the coaches responded to these items on the basis of existing administrative policies within their institutions and consequently their personal attitudes may not have been revealed. In other words, practices affecting the conduct of intercollegiate athletics may be governed more by existing policies than by personal attitudes. However, it should be recognized that the existing policies were probably determined on the basis of the attitudes of the individuals who made the policies.

Thurstone (111) said that the scale developer requires skill to arrange situations in which the respondents will reveal their attitudes with the least possible distortion. Thus the skill of this investigator was a variable affecting the quality of each situation-response item. The background and experience of the investigator imposed limits on her ability to construct scale items.

Another factor influencing the quality of scale items was the specificity which existed in the situations and responses. In some cases the situation was too particular to a certain activity. Some coaches did not have enough technical background to know how they would respond if placed in the situation. In other cases, the situation was not detailed enough to give the coach adequate information to make a sound response.

The Use of Expert Judges

There were nine judges selected to serve as the panel of experts who assisted in the development of the scale. The task of ranking the five responses for each of the original one hundred scale items was very time consuming. In spite of this, all of the judges took time to comment on individual items and to express their sincere interest in the study. They indicated there was merit in this kind of an investigation and that the study was most worthwhile.

The judges represented the six geographical districts of the American Association for Health, Physical Education and Recreation (AAHPER) which might have helped to compensate for any marked differences in philosophical beliefs among districts. They also represented different age groups which may have been a factor influencing attitudes. The investigator believed the judges had a thorough knowledge and understanding of the philosophy of the Division for Girls and Women's Sports (DGWS); however, this did not guarantee that they would respond in exactly the same manner. Indeed, the investigator was confident in assuming that the judgments obtained from the judges would reflect experience and expertise in philosophy and standards for girls and women's sports. This was a knowledgeable, interested, and competent group of expert judges. Their contribution to the study was significant.

The comments from the judges on specific items centered around the need for additional information in the situations and responses and the possibility of identification with institutional policy. In some cases, judges indicated that items were too specific and thus the experience of the responding coach would

affect reliability. Several judges commented that the responses which they considered negative were difficult to rank in order of desirability.

In retrospect, it would have been beneficial to have used two sets of judges to evaluate the items. The first set of five to seven judges would have been used to improve the quality of the scale items and to give the investigator an opportunity to become familiar with the statistical techniques. Then, the investigator would have been able to revise the items. This might have involved dropping and adding responses as well as clarifying situations on the basis of comments and recommendations from the first set of judges. Such revised items could have been evaluated and their responses ranked by the second set of expert judges.

The panel of nine judges was composed of such experts that it seemed inappropriate to submit the scale to additional judges for further refinement. However, it would have been helpful if the items had been evaluated more thoroughly before sending them to the panel of expert judges. The items could not be altered once they had been evaluated and ranked by the judges because this information served as the basis for scoring the attitude scale.

Selection of Scale Items

One of the criteria used in determining items to be considered for inclusion in the scale was that over half of the judges had to rate the item either desirable or essential. It was thought that this criterion would assist in the elimination of undesirable items. However, there was only one item which more than four of the nine judges rated undesirable. Had the criterion been that only

one judge could have rated the item undesirable, fourteen items would have been eliminated. The data indicated that most of the items rated essential by at least five judges and which were not eliminated on the basis of the other criteria, were included in the final fifty-item attitude scale.

Another criterion was that the average intercorrelation of the judges' rankings had to be .500 or better. Although the range of average intercorrelations was from .034 to .973, only eight were below .500. This criterion was not stringent enough. It would have been more realistic to have had the average intercorrelation set at .700.

The investigator computed the mean of the average intercorrelations for the fifty items in the attitude scale to determine a measure of inter-judge reliability. The average intercorrelations indicated the degree of agreement among the judges in ranking the responses in order of desirability. The coefficients ranged from .614 to .973 and averaged .879. This provides further evidence of the credibility of the expert judges.

The design of the study was such that the ratings of the judges on the items as originally worded served as the basis for the scoring of the final scale. Consequently, the investigator was able to make only minor editorial changes. Those items which needed further clarification were eliminated. The specific comments of the judges were carefully considered in addition to the three criteria outlined in the procedures when making the final selection of the fifty items.

ADMINISTRATION AND SCORING OF THE ATTITUDE SCALE

The Association for Intercollegiate Athletics for Women (AIAW) charter membership list was the source of schools selected for the study. Every third member school served as the random sample. The women coaches at these institutions were the respondents who were asked to complete the attitude scale. It was acknowledged that there are men who coach women's intercollegiate athletic teams. However, this study was specifically designed to measure the attitudes of women coaches. Only women served as judges and only women were requested to complete the scale. The responding coaches represented women of different ages, educational degrees and coaching experience. Some of the women coached as many as three different sports while a few served as assistant coaches or were primarily responsible for third and fourth teams. One coordinator of intercollegiate athletics commented that she did not have her part-time swimming coach respond to the scale since the coach was a recent graduate and was not a member of the regular staff. The cross-section of women coaches who returned scales appeared to represent a random sample from the total population of women coaches.

Administration Procedures

The attitude scales were mailed to the coordinator of intercollegiate athletics for women at the selected institutions. The coordinators were not given the opportunity to indicate whether or not they were willing to have their coaches participate in the study. Perhaps if the investigator had first inquired about their

interest in taking part in the study the number of returns would have been reduced. This procedure would have required an additional mailing and also would have given the coordinator an opportunity to refuse participation without having seen the attitude scale. However, it was important that the integrity of the random sample of institutions be maintained. The probability of a high percentage of returns was perhaps increased because the letter to the coordinator and the appropriate number of scales arrived at the same time. Scales were returned from 84 percent of the institutions.

Some of the coordinators attached xeroxed copies of the explanatory letter from the investigator when they distributed the scales to their coaches. Others wrote a note to each coach asking her to complete the scale. There was no way to know the exact procedures used in administering the scales. Precise directions for administration were not given. The fact that there was no personal contact between the investigator and either the coordinators or the coaches most likely influenced the efficiency of administration and the degree to which the coaches followed the instructions. The investigator thought this lack of control during administration may have had an effect on the reliability coefficient for the scale. If more of the scales had been completed according to the directions, the range of scores would probably have been larger and more of the responses may have functioned. However, some data were lost, since approximately one third of the returned scales could not be used in determining the reliability of the scale.

Scoring the Attitude Scale

The 246 returned scales were manually scored by the investigator. The coach marked her response directly on the scale, and the investigator converted the response to a numerical value and then recorded this value on a separate tally sheet. This presented an opportunity for errors to ensue. It might have been more accurate to use answer sheets which possibly could have been mechanically scored.

The numerical value assigned to each response was determined by averaging the desirability rankings given by the nine expert judges. This meant that the value for each response was based on the judges' rankings of the five responses with the allowance that a ranking could be used more than once. The coaches' responses, on the other hand, were not related to ranking; they selected only one response indicative of how they would behave if placed in the situation described. The average weight for each response was rounded to the nearest tenth of a whole number. This precision indicated a truer score since the ranking was more clearly represented on a continuum of desirability. The average weight showed spatial relationship of desirability as valued by the expert judges. This distance would not have been as adequately represented if any of the following three procedures had been used: (1) the average weights had been converted to the nearest whole number, (2) the average weights had been converted to a 1, 2, 3, 4, 5 ranking of responses, and (3) the judges had been forced to use all five numbers in their original rankings.

Problems arose in scoring the scale because the coaches failed to follow

the directions. They were instructed to read each situation carefully and then to read the five responses which indicated possible actions toward the situation. The coaches were to put themselves in the situation described and to mark the one response which would indicate how they would act in that situation. Some of the coaches marked two responses while others did not mark any. Several of the coaches wrote down how they would behave and indicated this to be their response. Only 66 percent of the coaches who responded completed every item accurately.

Part of the function of taking a situation-response scale is imposed by having to place one's own self within the limits of the situations described and having to select a response from among those included in the scale. If the investigator or someone more knowledgeable about the directions had administered the scale, the number of useable scales may have been greatly increased. The administrator could have interpreted the directions clearly and would have been available to answer questions.

The problems which arose in scoring pointed out the need for more precise directions. The idea of placing oneself within the limits of the written situations and responses should have been reemphasized. In addition, the directions should have stated repeatedly that only one response was to be marked.

Reactions After Scoring the Attitude Scale

The mean score for the 163 coaches who completed the scale accurately was 217.6 and the range was 196.2 to 230.8 out of a maximum score of 234.7.

The high mean and the narrow range may have resulted because debatable items which had low average intercorrelations had been eliminated from the scale. The small range of scores in turn affected the reliability of the scale. The investigator critically examined a random sample of twenty completed scales of the total 163. The most desirable response was selected the majority of the time. In a few items all five responses were utilized, but, for most items, only two or three of the responses were utilized. All of the responses were not functioning.

What might have been some reasons for the coaches' scoring so high on the scale? The content of the items was influenced by the background of the investigator. Her established convictions toward DGWS philosophy and standards may have produced a bias in the wording of items. The responding coaches were all from AIAW member schools. They possibly had a DGWS bias which influenced them to select the response they felt they should. Several of the judges commented on the difficulty of ranking the responses they considered to be negative. Perhaps the responses with low average weights were not as realistic as they were originally thought to be.

The nature of items related to administrative policy could have limited the number of acceptable responses. Some of the situations reflected recommended DGWS guidelines which have been promulgated for several years. The format of these items may have been such that there was only one response which would have followed the guidelines. The coaches, being somewhat knowledgeable of DGWS guidelines, perhaps chose this response because it exemplified what should have been done. The investigator conjectured that coaches selected the

most desirable response because policies had been developed to govern administrative practices.

Those items describing situations related to student welfare, ethics and sportsmanship definitely had responses which exemplified righteous behavior. Coaches may have chosen the response which indicated what they should have done rather than what they would have done. The investigator speculated that this was another reason why the coaches scored so high. No one knows if the response the coach indicated would really have been her action in the actual situation.

Comments from the Women Coaches

The investigator appreciated the interest of the coaches who took time to communicate their reactions to the attitude scale. Their remarks dealt primarily with the nature of the scale and the choices of responses. A few coaches critically analyzed some of the situations. For the most part their comments were intended to assist the investigator in the development of a better scale. These comments could be incorporated when the scale is revised. Perhaps those coaches who did not return the scale would have offered comments of a different nature.

The coaches remarked that the scale was too long. They thought that some of the "questions and answers" were frustrating and that there were built-in assumptions in some of the questions. One coordinator commented that some of her coaches did not complete the "questionnaire" because it was too confusing, it did not seem to represent their true thinking, and they did not care to be

represented in this way. Some of these remarks concur with those of the expert judges which emphasized the need for clarification of wording and more details in some of the items. The scale should have contained fewer items. The fact that it was lengthy may have influenced the consistency of the coaches' responses.

One coach thought that it was beneficial to take the attitude scale because it made her sit down and think about what she was doing. The growth of intercollegiate athletics for women has been so rapid that few people have really taken time to consider in detail the implications of their actions and the direction their programs are heading. Because the coach had to take time to reflect about what she was doing may have been reason enough for taking the attitude scale. Hopefully the responding coaches did take time to contemplate the effect their actions would have on the future of intercollegiate athletics for women.

In taking a situation-response scale the respondent is limited to the exact wording of the situations and responses. A number of coaches said that their "correct answer" was not there and that they would not have behaved in any of the ways described in the responses. As a result, the response they indicated was not what they would have done if placed in the situation. Some coaches said there should have been the response "none of these." Others thought that additional responses should have been listed which combined some of the choices given in the existing responses. It was expressed that some items contained more than one "highly acceptable" response. It should be emphasized, however, that the coach was to indicate how she would respond if placed in the situation described. She was not to indicate the most desirable behavior. This had been a

task of the expert judges.

Several of the coaches commented that they had difficulty in selecting how they would act in some of the situations because they did not know the people involved. They said that their actions for one situation might vary if they were dealing with different personalities.

In retrospect, it might have been beneficial to have given the original scale items to a small sample of coaches just as it would have been good to have engaged the services of an additional set of judges. Through the use of a pilot study the remarks of the coaches could have been considered in finalizing the wording of the items. This procedure may have eliminated frustrating items and increased the percentage of returned scales which were accurately completed. This step can be taken in the future to strengthen the scale.

A SCALE FOR MEASURING ATTITUDES OF WOMEN COACHES

The investigator believes that the quality of athletic programs for college women is related to the attitudes of the women coaches who conduct them. Consequently, it was thought that the study of attitudes of women coaches was of crucial importance to the field of physical education. The investigator undertook this research project to construct a scale for assessing the attitudes of women coaches toward the conduct of intercollegiate athletics for women. The scale appeared to have excellent validity but questionable reliability.

Validity of the Attitude Scale

There are several kinds of validity. Essentially, validity indicates the degree to which a test or scale is capable of measuring what it claims to measure. The investigator chose to validate the attitude scale on the basis of content validity. The Standards for Educational and Psychological Tests and Manuals states that "content validity is demonstrated by showing how well the content of the test samples the class situations or subject matter about which conclusions are to be drawn." (3:12) Thus content validity indicates the representativeness or sampling adequacy of the content. (19) This kind of validity is especially important for measures of social behavior or adjustment based on observation of situations. (3)

The evaluation of content validity consists primarily of judgment. The process involves judging whether or not the samples in the test represent a random sample from the universe of content. (3) (19) The investigator used the following systematic efforts to check the assumption that content validity would exist in the attitude scale.

First, the investigator used, as a frame of reference for the development of items, an analysis of current literature on the topic of intercollegiate athletics. Particular attention was directed to material on women's athletics discussed at professional meetings. Insights gained from colleagues enhanced the investigator's understanding of the many aspects comprising intercollegiate athletics for women.

Second, the investigator used the assistance of five judges to evaluate and

revise the area and sub-areas which were identified to serve as a guide in the development of scale items. The judges thought the areas and sub-areas adequately covered the topic and could serve as a guide for the development of a valid attitude scale.

Third, the nine expert judges indicated the value of each of the original scale items. The investigator assumed that an item rated as essential or desirable by over half of the judges represented the content being measured. In view of the three steps taken to check for content validity, the scale was presumed relevant to the attitudes of women coaches toward the conduct of intercollegiate athletics for women.

Reliability of the Attitude Scale

A reliable test is one which is dependable. According to the American Psychological Association, "Reliability refers to the accuracy (consistency and stability) of measurement by a test." (3:25) The investigator employed a split-halves correlation to determine the reliability of the attitude scale. The split-halves method is said to give the upper limit of reliability because it ignores response variability and particular administrative conditions. This reliability coefficient is based on a single administration. The reliability of the scale was computed to be .597. This coefficient indicated that the internal consistency of the scale is questionable.

Perhaps a major reason for obtaining this reliability coefficient was the fact that the attitude scale contained heterogeneous items. There were thirteen major areas which served as a guide for the development of situation-response

items. In developing the initial one-hundred scale items and in selecting the fifty items to be included in the final scale, attempts were made to adequately represent the thirteen areas. Guilford supports this reasoning with the following statement, "If a test is heterogeneous, in the sense that different parts measure different traits, we should not expect a very high index of internal consistency." (14:450)

Previous discussion has presented additional reasons for the obtained reliability coefficient. First, the range of the scores for the coaches was very narrow. Second, comments from the coaches indicated that some of the items were ambiguous. Third, the instructions appeared to be unclear since only 66 percent of the coaches completed the scale correctly.

In order to improve reliability, the variance of individual differences needed to be maximized and the error variance needed to be minimized. A step that could be taken to increase the reliability of the scale would involve improvement of the situation-response items so there was less opportunity for individuals to interpret the items differently and thus less error variance. A second step to increase the reliability would be to make the instructions more precise. A third step would be to have a knowledgeable person administer the scales. Because the attitude scales were administered to the women coaches under varying conditions, the reliability was probably reduced somewhat. The investigator speculated that if the scales had been administered under standard, well-controlled and similar conditions the reliability would have been higher.

Implications for Use of the Attitude Scale

Perhaps the greatest value of the scale, as now written, may be obtained from its use as a teaching aid to stimulate discussion. The scale could be given to students taking courses in coaching and athletic administration. Women in the profession who are coaching might gain insight into problems after reading the scale. The areas and sub-areas within the scale may serve as a guide to the many aspects of intercollegiate athletics. The scale items may help to create an awareness of specific concerns which coaches must face.

CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

This study was undertaken for the purpose of developing a scale for measuring the attitudes of women coaches toward the conduct of intercollegiate athletics for women. The situation-response technique was chosen as the method for measuring attitudes. It was thought that this technique would be more action and behavior oriented than some other methods for measuring attitudes.

The procedure for constructing the attitude scale first involved the identification of areas and sub-areas which served as guides in the development of situation-response items. Five judges assisted in the revision of these areas and sub-areas. Then the investigator devised one hundred scale items representing these areas and sub-areas. Each item contained a brief description of a situation and five alternative responses representing different degrees of attitude toward the situation.

A panel of nine expert judges ranked the responses for each item in order of desirability and also evaluated whether or not the item would contribute to the scale. The judges' rankings for each item were correlated and averaged to indicate the degree of agreement among the judges. The responses of the judges

served as the basis for selecting items for the attitude scale and for scoring procedures. The items which met these three criteria were considered for inclusion in the fifty-item scale: (1) over half of the judges must have considered the item either desirable or essential, (2) the five responses for each judge on each item must have included three different rankings with at least one rank below 3 and one rank above 3, and (3) the average intercorrelation of response rankings for the item must have been .500 or better. The mean of the average intercorrelations for the items in the scale was .879. This figure gave an indication of the inter-judge reliability. Content validity was assumed because of the establishment of areas and sub-areas and because of the item-value ratings of the expert judges.

In order to determine the reliability of the scale, it was administered to women coaches at seventy-five randomly selected institutions which were charter members of the Association for Intercollegiate Athletics for Women (AIAW). Coaches were directed to indicate how they would respond if placed in the situations described in the items. Only 66 percent of the scales returned had each item answered with one of the alternative responses. The data from these 163 scales served as the basis for reliability computation. The average of the judges' responses was the score for the response which was selected. The reliability of the scale, determined by employing the Spearman-Brown prophecy formula to the Pearson product-moment method of correlation was computed to be .597.

The scores of the women coaches on the attitude scale appeared to indicate

very desirable attitudes toward the conduct of intercollegiate athletics for women. The mean score was 217.6, out of a possible 234.7, and the range was 196.2 to 230.8.

CONCLUSIONS

The purpose of this study was to construct a scale for measuring the attitudes of women coaches toward the conduct of intercollegiate athletics for women. Within the limits of this study and in view of the findings contained in this report, these conclusions are presented:

1. This attitude scale possesses content validity.
2. The index of internal consistency obtained for the attitude scale is acceptable given the heterogeneity of content.

RECOMMENDATIONS

These recommendations are presented in light of the conclusions presented in this study and in view of the insight and understanding gained as a result of conducting this investigation:

1. Readminister the scale to a random sample of thirty women coaches who took part in this study. Use the data to determine the reliability coefficient of the scale using the test-retest method.
2. Re-examine reliability by converting the average weights from the judges' responses to a 1, 2, 3, 4, 5 ranking of responses.
3. This attitude scale should be revised. Comments from the expert

judges and coaches should be taken into consideration when revising some of the scale items. The revised scale should contain approximately thirty items.

4. Devise specific research inquiries which utilize the scale as one variable of coaching behavior.
5. Another scale to measure the attitudes of women coaches toward the conduct of intercollegiate athletics for women should be developed to provide further evidence of validity.
6. A scale to measure the attitudes of women who are participants on intercollegiate athletic teams should be developed.

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APPENDICES

APPENDIX A

SCALE AREAS AND ITEMS

Areas and Sub-areas for an Attitude Scale for Women Coaches

1. PLACE OF ATHLETICS IN EDUCATION AND PHYSICAL EDUCATION

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Situation-Response Items

___ 1.* You are scheduling your field hockey games for the next season. On what basis would you select each of your opponents?

___ a. The equality of the level of competition
___ b. The proximity of the opposing team
___ c. The record my team had against the other school
___ d. The opportunity for a winning season
___ e. My friendship with the opposing coach

___ 2.* You are hostessing a state-wide basketball tournament. How would you arrange the schedule of games for eight teams?

___ a. Draw from a hat the names of the teams for placement in the bracket
___ b. Place the teams into the brackets on the basis of season record
___ c. Place the strongest teams in the opposite half of the bracket from where my team is placed
___ d. Match my team against an easy opponent in the first game
___ e. Have a neutral person arrange the bracket

___ 3.* You are coaching basketball. What emphasis would you place on your players knowing the rules?

___ a. No emphasis would be placed on rule knowledge
___ b. All players would be required to pass a rules test to qualify for the team
___ c. A player would be taken from the game if she did not know the rules
___ d. Time would be spent during practice for players to discuss rules
___ e. At the first of the season there would be several rule sessions

___ 4. You coach the softball team. The first string pitcher pulled a muscle in her leg two days before the final big game of the season. How would you use her in the game?

___ a. She would start the game pitching with her leg wrapped securely
___ b. She would not be allowed to play at all
___ c. She would go in as a substitute if the second string pitcher got in trouble
___ d. She would be used only as a pinch hitter, if necessary
___ e. She would be used as a possible substitute if she had to be given a medical release

*Indicates item selected to be included in attitude scale. If a new number was assigned to the item it follows the asterisk.

___ 5. *(4) You are coordinator of the women's intercollegiate athletic program. What kind of medical clearance would you require for participation on an intercollegiate team?

___ a. Note of approval from family doctor
___ b. No medical clearance necessary
___ c. Basic physical check up by family doctor within one year of beginning of competitive season
___ d. Medical examinations for athletes as arranged through the school health services prior to season
___ e. Complete physical check up required within six months of beginning of season

___ 6. The goalie on your lacrosse team is usually the last one out to practice. The first game of the season she lets an easy goal score. How do you intend to improve this situation?

___ a. Not let her play goalie any more
___ b. Plan some special practice sessions with her
___ c. Talk to her about her attitude toward practice
___ d. Start to train another goalie
___ e. Have the team captain talk to the goalie

___ 7. *(5) One of your experienced basketball players continually yells at her teammates during practices and in games. How do you as coach intend to influence this situation?

___ a. Drop her from the team
___ b. Bring up the situation without mentioning names at a team meeting
___ c. Talk to the girl individually
___ d. Have the team captain talk to her
___ e. Pull her from the game each time she speaks out

___ 8. *(6) As swimming coach, what would you do if you heard a rumor that a swimmer from another school was on an athletic scholarship?

___ a. Refuse to schedule a meet with that school
___ b. Call the swimmer's coach to discuss the issue
___ c. Notify the chairman of my department
___ d. Nothing
___ e. Will not allow that swimmer to swim in any meets that my school holds

___ 9. You coach the college gymnastics team. A local high school coach asks you to come observe her gymnastics practice. She wants to introduce you to her seniors who might be interested in attending your college. What would you do?

___ a. Inform my department chairman of this request and ask for her advice
___ b. Go to one practice, but do not talk with the students
___ c. Go to one practice and meet with the seniors to tell them about my program
___ d. Ask the high school coach to send the interested seniors to one of my college practices
___ e. Inform the high school coach that this would be a form of recruiting and is not an acceptable practice

___10. Your department chairman has stated that all members of intercollegiate teams must have at least a C grade average to participate. As a coach, what is your feeling toward this policy?

___ a. Strongly agree with this policy
___ b. Agree that students must maintain an academic average but it only be above that required to stay in school
___ c. I am undecided as to the value of requiring a certain academic average
___ d. Feel that any student who is in school, but not on academic probation should be allowed to participate
___ e. Strongly disagree with the policy

___11. Your department chairman has assigned you to coach the volleyball team. You feel inadequate to do so. What will you do about the situation?

___ a. Tell her I will not coach volleyball
___ b. Attend some clinics to help prepare myself
___ c. Join a local volleyball team to improve my skills
___ d. Purchase the latest publications on volleyball
___ e. Ask someone who has had some volleyball playing or coaching experience to assist me

___12. As coordinator of the women's intercollegiate athletic program, it is your responsibility to decide on the appropriate length of preseasons and seasons. What do you determine the length of the preseason for gymnastics to be?

___ a. two weeks
___ b. one month
___ c. two months
___ d. three months
___ e. four months

___13.*(7) Considering that budget does not limit the activities in your bowling program in any way, what kind of arrangements do you make for the members of your bowling team to roll practice lines?

___ a. All members of the team can roll as many lines as they would like at the school lanes with no charge
___ b. There is no provision for practice lines
___ c. Those girls selected to bowl in the next match are given ten free lines that week
___ d. All members can bowl ten lines free per week
___ e. The top eight members from week to week are given five free lines

Editorial change: added "free" to response d.

___14. You coach the varsity basketball team. How do you make arrangements for officials for your home games?

___ a. Contact the local board of officials
___ b. Use members of your staff who volunteer their services
___ c. Use students who hold ratings
___ d. Use friends of mine who have experience but are not currently rated
___ e. My student manager makes the arrangements

___15.*(8) Your volleyball team has been selected to participate in a national championship. How do you anticipate securing funds for the team to go?

___ a. Take funds from other teams in the competitive program
___ b. All players must pay for their own expenses
___ c. Members of the team will engage in money making projects
___ d. Request additional funds from the student body association
___ e. Solicit donations from the community and alumni

___16. Your school has been invited to join a new women's collegiate bowling league. As coach of the bowling team you are asked to give your ideas concerning the value of league membership. What would you say?

___ a. League membership has many advantages
___ b. League membership is essential for the bowling program
___ c. League membership has many disadvantages
___ d. League membership is of some value
___ e. League membership can create a number of serious problems

___17. You coach volleyball and tennis in a large university. Your department chairman encourages you to join the regional coaches association. What would you do?

___ a. Join right away
___ b. Join only if the school paid my membership dues
___ c. Join only if there were adequate benefits to offset the cost of the dues
___ d. Join only if mandatory
___ e. Would not join

___18. You coach the college hockey team. Several of your players want to start attending basketball practice before the hockey season is completed. What would you tell them?

___ a. They may not attend any basketball practices until the hockey season is completed
___ b. They may attend any basketball practices that do not conflict with the hockey schedule
___ c. They may attend one basketball practice per week
___ d. They must work on their basketball skill during their own time as they cannot practice with two teams at the same time
___ e. They may not play any basketball of any kind until the hockey season is completed

___19.*(9) You are making arrangements for your tennis team to travel to a nearby town for a match. What do you tell your players regarding transportation arrangements?

___ a. All players must find their own transportation
___ b. The student manager will make arrangements for transportation according to policies
___ c. Everybody will meet and ride together in school cars driven by students
___ d. Players will ride in private cars driven by members of the faculty
___ e. Players will meet and ride together in school cars driven by faculty members

Editorial change: added "according to policies" to response b.

___20.*(10) As coordinator of the women's intercollegiate athletic program, what is your attitude regarding players missing classes for games?

___ a. No classes are to be missed
___ b. Students are to make arrangements with faculty members whose classes are to be missed
___ c. I will make arrangements with the faculty members whose classes are to be missed
___ d. Students may only miss classes with approval of the appropriate faculty member
___ e. I am not concerned about classes students might miss

___21. You have entered your tennis team in the state collegiate championship. You see, when looking over the draw, that the girl who played #2 singles all season for a nearby school has been entered as #1 and the #1 singles player is playing #1 doubles. What do you do about this switch of players?

___ a. Nothing
___ b. Report it to the tournament director immediately
___ c. Discuss the situation with the coaches nearby
___ d. Withdraw my team from the tournament
___ e. Bring up the situation at the coaches meeting during the tournament

___22.*(17) As field hockey coach at your college, you belong to the regional field hockey association. Several of the coaches in your area are upset about the rough play of one of the teams. What do you feel should be done to improve the situation?

___ a. Present a motion to have the team dropped from the association
___ b. Do not schedule any games with this team in the near future
___ c. Speak to the coach of the team and tell her that if the situation is not corrected I will discontinue to schedule games with her team
___ d. Write to the president of the association explaining the situation
___ e. Have my department chairman write to the department chairman of the school involved explaining the situation.

___23. You are coordinator of the women's intercollegiate athletic program at a large university. You receive a letter from a high school senior who holds several AAU swimming records. She requests information on possible athletic scholarships. How do you respond to this request?

___ a. Do not answer the letter
___ b. Write her and tell her to write to the office of financial affairs regarding all scholarship information
___ c. Have my swimming coach write to her regarding the swimming program
___ d. Write her for information regarding academic qualifications and athletic records
___ e. Submit her name as a possible applicant for a scholarship for incoming physical education majors

___24.*(11) Your fencing team will hold its first meeting next week. What will you tell the fencers will be the role of student leadership in the activities of the team?

___ a. There will be no opportunity for student leadership
___ b. Officers will be elected by the team
___ c. A captain will be elected by the team
___ d. A captain will be appointed by the coach
___ e. Leadership roles will be designated by the coach

___25. As coach of the softball team, what do you see will be the role of team members in decision making?

___ a. Team members will not be involved in decision making
___ b. All decisions shall be made by the elected officers
___ c. Decisions shall be made by all members of the team
___ d. Decisions shall be made by the coach and the elected captain
___ e. Decisions shall be made by the coach and the appointed captain

___26. You are chairman of a department of physical education for women. Wherein do you think control of the women's intercollegiate athletic program shall lie?

___ a. With the coordinator of the women's intercollegiate athletic program
___ b. With the department chairman
___ c. Under the control of a departmental athletic committee
___ d. Under the control of an all campus athletic committee
___ e. Under the control of the university athletic department

___27. *(12) One of your gymnasts often phones you at home for no apparent reason. She comes early and stays late for workouts in an attempt to be friends with you. How do you respond to her actions?

___ a. Encourage her to talk with me and be friends
___ b. Discuss it with her adviser
___ c. Ignore the student as much as possible
___ d. Ask the student not to call me at home
___ e. Treat her as I do each other member of the team

___28. You are the volleyball coach at a large university. There are eight members on your "A" team and eight members on your "B" team. How do you plan to provide opportunities for your "B" players to increase their ability in game situations?

___ a. All will have a fairly equal opportunity to play in games scheduled for the "B" team
___ b. The starting six on the "B" team will play the majority of time in "B" games
___ c. The most highly skilled on the "B" team will serve as substitutes for the "A" team
___ d. There will be an opportunity for "B" players to earn a spot on the "A" team
___ e. If a "B" player does exceedingly well she may start in the "A" match that same day

___29. *(13) You are in the process of making the selection of your varsity basketball squad. What two factors do you rank highest in making the selections?

___ a. Year in school and demonstrated skill
___ b. Major and potential skill
___ c. Year in school and potential skill
___ d. Personality and demonstrated skill
___ e. Major and demonstrated skill

___30. You are the coordinator of the women's intercollegiate athletic program. When do you feel it is appropriate to charge admission to athletic events?

___ a. Never
___ b. At all home games
___ c. For special exhibitions
___ d. When funds are needed to finance an aspect of the program
___ e. At championship events

___31. *(18) The coach of your track and field team is on a leave of absence during the current year. No one has been hired that can take over her coaching responsibilities. As department chairman what kind of arrangements have you made to fill this assignment?

___ a. The assignment will not be filled, and there will be no track and field team this year
___ b. A member of the staff who has indicated an interest in coaching track and field will serve as coach
___ c. A graduate assistant will be assigned to serve as coach
___ d. A qualified volunteer from the community will be named as coach
___ e. An interested member of the men's physical education department will serve as coach.

___32. There is a departmental policy that all staff members who are assigned to coach a team sport must hold a current DGWS rating. As a coach in this department, what is your opinion of this policy?

___ a. It would be difficult to justify
___ b. There are more points for the policy than against the policy
___ c. There are more points against the policy than for the policy
___ d. There are some good points and some bad points about it
___ e. It is a good policy and should be followed

___33. The coach of your swimming team seldom attends departmental faculty meetings and appears to have no concern other than in developing a strong competitive swimming program. As department chairman what do you tell her?

___ a. You are to attend all departmental meetings and, if necessary, cancel swimming practices to do so
___ b. You are to decrease the time you spend with the swimming team so that you can fulfill other departmental obligations
___ c. It is fine that you are so interested in your swimming team, but you must show more concern for departmental responsibilities
___ d. If you do not show greater interest in departmental activities you will not be allowed to coach
___ e. If you continue to miss faculty meetings you will be relieved of your coaching responsibilities.

___34. You coach the volleyball team. After the preseason conditioning period there are still eighteen girls who are coming out for the team. Your department chairman states that no one shall be cut from the squad. How do you feel about this statement?

___ a. Strongly agree with her position
___ b. Agree with her position
___ c. Undecided
___ d. Disagree with her position
___ e. Strongly disagree with her position

___35. *[(19)] Your basketball team is playing a home game. You feel certain that the officials are not watching for three second lane violations. How do you react to this situation?

___ a. Call out the violation each time it occurs
___ b. Bring up my concern to the officials at half time
___ c. Ignore it
___ d. Call a time out and discuss my concern about the rule infringement with the officials
___ e. Instruct my players to call out the violation each time they think the violation has occurred

___36. *(20) You are coordinator of the women's intercollegiate athletic program. What do you feel should be the role of your institution in purchasing equipment for members of the competitive teams?

___ a. No individual player's equipment, e.g. tennis rackets, hockey sticks, softball gloves, should be purchased by the institution
___ b. Intercollegiate athletic equipment should be purchased when necessary to insure that all players have standard, good quality equipment
___ c. Members of teams should be furnished with equipment which they can keep at the completion of the season
___ d. Members of competitive teams should buy their personal athletic equipment from the institution
___ e. Intercollegiate athletic teams should use department equipment purchased from the physical education department budget

___37. One of your hockey players is always getting hurt. On the basis of your observations you decide that the girl is accident prone. She screams out at practice each time she is involved in the slightest physical contact. How do you intend to help this student?

___ a. Ignore her
___ b. Tell her that her actions are immature and that, if they persist, she shall be dropped from the team
___ c. Discuss my concern for her well being and tell her to be more careful
___ d. Explain to her that she is very careless in her movements and needs to keep her body under better control
___ e. Stop the practice and ask what is wrong each time she screams

___38. You coach the field hockey team and have been discussing strategy with your players. One of them asks about pretending an injury if you are winded in order to allow for a substitute. What would you say to the team?

___ a. We should not have to do anything like this
___ b. I hope we do not have to resort to action like this
___ c. It is not right to discuss such things
___ d. I know that it is being done by other teams and could possibly work for us
___ e. I would discuss the situation and explain the philosophy behind the substitution rule

___39. *(14) At the meeting of the regional women's intercollegiate athletic association there is some concern expressed about the skill and personal integrity of officials. What do you say?

___ a. Officials are usually honest and try to do a good job
___ b. Most officials are honest, capable and try to do a good job
___ c. Officials are sometimes influenced by the home crowd
___ d. Officials often try to please some of the coaches
___ e. Officials are sometimes incompetent and favor the home team

___40. *(15) You coach the women's golf team. One of your team members reports to you that another member is using drugs. What would you do about the situation?

___ a. Report the possibility of drug usage to her parents
___ b. Call the student into my office for a conference
___ c. Do nothing, because it is none of my business
___ d. Investigate the truth in the report by talking with other members of the team and friends of the student
___ e. Report what I have been told to the university health service

___41. Your hockey team is playing a game in the college tournament. Before the game starts you notice that the opposing goalie is using a softball glove. How would you react in this situation?

___ a. Refuse to play if the goalie wears the glove
___ b. Consider the use of a glove is within the rules and possibly have my goalie try to use one
___ c. Write to the sectional umpiring chairman for a ruling following the game
___ d. Tell my captain to question the umpires as to whether or not it is legal
___ e. Express my concern regarding the legality of using a softball glove to the umpires before the game starts

___42. *(16) You are chairman of a physical education department. An alumna sends a check for $1, 000 to you as a contribution for the support of the women's intercollegiate athletic program. What do you intend to do with the money?

___ a. Give the money to the team that will attend a national championship
___ b. Use the money to hire a coach
___ c. Use the money to purchase new uniforms for some of the teams
___ d. Refuse it since I feel all funds must come from within the institution
___ e. Put the money into the intercollegiate fund to be divided among all the programs as needed

___43. You are hostessing the regional basketball tournament. What kind of awards do you think would be appropriate?

___ a. Certificates should be awarded to the top three teams
___ b. Every member of the championship team should be given a small trophy, in addition there should be team trophies for the first three places
___ c. All participants should receive a small momento and the winning team shall be given a nice trophy
___ d. There should be a large trophy for first place and smaller trophies for the next two places
___ e. A small trophy should be awarded to the first place team and a small plaque to the second place team

___44. A senior member of your volleyball team comes to you for advice about her academic program. She can graduate if she goes to summer school, but she wants to wait and finish school in the fall so she will be eligible to play volleyball one more season. What do you tell her?

___ a. Encourage her to plan her schedule so she will be eligible to play volleyball one more season
___ b. Encourage her to go to summer school and graduate
___ c. Tell her that I am not in a position to advise her regarding academic matters
___ d. Tell her that I do not allow seniors two years of eligibility no matter how many years they had previously been on the team
___ e. Tell her that I would like her to be on the team next fall, but that it would be better for her to concentrate on getting through school by the end of the summer.

___45. Some of the lacrosse coaches have proposed a policy that students who play on college teams cannot officiate lacrosse games at other schools. What do you think about such a policy?

___ a. Feel strongly that it would be wrong to pass such a policy
___ b. Do not think there is any need for such a policy
___ c. Undecided
___ d. There may be merit in passing such a policy
___ e. Agree strongly that such a policy should be passed

___46. *(21) The coach of a nearby basketball team yells from the sidelines during games and at times questions the calls of the officials. You serve as basketball chairman for the state intercollegiate athletic association. What do you plan to do to alter the situation?

___ a. Speak to the coach about her behavior
___ b. Accept her behavior
___ c. Send a letter to the coach on behalf of the other coaches explaining their disapproval of her behavior
___ d. Bring up the general concern for proper conduct of coaches during games when all the coaches are together at a meeting
___ e. Send a letter to the chairman of the department where the coach teaches telling her there is disapproval of the coach's behavior

Editorial change: deleted "all" from between "of" and "the" from response c.

___47. *(30) What advice would you give your softball players concerning rules of the game?

___ a. Play the percentage on breaking the rules sometimes
___ b. Adhere to the rules in a strict fashion
___ c. Play by the spirit as well as the letter of the rules
___ d. The rules can be used as a basis for practicing good moral principles
___ e. Avoid being technical in interpreting the rules

___48. *(23) You are the basketball coach. During a play-off game, your top scorer commits two unsportsmanlike acts. What would you do if you saw her foul an opponent even though the officials did not call a foul?

___ a. Tell her after the game that her actions were wrong
___ b. Forget about the incident unless someone mentions it
___ c. Tell the players on the bench that this kind of behavior is bad
___ d. Take her out of the game and talk with her about her conduct
___ e. During the next time out tell her that she will be taken out of the game if such conduct continues

___49. *(26) A local sports booster has said he would financially help an entering freshman so she will have an opportunity for a college education and can participate in the athletic program. The girl holds a national AAU track and field record. What would you, as track and field coach, tell this man?

___ a. It is very kind of you to offer this assistance to such a promising young athlete
___ b. I am leary of the possible obligations this may put on the student
___ c. Do not say anything and pretend to know nothing about this transaction
___ d. Inform the man that this support would be a type of athletic scholarship and would make the student ineligible to compete
___ e. Encourage the man to support the total intercollegiate program through a contribution to the intercollegiate fund

___50. *(22) As coach of the track and field team you have been asked to write an article for the alumnae news bulletin. How do you respond to this request?

___ a. Write an article telling about the events of the season, top performers and special activities
___ b. Write a general article about the team when you can get around to it
___ c. Do not prepare anything
___ d. Ask my student manager to write an article
___ e. Prepare a lengthy article and in it ask alumnae to send their promising track and field performers to their alma mater

___51. *(27) During August you attend a field hockey camp which includes special sessions for coaches. How do you intend to use the new knowledge and coaching techniques presented at the camp?

___ a. Plan to revamp all of my practices and to follow all of the ideas presented at the camp
___ b. Do not intend to incorporate any new materials because I think my present techniques are best
___ c. Will prepare written materials from the notes taken at camp and make them available for the members of my team
___ d. Plan to incorporate a few of the ideas presented into my coaching plans
___ e. Pick out a few totally new concepts to introduce and some varying techniques which may help my players adjust to skill problems

___52. *(24) How do you as a coach intend to keep abreast with research findings in professional literature?

___ a. Read the research published by the Division for Girls and Women's Sports
___ b. Read all research published in the Research Quarterly related to the activity I coach
___ c. Attempt to read research in the area of motor learning and sports psychology
___ d. Do not intend to read any research literature
___ e. If someone points out an article that may be of interest to me I may take time to read it

___53. *(28) You have just finished your lacrosse season. How do you plan to evaluate your coaching effectiveness?

___ a. The win-loss record will serve as the best evaluation
___ b. Plan for an open discussion with the members of the team and allow for suggestions and criticisms
___ c. Prepare an evaluation sheet for all of the team members to complete
___ d. Discuss the season with the team captain
___ e. Once the season is over I do not intend to spend any further time on lacrosse

___54. Your school is starting an intercollegiate athletic program. There has been some concern as to where the control of athletic policy should be placed. What do you as a prospective coach tell the committee regarding this issue?

___ a. Each coach should be allowed to make her own decision
___ b. The department chairman should make all policies
___ c. The coordinator of the intercollegiate athletic program should make all policies after consultation with the coaches and department chairmen
___ d. The coaches as a group should decide on policies
___ e. All policies should be made by a campus intercollegiate athletic committee

___55. *(31) An intercollegiate athletic program for women will be started at your institution. You have been named as the coordinator. What do you feel should be the purpose of the competitive program?

___ a. To provide majors with an opportunity to learn advanced skills
___ b. To give women students an opportunity to spend a great deal of time in highly specialized coaching situations
___ c. To provide an opportunity for all who are interested, no matter their skill level, to participate in athletic contests with other colleges
___ d. To provide an opportunity for skilled performers to compete against those of similar ability from other colleges
___ e. To allow students to have an opportunity to compete beyond the level of intramurals

___56. *(25) As the swimming coach, what attempt do you make to understand the idiosyncracies of the members of your team?

___ a. I am not concerned about anything other than their swimming ability
___ b. Make it a point to have an individual conference with every member of the team at the beginning of the season
___ c. Look over the personal folders of those swimmers who are physical education majors
___ d. At the first meetings I provide opportunities for a great deal of group interaction and expression of student opinion
___ e. What I hear about members of my team I remember, but I do not attempt to get involved in their personal lives

___57. *(29) Your new department chairman has decided that every competitive team should be allocated the same amount of money. You are not happy with her decision. As coordinator of the athletic program you tell her money should be allocated on the following basis:

___ a. Quality of the team
___ b. Interest shown by the coach in promoting a strong program
___ c. Number of opportunities to participate in competition
___ d. Number of participants and the extent of the schedule
___ e. Number of participants

Editorial change: added the words "in competition" to response c.

___58. *(32) You coach the school tennis team. After the team has been selected, you make it a point to explain your philosophy toward winning and losing to the team. What do you tell them?

___ a. Winning is paramount. We are out to win at all cost
___ b. There is no place for a defeatist on this team
___ c. I do not care whether you win or lose, but I do expect you to put forth one hundred per cent
___ d. I am not concerned about the outcome of the matches
___ e. Winning is important, but winning is not the all important thing

Editorial change: Substituted "a defeatist" for "the loser" in response b.

___59. *(33) There has been some talk from students regarding the conduct of coaches during practices. As department chairman you feel it is important at the next staff meeting to make a few comments. What do you say?

___ a. Coaches are responsible for setting good examples for their players
___ b. I really do not care how you act, the main concern is that you attend all practices
___ c. Coaches need to show more enthusiasm and interest
___ d. You should realize that the members of your teams are learning how to coach from the way you coach
___ e. You have a responsibility and an obligation to have well planned and organized practices

___60. *(34) You coach the fencing team. What kind of a commitment to the team do you expect of all fencers?

___ a. Fencers may be allowed to miss practice and meets if they have social obligations
___ b. There shall be no excuses for missing practice
___ c. Fencers shall be available to participate in all meets
___ d. Fencers are to let me know if they have to miss practice because of studies
___ e. Membership on the team should teach fencers to discipline themselves. Attendance at all practices and meets is required

___61. You coach both the "A" and "B" basketball teams. What is your policy regarding freshmen playing on the "A" team?

___ a. No freshman shall be allowed to play on the "A" team
___ b. For tournament play at the end of the season, the top freshmen players will move up to the "A" team
___ c. Only in cases of injury may freshmen be allowed to be on the "A" team, and then they may only be used as substitutes
___ d. Freshmen of superior skill should be placed on the "A" team
___ e. For games which may be close in score, the top freshmen players can be moved up to the "A" team

___62. You are the chairman of the department in a small college. You have no staff member qualified or interested in coaching the golf team. A man from the community has expressed an interest in serving as coach. Under what condition would you allow him to coach?

___ a. If he would do it voluntarily
___ b. If he is a faculty member at your college
___ c. If he has a major or minor in physical education
___ d. If he has demonstrated skill as a teacher of golf
___ e. If he is certified as a golf instructor

___63. *(36) You are the chairman of a department and are speaking to a group of major students regarding the professional preparation of women coaches. What do you tell them is the role of actual competitive experience in preparing to coach?

___ a. There might be some value in having taken part in a competitive program
___ b. The knowledge gained about organization alone is enough to require future coaches to take part in a competitive program
___ c. There is no value gained from competing that cannot be gained in other ways
___ d. One of the best ways to learn how to coach is to be coached
___ e. If you have a good coach you may gain valuable insight about coaching that you can later apply

___64. There are sixteen girls on your softball team. How do you make use of the substitutes?

___ a. Substitutes will have equal opportunities during practice
___ b. A substitute will learn one position and be ready to play that position if the regular player is injured or not performing well
___ c. Substitutes are encouraged to attend all practices, but will seldom be used in games
___ d. Substitutes should be willing and eager to play any position
___ e. Substitutes will have second place in practice opportunities

___65. Several members of your track and field team want to work out on their own. What do you tell them?

___ a. Individuals may work out by themselves if they please
___ b. You may work out in pairs as long as you follow the prescribed program
___ c. As long as you prepare your own program and have it checked by me you can work out by yourself
___ d. All workouts must be done under my supervision
___ e. Members of the team should work out only during scheduled practice time

___66.*(37) You coach the varsity hockey team. One of your returning wings plays next to a new girl who is trying out at inner. The wing is extremely upset because the new inner cannot get the ball out to her. What do you tell the wing?

___ a. You were once a new player; please show more understanding toward the new player
___ b. If she cannot hit the ball to you, go to get the ball when it goes in her position
___ c. This inner will not be playing very much so do not worry about her
___ d. It is part of your job to help the inner understand her relationship with the other members of the team
___ e. With your help the inner will improve her skills; work with her, not against her

___67. Your star softball player has heated arguments with you regarding employment of strategy and how to conduct practices. Her criticisms are causing dissention among the team members. How do you handle the situation?

___ a. Put up with her remarks because you need her on the team
___ b. Adjust your coaching methods to her suggestions
___ c. Challenge her remarks in front of the team
___ d. Drop her from the team
___ e. Discuss possible strategy and practice plans with the entire term

___68.*(41) Your swimming team will be allowed to have a manager for the first time. Which one of the following will you use among your criteria governing the selection of the manager?

___ a. She must be a member of the team
___ b. She must be a freshman or sophomore physical education major
___ c. She must be dependable and have indicated an interest by applying for the position
___ d. She will be selected by the members of the team
___ e. She must have had experience in competitive swimming and show interest in being manager

___69.*(35) You coach the school softball team. At the beginning of the season some of your stronger players come to you and ask if there is a policy about playing on the school team and on an outside team at the same time. What do you tell them?

___ a. You are free to play on both teams as long as the competitive seasons do not overlap
___ b. There are no regulations; therefore, you may play on both teams at the same time
___ c. If you play on the school team you may not practice on the outside team until the school season is over
___ d. Those who have played on an outside team are not allowed to play on the school team
___ e. You may play on the school team but only practice with the outside team

___70*(42) You have just attended a conference on the psychology of coaching. One of the main topics discussed was effective goal setting. How do you intend to apply knowledges gained in coaching your swimming team?

___ a. There is no way to apply information that will really be beneficial
___ b. Attempts will be made to make individual work out and performance charts
___ c. I will share information gained at the conference with the student manager and she will apply the material to set goals for the swimmers
___ d. Individual and team goals will be set weekly; knowledge of results of performances will be posted for all to see
___ e. I will discuss knowledge gained at the conference with the members of the team and leave it at that

___71. Some of your gymnastic equipment needs repair. In particular, it is difficult to stabilize the balance beam. What do you intend to do about the situation?

___ a. Inform my department chairman of the faulty equipment and do not use it until it is repaired
___ b. Inform my department chairman of the faulty equipment, but continue to use it
___ c. Have some of the gymnasts stabilize the beam while it is in use
___ d. Allow only the lighter gymnasts to perform on the beam
___ e. The season is about over, so I will wait to report about the equipment until we are through using it

___72. One of the members of your 440 relay team reports to you on the day of a track meet that she has had abdominal cramps during the day and does not feel like running. What do you tell her?

___ a. You will be all right to run if you warm up easily
___ b. Go to the infirmary and get a statement as to whether or not you should run
___ c. Go home and rest and let me know how you are feeling tomorrow
___ d. Take some aspirin and you will be all right to run
___ e. You must run because the other members of the relay team are depending on you

___73. *(43) You are playing a basketball team that you have not played before. At halftime the score is 32-8 in your favor. What are your plans for substituting during the second half?

___ a. The entire bench will play the second half as long as the team stays in the lead
___ b. Several of the substitutes will rotate in with the regulars
___ c. There will be no substitutes except in case of injury or fatigue
___ d. A team of regulars will play half of the third and fourth quarters and a team of substitutes will play the remainder of the game
___ e. All players will have an opportunity to play as I attempt to observe different combinations in game play

___74. *(38) Betty plays second doubles on your tennis team. She frequently becomes angry and gives up when she is not playing well. What will you do to improve her attitude?

___ a. Talk to the captain of the team about Betty's reactions
___ b. Leave her alone to work out her problems
___ c. Tell Betty that she needs to improve her attitude
___ d. Tell her that she will not play in any more matches if she continues to display her anger
___ e. Talk with Betty about possible reasons for her actions and what she might do to control them.

___75. The members of your swimming team come to you requesting training rules. What is your attitude toward training rules?

___ a. There is very little value in having training rules
___ b. Training rules are a must
___ c. There is some value in having training rules if they are enforced
___ d. The value of them is uncertain, because you can never be sure if they are being followed
___ e. They are only made to be broken so why have them

___76. *(40) You are the new chairman of a department. The members of the faculty who coach ask you what your philosophy is regarding the availability of different competitive opportunities. What do you tell them?

___ a. There should be a competitive team for every sport where interest is indicated
___ b. There should only be team sports since there is more interest there and more students can participate
___ c. There should only be competitive opportunities in the feminine sports--golf and tennis
___ d. There should be a variety of teams in both individual and team sports in an attempt to provide a well-rounded program
___ e. There should only be a couple programs offered and these should be highly competitive

___77.*(39) As a coach, how do you expect to command the respect of the members of your team?

___ a. By telling them exactly what is expected of them and not allowing any exceptions
___ b. By demonstrating my superior skill
___ c. By showing individual concern for all members of the team
___ d. By joking and teasing with the members of the team
___ e. By being well-prepared for practices and organized in handling the team

___78. As department chairman you approach the president of your institution regarding the sources of funds for the women's intercollegiate athletic program. What do you tell him?

___ a. The budget should come from donations from alumni and fund-raising projects
___ b. The entire budget should come from student fees
___ c. The women's athletic program should be financed by funds from the physical education department budget
___ d. The budget should be an allotment from the university athletic department
___ e. Financial support for the program should be from a special budget controlled by the university administration

___79. Your bowling team has been asked to enter an invitational tournament at a university in a neighboring state. If you have the necessary funds, what do you consider first in deciding whether or not to go?

___ a. The level of competition at the tournament
___ b. The distance to be travelled
___ c. The extent of your existing schedule
___ d. The opportunity to win the tournament
___ e. The opportunity for a broader social experience

___80.*(46) There has been some discussion at department meetings regarding the personal image of coaches. As a coach, what do you feel should be the role of the department in dealing with questionable conduct and dress of coaches?

___ a. Problems regarding the image presented by certain coaches should be treated individually by the department chairman
___ b. A committee of coaches should develop guidelines for coaches that can later be approved by the entire staff
___ c. This should not be a concern of the department
___ d. The department chairman should set down definite standards that must be adhered to
___ e. A departmental committee shall deal with instances of questionable conduct and dress

___81. Your lacrosse team is preparing to enter the college tournament. You have not seen the team play which will probably be your strongest competition. Some of your players want you to scout this team's play. What do you tell them?

___ a. There is a place for scouting, but only at higher levels of competition
___ b. I do not believe in scouting
___ c. I intend to scout the team at all possible opportunities
___ d. Any scouting that I do will be at the tournament
___ e. You may scout and bring back information, but I do not have time to scout

___82. There has been discussion among the coaches at your school regarding the number of hours per week competitive teams should be allowed to practice. What opinion do you express when the coaches meet to discuss the issue?

___ a. The amount of time for practice should be decided by each coach and the members of her team
___ b. The time required to attend practices should not infringe on students' rights to develop other interests
___ c. We have an obligation to protect the interests of our students; therefore, there should be no more than four hours of practice per week
___ d. The amount of time allowed for practice should be reasonable considering that a player is first a student
___ e. Practice time should be regulated by each coach

___83. As coordinator of the intercollegiate athletic program, you have been asked to speak to the Introduction to Coaching class. A student asks you if you feel a team can win in ways other than by the score. What do you tell her?

___ a. The final score tells the total picture
___ b. Winning can be in the realm of improved sportsmanship and team cooperation as well as in the score
___ c. If there is improvement in performance the game can be called a victory no matter what the score
___ d. Winning may be in terms of individuals making gains toward their potential
___ e. There may be some elements of the game that are victories in themselves

___84. At a three-way track and field meet a member of an opposing team is used to set a fast pace in the mile. The runner drops out after three laps. What is your reaction to the situation?

___ a. The situation does not affect me in any way
___ b. This practice takes away from the true nature of the competition
___ c. The coach should be sent a letter of complaint
___ d. I decide this was good strategy and will try it in a meet
___ e. I get upset and explain my feelings to the coach involved

___85. Your field hockey team plays by the official rules which do not allow for substitutions. Taking this into consideration, how many players do you plan to carry on the team for the season and why?

___ a. Fifteen, as the substitutes will have only limited playing opportunities
___ b. Only thirteen, as the positions will be decided at the time the team is selected
___ c. Eighteen girls will be selected. Starting positions may vary from game to game
___ d. There will be twenty-two on the team so there will be enough for game play during practice sessions
___ e. Everyone who comes out for the team will be on it, even though they may not play in a game

___86. Your gymnastics team is making plans to attend the national championship as you feel certain that members of the team will qualify at the regional meet. Two gymnasts from a nearby school plan to transfer to your school just prior to the regional meet so they will be eligible to attend the nationals. Do you feel they should be added to your team?

___ a. I might consider adding them if they can strengthen the team
___ b. I will let the team members decide on the issue
___ c. If the department chairman approves I will add them to the team
___ d. Definitely not
___ e. They deserve every right to join the team

___87. *(44) One of your golfers reports that her opponent improperly marks her ball for putts. What do you tell her?

___ a. I will report it to the tournament official
___ b. You should report it to the tournament official
___ c. Her marking the ball should not interfere with your game
___ d. You should talk to her about it
___ e. Her coach lets her get away with it

___88. You feel your #2 golfer will play considerably better if she could play in the #1 position. Her skill level is apparently equal to that of the #1 player, but she can never beat her. What would you do to help her?

___ a. Discuss with her her feelings about playing the #1 golfer
___ b. Reverse the positions of the two golfers
___ c. Try to build her confidence by helping her with the weak points of her game
___ d. Change the criteria for ranking to see if that affects the performance of the two players
___ e. Encourage her to try harder

___89. *(45) One of your golfers habitually bangs her club after missing a shot. What do you do?

___ a. Have her play with a more skilled and emotionally stable player
___ b. Help her to understand that when she displays her temper her level of concentration is upset
___ c. Ignore her actions
___ d. Tell her that you disapprove of her actions
___ e. Tell her to quit displaying her temper or she will be dropped from the team

___90. You are the director of the state golf tournament. It will be played by stroke play. The pairings are made on the basis of handicaps. As a result, some of the girls are playing their teammates. One of the coaches complains about the pairings. What do you tell her?

___ a. This method of pairing may bring a bigger gallery
___ b. The girls would rather play with someone of their own calibre
___ c. The girls will not cheat this way
___ d. This method of pairing helps to stimulate competition among players of like skill
___ e. It is easier to set up tee times and run the tournament using this method of pairing

___91. *[47] One of your badminton players loses in the championship match at the regional tournament. She wanted to win very badly and cries when she loses. How do you respond to her?

___ a. Tell her she let you down
___ b. Tell her that you understand how she feels
___ c. Ignore her
___ d. Act as upset as she is
___ e. Make sure that some of her friends are with her

___92. One of your fencers asks you to work out with her one afternoon when you have planned to go shopping. What do you tell her?

___ a. I will be there
___ b. I cannot come at that time, but I will help you some other time
___ c. Please get some one else to work out with you
___ d. I can only practice with you a short time
___ e. I cannot schedule individual practices

___93. You think you are the only one who knows that an opposing coach has a drinking problem. Her habits appear to be affecting her ability to coach. What do you do to correct the situation?

___ a. Talk with her about the problem
___ b. Talk with the chairman of her department about the problem
___ c. Nothing
___ d. Speak to your own department chairman about your concern
___ e. Speak to the president of your coaches' association about the problem

___94.*(48) Your top all-around gymnast becomes ill at the regional championship. She is up all night. In the morning she looks pale and drained. She wants to compete very badly. What do you do?

___ a. Tell her she can compete if she feels up to it
___ b. Check her temperature and if it is normal let her compete
___ c. Give her some aspirin and tell her that she will be all right
___ d. Tell her to stay in bed
___ e. Have the infirmary check her over and let them make the decision as to whether or not she should compete

___95. As coordinator of the intercollegiate athletic program you are asked to suggest a policy for insurance required by participants. What do you suggest?

___ a. Insurance coverage should be left to the discretion of the individual participant
___ b. Each participant must purchase insurance through the student body association
___ c. The intercollegiate athletic division should purchase adequate insurance for all of the participants in the program
___ d. Each participant must have some kind of insurance coverage; her family policy will suffice
___ e. The department of physical education should provide insurance coverage for the participants

___96.*(49) One of your basketball players is near the school scoring record. Members of the team are discussing her chances of breaking the record. What do you tell them?

___ a. Feed the ball to her as much as possible
___ b. I would not say anything to them
___ c. She will be allowed to play until she breaks the record
___ d. Play the game in the usual style for we should not be concerned with records
___ e. There will be an opportunity for the record to be broken if we play our usual style

___97. Your basketball team is ahead by 4 points in the last three minutes of a league game. There is no 30-second clock in use. What game strategy do you instruct your girls to employ?

___ a. The guards should dribble the ball in an attempt to draw a foul
___ b. Do not shoot until near the end of the thirty second period
___ c. Set up plays quickly to get shots off so we can increase the lead
___ d. Take shots when there are opportunities for good ones
___ e. Keep control of the ball until the end of the game

___98. *(50) Your department chairman has appointed you to a committee to suggest appropriate load credit for coaching. What would you, as a coach, recommend?

___ a. Coaching should be considered voluntary service
___ b. All coaches should be relieved of teaching one service class during their competitive seasons
___ c. All coaches should be relieved of teaching two service classes during their competitive seasons
___ d. Coaches should not receive load credit, but should receive extra compensation
___ e. Load credit for coaching should be determined on the basis of extent of competitive season and amount of practice time involved

___99. One of your better volleyball players has a finger injury. You were instructed not to let her play until she received medical clearance. She comes dressed to play in a match. During the course of play, she becomes frustrated and leaves because you will not let her play. What is your reaction?

___ a. Cut her from the team
___ b. Have a conference with her to discuss her lack of loyalty to the team
___ c. Ignore her
___ d. She will not be allowed to play the first match after she receives medical clearance
___ e. Discuss the matter with the team captain

___100. You are a coach at a large university. Your colleague who coaches the swimming team asks you to change the grade of one of her swimmers so she will be eligible for competition. What do you tell her?

___ a. I do not believe in changing grades of athletes
___ b. The student deserves exactly what I gave her
___ c. I will change the grade if the student does some additional work
___ d. I will change the grade if you will be willing to do the same for one of my players
___ e. In view of the other members of the class, it would not be fair to change her grade

APPENDIX B

CORRESPONDENCE TO EXPERT JUDGES

Letter Sent to Prospective Judges

January 2, 1972

Dr. Edith Betts
University of Idaho
Moscow, Idaho 83843

Dear Edie:

Throughout my association with intercollegiate athletics I have been interested in the quality of leadership which our women coaches possess. I have become increasingly aware of the role these women have in influencing the direction of our athletic programs. In pursuing advanced study at the University of North Carolina at Greensboro my interests have focused on the areas of coaching and administration. My attention has been channeled toward the development of a scale for measuring the attitudes of women coaches toward the conduct of intercollegiate athletics for women. May I seek your assistance as a juror in the development of such a scale?

I have chosen the situation-response technique which involves putting the respondent in a given situation and asking her to indicate how she would respond in one of the five alternative ways. The jury of experts would be asked to rank the responses in order of desirability and to assist in the selection of items appropriate for use in the scale. There will be approximately 100 items to consider.

I am fully cognizant of the many demands for time in your busy schedule; however I am also aware of the need for procuring the best judgments in our profession on the topic under investigation. You are one of ten women from throughout the country who have been asked to serve on the jury of experts. Will you please indicate your willingness to cooperate by marking the appropriate space on the enclosed postal card. Since it is necessary to send the scale out to the jury before the end of January, I would greatly appreciate it if you return the postal card at your earliest convenience.

I shall be more than happy to send you a copy of the final attitude scale. Thank you so much for your consideration and for any help you may extend to me.

Sincerely yours,

Becky Sisley, Ed. D. Candidate

Enclosure

Rosemary McGee, Adviser

Letter Sent to Participating Judges

January 20, 1972

Dr. Edith Betts
Women's Physical Education
University of Idaho
Moscow, Idaho 83843

Dear Edie:

I have received your post card and I am delighted that you have indicated a willingness to serve as a judge for my study. Enclosed are 100 situation-response items and directions for you to follow when (1) evaluating the items and (2) rating the responses. The purpose of this scale is to measure the attitudes of women coaches toward the conduct of intercollegiate athletics for women.

The ratings of the judges will be used to select the items to be included in the scale. It will then be sent to approximately 200 randomly selected women coaches from throughout the country. On the basis of the responses of these coaches, a final scale will be developed.

I am very interested in any suggestions or comments that you may have regarding any items and/or responses. Please be sure, however, to rate the items as they are written. You may wish to add a response which you feel is more desirable than any of the alternatives given. I would particularly welcome comments about any items you consider undesirable. Please feel free to make any comments directly on the dittoed sheets.

I would appreciate it if you would return the items to me by February 14. Enclosed is a self-addressed, stamped envelope for your convenience. Thank you very much for assisting with my study.

Sincerely yours,

Becky Sisley, Ed. D. Candidate

Rosemary McGee, Adviser

Enclosures

Return Post Card Enclosed with Letter to Prospective Judges

Name: _____

_____ I will be happy to serve as a judge, and will review the scale items at my earliest convenience.

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

Post Card Reminder to Return Scale Items

Feb. 16

Dear

Just a reminder for you to return the attitude scale items, soon.

Thank you,

Becky Sisley

Instructions for Jury of Experts

A Situation-Response Attitude Scale for Women Coaches

Directions:

The items on the following pages are situation-response items related to the conduct of intercollegiate athletics for college women. Please make two judgments on each of the items.

I. Rating of Responses

Read each situation carefully. Then read the five responses which indicate possible actions toward the situation. You are a member of a jury to judge the responses ranging from the most desirable behavior to the least desirable behavior. Please disregard your personal attitude toward the situation. Assign a value of five (5) points to the response which you judge to be the most desirable, four (4) points to the next most desirable, three (3) points to the next most desirable, and one (1) point to the least desirable response. For example:

____ 6. The goalie on your lacrosse team is usually the last one out to practice. The first game of the season she lets an easy goal score. How do you intend to improve this situation?

__1__ a. Do not let her play goalie any more

__5__ b. Plan some special sessions with her

__4__ c. Talk to her about her attitude toward practice

__2__ d. Start to train another goalie

__3__ e. Have the team captain talk to the goalie

If you had rated the responses as indicated, it would mean that you rated b as the most desirable action to be taken, c as the next most desirable, e as the next most desirable, d as the next most desirable, and a as the least desirable. Remember that you are to rate the responses in order of desirability and not necessarily on how you would personally respond.

You may feel it is absolutely impossible to rate the responses for a particular item on 5 to 1 value scale. If so, assign a duplicate value to two or more responses you think are equally desirable or equally undesirable. For example, in a given item, you may feel that two responses rate "4" points, two responses rate "1" point, and one response rates "3" points. Make sure that each response for every item is rated. The combined ratings of the judges will be used to determine the final weightings of responses.

II. Evaluation of Items

Also, please evaluate each total item. Indicate in the space provided to the left of the item number how you would rate each item in view of its contribution to the total scale. Use the following scoring method:

E	-	Essential	-	Should be included
D	-	Desirable	-	Acceptable
U	-	Undesirable	-	Should be left out

Be sure that each item is evaluated. The combined ratings of the judges will be used to determine the items to be included in the scale.

APPENDIX C

RAW DATA TABLE

Table 7

Raw Data of Judges' Responses Including Average Weightings of Selected Attitude Scale Items

Orig. No.		Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt. No.
1		D D E E D D E E D	1	
	a	5 5 5 5 5 5 5 5 5		5.0
	b	4 4 4 4 4 3 3 4 4		3.8
	c	3 3 3 3 3 4 4 3 2		3.1
	d	1 1 2 2 1 1 2 1 1		1.3
	e	1 2 1 1 2 2 1 2 3		1.7
2		E E D E E E D E E	2	
	a	5 3 5 4 3 4 3 3 4		3.8
	b	4 5 4 5 4 4 5 5 5		4.6
	c	1 1 2 1 1 1 1 1 1		1.1
	d	1 1 1 2 2 2 2 1 2		1.6
	e	3 4 3 4 5 5 4 3 3		3.8
3		D U E D U D D D D	3	
	a	1 1 2 1 1 1 2 1 2		1.3
	b	3 2 3 3 3 2 3 2 3		2.7
	c	1 1 1 1 2 3 1 1 1		1.3
	d	1 5 5 5 4 5 4 5 5		4.3
	e	5 3 4 4 5 4 5 4 4		4.2
4		D U D E U E D D U		
	a	2 1 4 5 1 1 1 2 1		
	b	4 5 5 1 4 5 2 2 5		
	c	2 2 3 4 1 2 3 1 3		
	d	3 3 1 2 1 3 4 1 4		
	e	3 4 2 3 3 4 5 4 2		
5		E D D D E E E E D	4	
	a	3 2 3 2 2 2 2 3 2		2.3
	b	1 1 1 1 1 1 1 1 1		1.0
	c	1 3 4 3 3 3 3 2 3		2.8
	d	5 4 3 5 5 5 4 5 5		4.6
	e	4 5 5 4 4 4 5 4 4		4.3
6		E D D D D D D D D		
	a	1 1 1 1 2 1 1 1 1		
	b	5 5 5 4 1 5 5 4 4		
	c	4 4 4 5 5 4 3 5 5		
	d	3 2 3 3 4 2 4 3 2		
	e	2 3 2 2 3 3 2 2 3		
7		E D E D D E U E E	5	
	a	1 1 1 1 1 1 1 1 1		1.0
	b	3 2 4 4 3 3 4 2 4		3.2
	c	5 5 5 5 5 5 5 5 5		5.0
	d	4 4 3 3 2 4 3 3 3		3.2
	e	1 3 2 2 4 2 2 4 2		2.4
8		E D E D U E E D D	6	
	a	1 2 2 1 4 2 4 1 3		2.2
	b	5 4 5 5 5 4 3 5 5		4.6
	c	3 5 4 2 3 5 5 4 4		3.9
	d	1 1 1 4 2 1 1 4 1		1.8
	e	1 3 3 1 1 2 2 1 2		1.8

E = essential
D = desirable
U = undesirable

Table 7 (continued)

Orig. No.	Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.
9	E E D U E E E D D		
a	3 5 3 3 4 5 3 4 3		
b	2 1 4 1 1 4 2 2 2		
c	1 4 5 5 2 1 1 1 5		
d	3 3 1 4 3 2 5 2 4		
e	4 2 3 1 5 3 4 5 1		
10	D D D E U E D D D		
a	4 1 4 1 1 5 3 4 5		
b	5 3 3 4 4 4 4 2 4		
c	1 2 5 2 2 2 2 2 2		
d	2 4 2 3 5 3 5 5 3		
e	2 5 1 5 3 1 1 1 1		
11	D D E D U E D E D		
a	2 1 1 1 3 1 1 3 1		
b	5 5 5 4 2 5 5 4 5		
c	4 4 5 2 5 4 2 4 3		
d	5 5 5 4 1 5 3 4 2		
e	4 5 4 5 4 5 4 5 4		
12	E D D U U U D D U		
a	1 4 4 1 1 - 1 1 1		
b	3 5 5 5 4 - 2 5 2		
c	2 1 3 4 5 - 4 4 3		
d	1 2 2 2 3 - 5 3 4		
e	1 3 1 1 2 - 3 2 5		
13	E D D D D D U U D	7	
a	2 5 4 5 4 4 5 5 5		4.3
b	1 1 1 1 1 1 1 1 1		1.0
c	3 2 3 2 2 3 2 3 3		2.6
d	4 4 5 4 5 5 4 4 4		4.3
e	4 3 2 3 3 2 3 2 2		2.7
14	E D E D U D D E U		
a	5 5 5 5 5 5 5 5 5		
b	2 2 4 2 4 3 2 2 2		
c	1 4 3 3 3 2 3 3 3		
d	1 3 2 4 2 1 1 1 1		
e	4 1 1 1 1 4 4 2 4		
15	E E D D E E D D D	8	
a	1 1 1 1 1 1 1 1 1		1.0
b	1 2 2 2 2 3 2 3 2		2.1
c	2 4 3 3 3 4 3 4 3		3.2
d	4 5 5 5 5 5 5 5 5		4.9
e	2 4 4 4 4 2 4 2 4		3.3
16	D D U U U D U U D		
a	2 5 5 5 3 3 5 5 4		
b	2 1 2 1 1 2 4 2 1		
c	2 3 3 2 3 1 1 1 2		
d	4 4 4 3 5 4 3 4 5		
e	4 2 1 1 4 5 2 1 4		
17	E D U D D D D D D		
a	2 5 1 5 5 5 5 5 4		
b	1 3 1 3 3 4 4 3 3		
c	1 4 1 4 4 2 3 3 5		
d	1 2 1 2 2 3 2 2 2		
e	1 1 1 1 1 1 1 1 1		
18	E E E E E E D D D		
a	5 4 2 1 5 5 3 2 2		
b	1 5 5 5 2 4 5 5 5		
c	2 3 3 3 1 2 4 4 4		
d	2 2 4 4 4 3 2 3 3		
e	1 1 1 2 3 1 1 1 1		

Table 7 (continued)

Orig. No.	Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.
19	E E D E E E D D D	9	
a	1 1 1 1 2 1 1 3 1		1.3
b	4 2 2 3 1 4 2 3 2		2.6
c	1 4 3 3 4 3 4 4 4		3.3
d	2 3 4 4 3 2 3 4 3		3.1
e	3 5 5 5 5 5 5 5 5		4.8
20	E D E D D E E E D	10	
a	1 2 1 2 2 2 1 2 2		1.7
b	5 4 5 4 5 3 5 4 5		4.4
c	5 5 3 5 4 4 3 3 3		3.9
d	4 3 4 3 3 5 4 5 4		3.9
e	1 1 1 1 1 1 2 1 1		1.1
21	E D D E U D D D D		
a	1 1 3 5 5 5 5 5 5		
b	2 5 2 3 1 3 3 1 3		
c	5 3 4 2 1 2 2 1 2		
d	1 2 1 1 1 1 1 1 1		
e	2 4 5 4 1 4 4 1 4		
22	E D D D E E D E D	17	
a	1 1 1 1 2 1 1 1 1		1.1
b	1 3 3 2 4 2 3 3 3		2.7
c	5 4 4 5 5 3 5 5 5		4.6
d	2 5 5 4 3 4 4 4 4		3.9
e	4 5 1 3 1 5 2 4 2		3.0
23	E E D D U E E D E		
a	1 1 1 1 1 1 1 1 1		
b	5 5 5 5 5 5 4 5 4		
c	4 4 2 2 5 2 5 1 5		
d	3 2 1 3 1 4 3 1 3		
e	3 3 1 4 1 3 2 2 2		
24	D D D D U E E E D	11	
a	1 1 1 1 1 1 1 1 1		1.0
b	5 4 4 5 4 2 5 5 5		4.3
c	5 5 5 4 5 5 4 5 4		4.7
d	1 3 1 2 3 4 2 3 3		2.4
e	2 2 1 3 2 3 3 2 2		2.2
25	E U E D U E E E U		
a	1 1 1 1 3 1 1 1 1		
b	2 4 3 4 2 2 3 5 4		
c	4 5 5 5 1 3 2 4 3		
d	3 3 4 3 5 5 5 5 5		
e	2 2 2 2 4 4 4 2 2		
26	E E D D U E D E D		
a	4 2 5 4 2 4 4 4 3		
b	5 4 4 3 1 5 2 3 1		
c	2 3 3 5 5 3 5 5 5		
d	1 5 2 1 3 2 3 2 4		
e	1 1 1 2 4 1 1 1 2		
27	D D D D D E D D D	12	
a	1 1 4 1 2 3 2 1 3		2.0
b	5 5 3 3 3 2 3 4 1		3.2
c	1 2 1 1 1 1 1 1 2		1.2
d	4 3 2 3 4 4 4 4 5		3.7
e	5 4 5 5 5 5 5 5 4		4.8
28	E D E E E E D E E		
a	5 1 5 4 5 2 5 5 3		
b	2 5 3 3 3 3 2 2 4		
c	5 5 2 2 2 4 3 3 2		
d	4 5 4 5 4 5 5 4 5		
e	2 3 1 1 1 1 1 1 1		

Table 7 (continued)

Orig. No.		Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.
29		E D E D E E D D D	13	
	a	5 5 5 5 4 3 5 4 4		4.4
	b	2 1 2 3 1 2 1 1 1		1.6
	c	4 4 4 2 3 4 3 3 3		3.3
	d	1 2 1 3 5 5 4 5 5		3.4
	e	2 1 3 4 2 1 1 1 1		1.8
30		D E D D U E D E E		
	a	1 1 1 1 1 1 1 1 1		
	b	1 2 3 2 3 5 3 2 3		
	c	4 5 4 4 4 4 5 5 4		
	d	2 4 2 5 2 3 3 3 2		
	e	5 4 5 3 5 2 5 4 5		
31		E E E D E D D D E	18	
	a	1 1 1 1 1 1 1 1 1		1.0
	b	5 5 5 5 5 4 4 5 5		4.8
	c	1 2 4 2 3 3 4 3 4		2.9
	d	1 3 2 3 2 3 5 1 2		2.4
	e	3 4 3 4 4 4 4 4 3		3.7
32		D D D U D E D D D		
	a	5 1 1 5 1 2 1 5 4		
	b	3 3 4 3 5 3 4 3 1		
	c	4 2 2 1 2 1 2 3 5		
	d	5 4 5 2 4 5 3 4 3		
	e	2 5 3 4 3 4 5 2 2		
33		E E E D D E U E D		
	a	3 3 3 3 1 3 4 3 4		
	b	5 4 4 4 2 4 3 5 1		
	c	5 5 5 5 5 5 5 4 5		
	d	2 1 2 2 4 2 2 2 3		
	e	2 2 1 1 3 1 1 1 2		
34		D D D D U D D D D		
	a	1 2 5 1 2 4 2 5 3		
	b	1 3 4 2 5 5 3 4 5		
	c	1 1 3 3 4 3 4 2 4		
	d	5 4 2 5 3 2 5 1 2		
	e	3 5 1 4 1 1 1 1 1		
35		D D E D D E D E E	19	
	a	1 2 2 2 1 1 1 1 2		1.4
	b	4 3 4 4 4 5 4 4 4		4.0
	c	1 4 3 3 2 3 2 3 3		2.7
	d	5 5 5 5 5 4 5 5 5		4.9
	e	1 1 1 1 1 2 1 1 1		1.1
36		E D D D D E U E U	20	
	a	1 1 3 2 2 4 1 1 4		2.1
	b	5 5 5 5 5 5 5 5 5		5.0
	c	1 2 1 4 1 1 1 1 2		1.6
	d	2 3 1 1 3 3 3 3 1		2.2
	e	2 4 4 3 4 2 4 4 3		3.3
37		E D D D E D U D D		
	a	1 3 4 3 2 2 1 3 2		
	b	2 1 3 2 5 3 3 4 5		
	c	3 5 3 4 3 5 4 5 4		
	d	2 4 5 5 4 4 5 4 3		
	e	2 2 1 1 1 1 2 1 1		
38		E E E D U E D D E		
	a	5 1 4 4 1 4 3 3 3		
	b	5 1 3 2 1 3 4 2 5		
	c	2 4 1 1 1 1 1 1 1		
	d	1 1 1 1 1 1 2 1 2		
	e	5 5 5 5 5 5 5 5 4		

Table 7 (continued)

Orig. No.	Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.
39	E D D U E E U E D	14	
a	- 5 4 5 4 5 4 5 4		4.0
b	- 4 5 4 5 5 5 4 5		4.1
c	- 3 3 3 2 3 1 3 3		2.3
d	- 2 1 1 1 1 1 2 2		1.2
e	- 1 1 2 3 1 1 1 1		1.2
40	E D D D E E D D D	15	
a	2 3 2 2 2 3 2 2 3		2.3
b	5 5 5 5 5 5 5 5 5		5.0
c	1 2 1 1 1 1 1 1 1		1.1
d	1 1 1 3 4 1 2 4 4		2.3
e	5 4 3 4 3 4 4 3 2		3.6
41	E D U D D U D D D		
a	5 2 1 1 1 1 2 1 1		
b	1 1 1 2 2 2 1 2 2		
c	1 3 3 3 3 4 3 3 3		
d	2 4 4 4 5 2 4 5 4		
e	5 5 5 5 4 5 5 4 5		
42	E E E D D D D D D	16	
a	3 4 2 4 3 3 3 2 3		3.0
b	1 1 4 1 2 2 1 1 1		1.6
c	4 4 3 3 4 4 4 4 4		3.8
d	1 2 1 2 1 1 1 3 2		1.6
e	5 5 5 5 5 5 5 5 5		5.0
43	E D E D D U D D D		
a	3 2 2 2 3 - 1 1 1		
b	4 1 1 4 4 - 1 4 3		
c	2 4 5 3 2 - 5 5 2		
d	3 5 3 5 1 - 2 3 5		
e	2 3 4 1 5 - 3 2 4		
44	D E D D U E D D D		
a	3 1 1 3 2 2 - 3 2		
b	3 4 2 4 5 5 - 4 4		
c	5 2 1 1 1 5 - 2 3		
d	2 1 1 2 3 1 - 1 1		
e	3 4 3 5 4 3 - 5 5		
45	D D D D D D D D D		
a	5 4 5 4 5 1 4 3 5		
b	4 5 4 5 4 2 5 3 4		
c	1 2 3 3 3 4 2 1 3		
d	2 3 2 2 2 5 3 5 2		
e	1 1 1 1 1 3 1 2 1		
46	E D D D U E D E E	21	
a	5 4 3 5 4 4 4 5 3		4.1
b	1 1 1 1 1 1 1 1 1		1.0
c	3 3 4 3 1 2 3 3 4		2.9
d	4 5 5 4 5 3 5 4 5		4.4
e	3 2 2 2 1 5 2 3 2		2.4
47	E E E D D E D E E	30	
a	1 1 1 1 1 1 2 1 1		1.1
b	5 3 4 2 3 3 3 4 4		3.4
c	5 5 5 5 5 5 5 5 5		5.0
d	4 4 3 4 4 4 4 4 3		3.8
e	2 2 2 3 2 2 1 2 2		2.0
48	E U E E E E D E E	23	
a	3 2 2 2 2 3 3 2 3		2.4
b	1 1 1 1 1 1 1 1 1		1.0
c	2 3 3 3 3 2 2 3 2		2.6
d	5 5 5 5 5 5 5 5 5		5.0
e	3 4 4 4 4 4 4 4 4		3.9

Table 7 (continued)

Orig. No.	Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.
49	E E E D E E E E E	26	
a	1 2 1 2 2 5 1 1 2		1.9
b	3 3 1 3 3 3 3 3 4		2.9
c	1 1 1 1 1 4 1 1 1		1.3
d	5 4 5 5 5 1 5 5 5		4.4
e	4 5 4 4 4 2 4 4 3		3.8
50	E E D D D U E D E	22	
a	5 5 5 5 5 5 5 5 5		5.0
b	2 4 4 2 4 3 4 2 3		3.1
c	1 1 1 1 2 1 1 1 2		1.2
d	3 2 3 3 3 4 3 4 4		3.2
e	1 3 1 4 1 2 1 2 1		1.8
51	D U E D D D E D D	27	
a	2 3 2 1 1 2 3 2 2		2.0
b	1 1 1 2 2 1 1 1 1		1.2
c	4 2 4 3 3 2 5 4 3		3.3
d	4 5 3 4 4 4 4 4 5		4.1
e	5 4 5 5 5 5 4 5 4		4.7
52	E D D U U D E D D	24	
a	4 4 4 5 4 4 5 4 3		4.1
b	3 5 4 5 3 4 5 4 4		4.0
c	5 4 5 5 5 4 5 5 5		4.8
d	1 1 1 1 1 1 1 1 1		1.0
e	2 2 3 2 2 2 2 2 2		2.1
53	E D E D D E E E D	28	
a	3 2 1 2 2 2 3 2 1		2.0
b	5 3 5 5 5 4 5 5 5		4.7
c	4 5 4 4 4 4 5 4 4		4.2
d	4 4 3 3 3 3 4 3 3		3.3
e	1 1 1 1 1 1 1 1 2		1.1
54	E E D D E E D E D		
a	1 1 2 2 1 1 1 1 1		
b	3 3 2 1 2 3 1 3 2		
c	5 4 4 5 4 5 2 4 5		
d	3 2 5 3 5 3 2 5 4		
e	4 5 1 4 3 4 3 2 3		
55	D E E E D E E E D	31	
a	1 2 1 3 1 1 3 1 2		1.7
b	2 3 2 2 2 4 2 3 1		2.3
c	2 1 5 1 3 2 1 2 1		2.0
d	5 5 3 5 5 5 5 5 5		4.8
e	5 3 4 4 4 4 4 4 4		4.0
56	E D E D U D E E D	25	
a	1 1 1 1 1 1 2 1 1		1.1
b	4 5 4 4 5 4 4 4 4		4.2
c	2 3 2 2 2 1 1 3 2		2.0
d	4 4 5 5 4 4 5 5 3		4.3
e	2 2 1 3 3 2 3 2 5		2.6
57	E E E D D E D E U	29	
a	3 2 1 1 2 1 2 2 3		1.9
b	1 1 2 2 1 1 1 1 2		1.3
c	3 3 3 3 3 3 3 4 4		3.2
d	4 5 5 5 4 5 5 5 3		4.6
e	4 4 4 4 5 3 4 4 4		4.0
58	E E E E E E D E D	32	
a	1 1 1 1 1 2 1 1 1		1.1
b	1 2 1 2 2 3 1 2 3		1.9
c	4 5 4 3 4 5 4 4 4		4.1
d	1 3 1 1 3 1 1 1 2		1.6
e	5 4 5 5 5 4 5 5 5		4.8

Table 7 (continued)

Orig. No.		Judges 1	2	3	4	5	6	7	8	9	New No.	Ave. Wt.
59		E	E	D	D	D	E	D	E	D	33	
	a	5	4	4	5	4	5	4	5	4		4.4
	b	2	1	1	1	1	1	1	1	1		1.1
	c	3	2	2	2	2	5	2	2	2		2.4
	d	4	3	5	4	5	3	3	4	3		3.8
	e	5	5	3	5	3	4	5	5	5		4.4
60		E	E	U	D	D	E	D	E	D	34	
	a	1	1	1	2	1	1	1	2	1		1.2
	b	2	2	1	1	2	4	2	1	2		1.9
	c	4	3	4	4	3	1	4	4	4		3.4
	d	4	4	4	5	4	2	3	5	3		3.8
	e	5	5	3	3	5	5	5	4	5		4.4
61		E	D	D	D	E	U	D	E	D		
	a	1	1	1	1	1	4	1	1	3		
	b	3	4	1	3	4	1	2	4	4		
	c	2	3	1	2	2	3	3	2	2		
	d	4	5	5	5	5	5	5	5	5		
	e	2	2	1	3	3	2	3	2	1		
62		E	D	U	D	E	E	D	E	D		
	a	1	1	2	1	1	1	1	1	1		
	b	2	2	2	2	3	3	1	5	3		
	c	1	3	2	3	2	2	1	4	5		
	d	5	4	5	4	5	4	5	3	4		
	e	4	5	4	5	4	5	4	3	2		
63		E	D	E	E	E	E	D	D	E	36	
	a	4	2	3	2	2	2	2	3	2		2.4
	b	2	1	2	3	5	3	5	2	3		2.9
	c	1	1	1	1	1	1	1	1	1		1.0
	d	3	4	5	4	3	5	4	4	4		4.0
	e	5	5	4	5	4	4	3	5	5		4.4
64		D	U	D	D	D	D	D	D	D		
	a	5	5	5	2	5	5	5	5	5		
	b	4	4	1	4	3	2	2	2	3		
	c	4	2	3	3	2	4	4	1	2		
	d	2	3	4	5	4	3	3	4	4		
	e	2	1	2	1	1	1	1	3	1		
65		E	D	D	D	D	D	D	E	D		
	a	5	2	4	4	5	4	4	1	5		
	b	3	4	3	3	4	3	2	4	3		
	c	3	5	5	5	2	5	5	5	4		
	d	1	3	1	2	1	2	3	3	2		
	e	1	1	1	1	3	1	1	2	1		
66		E	D	E	D	E	E	D	E	E	37	
	a	4	4	4	4	3	3	3	3	5		3.7
	b	2	1	2	2	2	2	2	2	2		1.9
	c	1	1	1	1	1	1	1	1	1		1.0
	d	5	3	3	3	5	4	5	4	3		3.9
	e	5	5	5	5	4	5	4	5	4		4.7
67		E	U	D	D	D	E	D	E	D		
	a	1	2	1	2	1	1	2	1	1		
	b	1	3	1	2	1	1	2	2	3		
	c	2	4	1	4	2	4	1	3	4		
	d	1	1	1	1	4	1	1	4	2		
	e	4	5	4	5	5	5	5	5	5		
68		E	D	E	D	D	U	D	D	D	41	
	a	1	2	2	1	1	1	1	2	1		1.3
	b	1	1	1	2	2	1	1	1	1		1.2
	c	5	5	5	5	5	5	5	5	5		5.0
	d	1	4	3	3	3	1	4	3	3		2.8
	e	3	3	4	4	4	3	3	4	4		3.6

Table 7 (continued)

Orig. No.		Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.
69		E D E D U E D D D	35	
	a	5 5 4 5 4 - 4 5 5		4.1
	b	1 1 2 3 3 - 3 3 2		2.0
	c	4 3 5 2 5 - 5 4 4		3.6
	d	1 2 1 1 1 - 1 1 1		1.0
	e	1 4 3 3 2 - 1 2 3		2.1
70		E D E D D D D D E	42	
	a	1 1 1 1 1 1 1 1 1		1.0
	b	5 4 4 4 4 4 4 4 4		4.1
	c	2 2 3 3 3 2 2 3 3		2.6
	d	5 5 5 5 5 5 5 5 5		5.0
	e	1 3 2 2 2 3 3 2 2		2.2
71		D D E D U E D E E		
	a	5 5 3 5 5 5 5 5 5		
	b	1 2 4 3 1 1 1 1 3		
	c	2 4 5 4 2 1 4 3 4		
	d	1 3 2 2 1 1 1 2 2		
	e	1 1 1 1 1 1 1 1 1		
72		E D D U U E D E D		
	a	1 2 1 1 1 1 2 3 2		
	b	5 2 4 4 5 5 5 5 4		
	c	2 5 5 4 2 4 2 4 4		
	d	1 2 1 1 1 1 1 2 1		
	e	1 1 1 1 1 1 1 1 2		
73		E D E D D E D E E	43	
	a	4 5 5 2 4 4 4 3 4		3.9
	b	5 4 3 4 3 3 3 4 2		3.4
	c	1 1 1 1 1 1 1 1 1		1.0
	d	3 2 2 3 2 2 2 2 3		2.3
	e	5 3 4 5 5 5 5 5 5		4.7
74		E D D D D D D D D	38	
	a	3 2 1 3 2 2 2 2 2		2.1
	b	1 1 1 1 1 1 1 1 1		1.0
	c	2 4 3 4 3 4 3 4 4		3.4
	d	2 3 3 2 4 3 4 3 3		3.0
	e	5 5 5 5 5 5 5 5 5		5.0
75		E D U D D D D E D		
	a	1 5 2 2 3 1 2 1 5		
	b	2 1 2 3 2 3 3 4 2		
	c	4 3 5 5 5 5 5 5 4		
	d	3 4 1 4 4 3 4 3 4		
	e	1 2 1 1 1 1 1 1 1		
76		E D E D D E D E E	40	
	a	3 5 4 4 4 3 4 5 4		4.0
	b	1 3 1 2 2 1 1 3 2		1.8
	c	1 2 1 2 1 1 1 1 2		1.3
	d	5 4 5 5 5 5 5 5 5		4.9
	e	1 1 1 1 3 1 2 1 1		1.3
77		E D D D E E D E E	39	
	a	4 4 2 2 4 3 1 2 3		2.8
	b	2 1 1 1 1 1 1 3 1		1.3
	c	4 3 5 4 5 5 4 5 5		4.4
	d	1 1 1 1 2 1 2 1 2		1.3
	e	5 5 4 5 3 5 5 5 5		4.7
78		E D U D U E U E D		
	a	2 1 1 1 1 1 1 1 1		
	b	3 4 4 2 3 3 3 4 5		
	c	3 2 3 5 2 5 5 3 2		
	d	5 3 1 4 4 3 4 4 3		
	e	3 5 5 3 5 4 2 5 4		

Table 7 (continued)

Orig. No.	Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.
79	E D D E E D D D D		
a	5 4 2 2 5 4 4 4 3		
b	4 3 3 3 3 2 3 3 3		
c	4 5 5 5 4 3 5 5 5		
d	1 2 1 1 2 1 1 1 1		
e	2 1 4 4 1 5 2 4 3		
80	E D E E D D E E E	46	
a	5 3 3 5 4 5 3 5 4		4.1
b	5 5 4 4 5 3 5 4 5		4.4
c	1 1 1 1 1 1 1 1 1		1.0
d	2 4 2 3 2 4 1 3 2		2.6
e	3 2 5 2 3 3 2 4 3		3.0
81	E D D D D D D E D		
a	1 2 2 3 2 1 3 3 3		
b	1 1 2 1 1 1 1 1 1		
c	4 3 1 5 5 1 2 5 5		
d	2 4 5 4 3 3 5 4 3		
e	1 5 3 2 4 2 4 3 3		
82	E D E D E D D E E		
a	4 4 2 5 3 3 3 3 3		
b	3 2 5 3 4 1 4 5 4		
c	3 1 3 1 1 4 2 3 2		
d	5 5 4 4 5 5 5 5 5		
e	4 3 1 2 2 2 1 1 1		
83	D D E D E E D E D		
a	2 1 1 1 1 1 1 1 1		
b	5 4 3 3 5 2 5 5 4		
c	5 2 3 2 2 5 4 5 3		
d	4 5 5 5 4 4 4 4 4		
e	4 3 5 4 3 3 2 3 3		
84	D D D D D D D U D		
a	1 4 4 4 2 - 5 5 3		
b	3 2 1 3 3 - 2 1 2		
c	3 2 1 3 3 - 2 1 2		
d	1 1 2 2 1 - 1 1 1		
e	4 3 1 1 4 - 1 1 4		
85	D D E D U D D D U		
a	4 4 2 2 3 3 2 5 2		
b	1 2 1 1 1 2 1 4 2		
c	5 3 5 3 4 4 3 3 4		
d	3 5 4 4 5 5 4 2 4		
e	1 1 3 5 2 1 5 3 2		
86	E D D D U E U ? D		
a	1 1 1 1 1 1 3 2 2		
b	1 4 4 5 1 3 2 5 3		
c	1 3 1 4 1 4 4 4 1		
d	5 5 5 2 5 5 1 1 5		
e	1 1 1 3 1 1 5 3 4		
87	D D D D D D D D E	44	
a	3 2 2 3 4 5 1 3 3		2.9
b	4 5 3 2 5 4 3 4 4		3.8
c	2 3 4 5 2 2 3 4 2		3.0
d	5 4 5 4 3 3 5 5 5		4.3
e	1 1 1 1 1 1 1 1 1		1.0
88	D D E D E D D D E		
a	5 5 4 5 5 5 3 5 5		
b	2 1 1 1 1 1 1 3 3		
c	5 3 5 4 4 4 5 5 4		
d	2 2 1 2 2 2 2 1 2		
e	2 4 3 3 3 3 4 4 2		

Table 7 (continued)

Orig. No.	Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.
89	D D U E D D D E D	45	
a	5 4 3 4 4 4 3 4 3		3.8
b	5 5 5 5 5 5 5 5 5		5.0
c	1 1 1 1 1 1 1 1 1		1.0
d	3 3 1 3 3 3 3 3 4		2.9
e	1 2 1 2 2 2 2 2 2		1.8
90	D D U U D D D E D		
a	1 2 1 1 2 1 2 2 1		
b	3 5 3 5 4 3 3 4 4		
c	1 1 1 1 1 1 1 1 2		
d	4 4 4 4 5 5 5 5 5		
e	2 3 1 1 3 4 1 3 3		
91	E D D D D E D E D	47	
a	1 2 1 1 2 2 1 1 1		1.3
b	3 5 5 5 5 4 3 5 5		4.4
c	1 3 1 1 3 3 2 1 3		2.0
d	1 1 1 1 1 1 1 1 1		1.0
e	4 4 4 4 4 4 5 4 4		4.1
92	U D E D E D D D E		
a	2 5 5 3 5 1 1 3 2		
b	5 4 4 5 3 5 5 4 5		
c	1 2 3 2 2 4 3 2 4		
d	4 3 2 4 4 1 2 5 3		
e	1 1 1 1 1 1 2 1 1		
93	E D D U D D D D E		
a	5 5 5 5 5 5 5 5 5		
b	1 4 4 1 2 2 3 4 4		
c	1 1 1 3 1 4 1 1 1		
d	4 3 3 2 4 1 3 2 2		
e	2 2 2 3 3 1 2 3 3		
94	D E D D U E D E D	48	
a	3 3 3 4 4 4 2 2 3		3.1
b	3 4 2 4 3 2 3 3 2		2.9
c	1 1 1 1 1 1 1 1 1		1.0
d	1 2 4 3 2 3 1 4 4		2.7
e	5 5 5 5 5 5 5 5 5		5.0
95	E E D D E E D E D		
a	1 1 2 2 1 1 1 1 4		
b	2 2 4 1 2 1 2 3 2		
c	4 5 5 4 5 5 3 5 5		
d	2 4 3 5 3 1 4 2 3		
e	3 3 1 3 4 4 3 4 1		
96	D D E D E E D D E	49	
a	1 1 1 1 1 1 2 1 1		1.1
b	4 3 2 2 3 3 1 4 3		2.8
c	1 2 1 4 4 1 4 2 2		2.3
d	5 4 4 3 2 4 3 3 4		3.6
e	5 5 5 5 5 5 5 5 5		5.0
97	U D D D D E D E E		
a	1 3 1 1 1 1 1 1 2		
b	1 1 3 3 2 1 2 2 3		
c	5 2 1 3 4 3 1 3 1		
d	4 5 5 5 5 5 5 5 5		
e	4 4 4 1 3 3 2 4 4		
98	E D E E E E D E E	50	
a	1 1 2 1 2 1 1 1 1		1.2
b	4 3 4 3 3 3 2 3 3		3.1
c	3 4 3 4 4 3 2 4 4		3.4
d	1 3 1 2 1 1 3 2 2		1.8
e	5 5 5 5 5 5 5 5 5		5.0

Table 7 (continued)

Orig. No.		Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.	Orig. No.		Judges 1 2 3 4 5 6 7 8 9	New No.	Ave. Wt.
99		D D E D D E D D D							
	a	1 1 1 1 1 1 1 2 2							
	b	2 5 5 5 5 5 3 5 5							
	c	1 2 1 4 3 4 5 1 1							
	d	1 3 2 2 2 1 1 3 4							
	e	1 4 4 3 4 1 4 4 3							
100		E E E D E E D E E							
	a	5 4 2 3 3 4 4 5 4							
	b	4 5 4 2 4 3 5 4 3							
	c	1 3 1 5 2 1 3 2 2							
	d	1 1 1 1 1 1 1 1 1							
	e	4 2 5 4 5 5 3 3 4							

APPENDIX D

RANDOM SAMPLE OF INSTITUTIONS AND MATERIALS SENT TO THEM

Table 8

Institutions Included in the Random Sample of AIAW Charter Members with a Record of the Number of Attitude Scales Sent and Returned

Institutions	Attitude Scales Sent	Attitude Scales Returned
Alaska:		
University of Alaska	2	2
Arizona:		
Arizona State University	8	6
Mesa Community College	5	5
California:		
California State College, Long Beach	9	5
San Fernando Valley State College	7	11**
University of Santa Clara	3	2
Colorado:		
Northeastern Junior College	1	1
University of Northern Colorado	7	7
Florida:		
Palm Beach Junior College	2	2
Idaho:		
University of Idaho	4	2
Illinois:		
Eastern Illinois University	7*	7
Illinois State University	11	9
Indiana:		
Butler University	3	3
Franklin College	2	2
Valparaiso University	5*	3

*Represents a guess of the number of women coaches at the institution

**This institution requested four additional scales

Table 8 (continued)

Institutions	Attitude Scales Sent	Attitude Scales Returned
Iowa:		
Iowa State University, Ames	6	5
Luther College	5	4
University of Iowa	6*	6
University of Northern Iowa	5	5
Kansas:		
Kansas State Teachers College	4	3
Kentucky:		
Eastern Kentucky University	6	6
Louisiana:		
Newcomb College	2	2
Maine:		
Colby College	2	2
University of Maine, Farmington	3	3
University of Maine, Portland-Gorham	5	4
Maryland:		
Goucher College	6	2
Salisbury State College	4	4
Towson State College	5	5
Massachusetts:		
Brandeis University	3	3
Fitchburg State College	3	3
Springfield College	5	5
University of Massachusetts	5	4
Westfield State College	4*	-
Michigan:		
Michigan State University	7	6

*Represents a guess of the number of women coaches at the institution

Table 8 (continued)

Institutions	Attitude Scales Sent	Attitude Scales Returned
Minnesota:		
Bemidji State College	6*	6
Mankato State College	5	3
Winona State College	3	3
Missouri:		
Northwest Missouri State College	5	5
Southwest Missouri State College	9	8
Nebraska:		
Wayne State College	2	-
New Hampshire:		
Keene State College	3	2
New Jersey:		
Ocean County College	3	-
Trenton State College	8	7
New York:		
Auburn Community College	3*	2
Cornell University	8	-
Fredonia Community College	3*	3
Hartwick College	2	2
Herbert H. Lehman College	9	1
Skidmore College	2	2
State University College, Potsdam	4*	-
North Carolina:		
Appalachian State University	3	3
North Dakota:		
North Dakota State University	5	-

*Represents a guess of the number of women coaches at the institution

Table 8 (continued)

Institutions	Attitude Scales Sent	Attitude Scales Returned
Ohio:		
College of Wooster	3	3
Mount Union College	2	2
University of Dayton	3	3
Oklahoma:		
Oklahoma State University	7	-
Oregon:		
Marylhurst College	2	2
Pacific University	4	-
Portland State University	9	-
Pennsylvania:		
Bloomsburg State College	2	2
East Stroudsburg State College	6	6
PMC Colleges	1	1
West Chester State College	10	2
South Dakota:		
Northern State College	4	2
Tennessee:		
University of Tennessee	6	6
Texas:		
Lamar University	4	4
Tarleton State College	4	-
Texas Lutheran College	1	1
Utah:		
Brigham Young University	8	8

*Represents a guess of the number of women coaches at the institution

Table 8 (continued)

Institutions	Attitude Scales Sent	Attitude Scales Returned
Virginia:		
Ferrum College	2	2
Old Dominion University	4	-
Roanoke College	2	-
Virginia Polytechnic Institution & State University	2	2
Washington:		
Eastern Washington State College	9	6
Wisconsin:		
University of Wisconsin, Whitewater	9	8
Total	349	246

Letter Sent to Coordinator of Intercollegiate Athletics

Coleman Gymnasium
UNC-G
Greensboro, N. C. 27412
April 5, 1972

Dear

Throughout my association with intercollegiate athletics I have been interested in the quality of leadership which women coaches possess. My experiences this year as Commissioner for Sanctioning for CIAW-AIAW have made me increasingly aware of the role women coaches have in influencing the direction of athletic programs. In pursuing advanced study at the University of North Carolina at Greensboro my interests have focused on the areas of coaching and administration. My dissertation involves the construction of a scale to measure the attitudes of women coaches toward the conduct of intercollegiate athletics for women. A preliminary evaluation of the scale items has been completed with the assistance of the following panel of expert judges:

Janet Atwood	Mary Jane Haskins	Betty McCue
Mildred Barnes	Fran Koenig	Frances Schaafsma
Edith Betts	Katherine Ley	Charlotte West

In order to determine the reliability of the attitude scale it is necessary to administer the scale to a large sample of women coaches of intercollegiate athletic teams. I was fortunate to use the listing of AIAW Charter Members as of February 25, 1972 in order to secure a random sample of coaches from throughout the country. Your school was selected in the random sample.

As coordinator of the women's intercollegiate athletic program at your institution, I am asking you to have each of your women coaches complete an attitude scale. I secured the number of your different women coaches from the sports forms which was sent in with your AIAW membership application. I believe an adequate number of scales is enclosed for your coaches. All respondents will remain anonymous.

Kindly put all of the completed attitude scales in the mail by May 1, 1972. Enclosed is a self-addressed, stamped envelope for your convenience. Only through your assistance and that of the other seventy-four coordinators of

women's intercollegiate athletic programs will it be possible to adequately complete the construction of a valid and reliable attitude scale. Your assistance in coordinating the administration of the scale to the women coaches at your institution is very much appreciated.

Sincerely yours,

Becky Sisley, Ed. D. Candidate
CIAW-AIAW, Commissioner for
Sanctioning

Rosemary McGee, Adviser

Enclosures

Page Attached to Front of Each Attitude Scale

A SITUATION-RESPONSE SCALE TO MEASURE ATTITUDES TOWARD THE CONDUCT OF INTERCOLLEGIATE ATHLETICS FOR WOMEN

Directions:

The items on the following pages are situation-response items related to the conduct of intercollegiate athletics for college women. Read each situation carefully. Then read the five responses which indicate possible actions toward the situation. Put yourself in the situation described and indicate how you would respond to the situation by placing an "X" in the space to the left of the appropriate response. Only one response is to be marked. For example:

1. The goalie on your hockey team is usually the last one out to practice. The first game of the season she lets an easy goal score. How do you intend to improve this situation?

____ a. Not let her play goalie any more

____ b. Plan some special practice sessions for her

__X__ c. Talk to her about her attitude toward practice

____ d. Start to train another goalie

____ e. Have the team captain talk to the goalie

Information from Respondent: (to be used only for record keeping of the investigator)

Name (not necessary) _____

Intercollegiate athletic programs you coach _____

_____

School _____

AIAW Region # _____

Please return this scale to the coordinator of your women's intercollegiate athletic program by April 24, 1972.

Post Card Reminder

May 9, 1972

Dear

Just a reminder to return the attitude scales from your women coaches as soon as possible. Perhaps you have already put them in the mail. I realize that fourth class mail can take an extra long time.

Thank you for your cooperation with this study.

Sincerely,

Becky Sisley
Ed.D. Candidate
UNC-Greensboro

APPENDIX E

SCORECARD AND SCORES ON COMPLETED SCALES

Attitude Scale Scorecard

1.	6.	11.	16.	21.
5.0 a.	2.2 a.	1.0 a.	3.0 a.	4.1 a.
3.8 b.	4.6 b.	4.3 b.	1.6 b.	1.0 b.
3.1 c.	3.9 c.	4.7 c.	3.8 c.	2.9 c.
1.3 d.	1.8 d.	2.4 d.	1.6 d.	4.4 d.
1.7 e.	1.8 e.	2.2 e.	5.0 e.	2.4 e.
2.	**7.**	**12.**	**17.**	**22.**
3.8 a.	4.3 a.	2.0 a.	1.1 a.	5.0 a.
4.6 b.	1.0 b.	3.2 b.	2.7 b.	3.1 b.
1.1 c.	2.6 c.	1.2 c.	4.6 c.	1.2 c.
1.6 d.	4.3 d.	3.7 d.	3.9 d.	3.2 d.
3.8 e.	2.7 e.	4.8 e.	3.0 e.	1.8 e.
3.	**8.**	**13.**	**18.**	**23.**
1.3 a.	1.0 a.	4.4 a.	1.0 a.	2.4 a.
2.7 b.	2.1 b.	1.6 b.	4.8 b.	1.0 b.
1.3 c.	3.2 c.	3.3 c.	2.9 c.	2.6 c.
4.3 d.	4.9 d.	3.4 d.	2.4 d.	5.0 d.
4.2 e.	3.3 e.	1.8 e.	3.7 e.	3.9 e.
4.	**9.**	**14.**	**19.**	**24.**
2.3 a.	1.3 a.	4.0 a.	1.4 a.	4.1 a.
1.0 b.	2.6 b.	4.1 b.	4.0 b.	4.1 b.
2.8 c.	3.3 c.	2.3 c.	2.7 c.	4.8 c.
4.6 d.	3.1 d.	1.2 d.	4.9 d.	1.0 d.
4.3 e.	4.8 e.	1.2 e.	1.1 e.	2.1 e.
5.	**10.**	**15.**	**20.**	**25.**
1.0 a.	1.7 a.	2.3 a.	2.1 a.	1.1 a.
3.2 b.	4.4 b.	5.0 b.	5.0 b.	4.2 b.
5.0 c.	3.9 c.	1.1 c.	1.6 c.	2.0 c.
3.2 d.	3.9 d.	2.3 d.	2.2 d.	4.3 d.
2.4 e.	1.1 e.	3.6 e.	3.3 e.	2.6 e.

Attitude Scale Scorecard (continued)

26.	31.	36.	41.	46.
1.9 a.	1.7 a.	2.4 a.	1.3 a.	4.1 a.
2.9 b.	2.3 b.	2.9 b.	1.2 b.	4.4 b.
1.3 c.	2.0 c.	1.0 c.	5.0 c.	1.0 c.
4.4 d.	4.8 d.	4.0 d.	2.8 d.	2.6 d.
3.8 e.	4.0 e.	4.4 e.	3.6 e.	3.0 e.
27.	**32.**	**37.**	**42.**	**47.**
2.0 a.	1.1 a.	3.7 a.	1.0 a.	1.3 a.
1.2 b.	1.9 b.	1.9 b.	4.1 b.	4.4 b.
3.3 c.	4.1 c.	1.0 c.	2.6 c.	2.0 c.
4.1 d.	1.6 d.	3.9 d.	5.0 d.	1.0 d.
4.7 e.	4.8 e.	4.7 e.	2.2 e.	4.1 e.
28.	**33.**	**38.**	**43.**	**48.**
2.0 a.	4.4 a.	2.1 a.	3.9 a.	3.1 a.
4.7 b.	1.1 b.	1.0 b.	3.4 b.	2.9 b.
4.2 c.	2.4 c.	3.4 c.	1.0 c.	1.0 c.
3.3 d.	3.8 d.	3.0 d.	2.3 d.	2.7 d.
1.1 e.	4.4 e.	5.0 e.	4.7 e.	5.0 e.
29.	**34.**	**39.**	**44.**	**49.**
1.9 a.	1.2 a.	2.8 a.	2.9 a.	1.1 a.
1.3 b.	1.9 b.	1.3 b.	3.8 b.	2.8 b.
3.2 c.	3.4 c.	4.4 c.	3.0 c.	2.3 c.
4.6 d.	3.8 d.	1.3 d.	4.3 d.	3.6 d.
4.0 e.	4.4 e.	4.7 e.	1.0 e.	5.0 e.
30.	**35.**	**40.**	**45.**	**50.**
1.1 a.	4.1 a.	4.0 a.	3.8 a.	1.2 a.
3.4 b.	2.0 b.	1.8 b.	5.0 b.	3.1 b.
5.0 c.	3.6 c.	1.3 c.	1.0 c.	3.4 c.
3.8 d.	1.0 d.	4.9 d.	2.9 d.	1.8 d.
2.0 e.	2.1 e.	1.3 e.	1.8 e.	5.0 e.

Table 9

Scores of Completed Scales: Odd Items, Even Items and Total Scores

Respondent Number	Odd Items	Even Items	Total Score	Respondent Number	Odd Items	Even Items	Total Score
1	114.5	110.4	224.9	31	107.9	111.1	219.0
2	107.5	108.0	215.5	32	110.7	110.5	221.2
3	108.6	114.2	222.8	33	109.6	108.3	217.9
4	111.8	107.6	219.4	34	107.6	107.3	214.9
5	110.3	111.0	221.3	35	103.5	105.9	209.4
6	105.7	110.4	216.1	36	105.1	110.2	215.3
7	110.7	110.4	221.1	37	113.5	111.0	224.5
8	111.1	111.3	222.4	38	108.5	112.6	221.1
9	99.8	96.4	196.2	39	106.7	107.8	214.5
10	112.4	106.1	218.5	40	110.3	106.9	217.2
11	107.6	112.5	220.1	41	106.2	110.8	217.0
12	106.8	112.2	219.0	42	108.7	109.5	218.2
13	115.3	104.3	219.6	43	106.3	111.9	218.2
14	110.8	107.4	218.2	44	113.0	113.3	226.3
15	112.5	110.6	223.1	45	111.4	104.5	215.9
16	102.8	113.1	215.9	46	103.0	111.1	214.1
17	109.6	113.3	222.9	47	114.4	113.4	217.8
18	111.3	112.6	223.9	48	110.0	111.4	221.4
19	112.9	111.0	223.9	49	109.6	110.3	219.9
20	111.4	111.3	222.7	50	114.1	110.3	224.4
21	113.4	111.1	224.5	51	108.8	109.8	218.6
22	109.8	107.4	217.2	52	114.1	110.3	224.4
23	112.0	107.9	219.9	53	109.0	106.8	215.8
24	114.8	111.9	226.7	54	105.0	110.3	215.3
25	112.6	110.0	222.6	55	107.5	110.6	218.1
26	109.0	107.3	216.3	56	106.2	109.2	215.4
27	110.7	115.3	226.0	57	112.8	108.7	221.5
28	109.8	107.4	217.2	58	112.4	113.3	225.7
29	111.7	112.3	224.0	59	109.3	115.0	214.3
30	106.4	106.7	213.1	60	110.9	110.2	221.1

Table 9 (continued)

Respondent Number	Odd Items	Even Items	Total Score	Respondent Number	Odd Items	Even Items	Total Score
61	108.3	110.9	219.2	91	110.8	111.8	222.6
62	108.5	106.9	215.4	92	104.5	105.9	210.4
63	107.1	107.7	214.8	93	111.0	111.6	222.6
64	112.6	111.1	223.7	94	110.3	112.3	222.6
65	103.8	111.2	215.0	95	108.8	109.4	218.2
66	111.7	113.0	224.7	96	104.5	108.0	212.5
67	109.1	111.6	220.7	97	109.8	106.4	216.2
68	106.0	110.3	216.3	98	113.7	114.0	227.7
69	111.1	111.0	222.1	99	109.5	110.8	220.3
70	108.3	103.6	211.9	100	106.7	106.1	212.8
71	108.9	111.7	220.6	101	111.9	114.3	226.2
72	108.8	109.3	218.1	102	105.5	109.2	214.7
73	102.7	104.3	207.0	103	113.0	114.0	217.0
74	112.0	112.8	224.8	104	111.1	111.9	223.0
75	107.6	108.3	215.9	105	109.2	108.3	217.5
76	103.2	109.7	212.9	106	114.0	113.9	227.9
77	107.5	113.3	220.8	107	106.5	104.5	221.0
78	104.1	110.6	214.7	108	111.6	112.0	223.6
79	112.8	111.9	224.7	109	112.3	113.9	226.2
80	111.9	113.8	225.7	110	111.1	108.4	219.5
81	104.7	106.8	221.5	111	103.8	113.2	217.0
82	111.5	116.2	227.7	112	110.6	116.9	227.5
83	109.4	114.3	224.7	113	105.7	104.2	209.9
84	111.6	110.5	222.1	114	109.0	113.1	222.1
85	111.3	112.2	223.5	115	107.7	108.9	216.6
86	116.4	113.5	229.9	116	108.4	106.1	214.5
87	103.0	100.9	203.9	117	112.2	111.6	223.8
88	110.4	111.8	224.2	118	110.8	110.1	220.9
89	107.7	112.7	220.4	119	108.5	104.4	212.9
90	103.6	105.3	208.9	120	115.1	115.7	230.6

Table 9 (continued)

Respondent Number	Odd Items	Even Items	Total Score	Respondent Number	Odd Items	Even Items	Total Score
121	106.1	112.7	218.8	151	107.1	108.0	215.1
122	108.3	113.2	221.5	152	107.8	105.5	213.3
123	115.3	114.4	229.7	153	110.2	116.7	226.9
124	112.4	114.9	227.3	154	109.5	110.6	220.1
125	105.2	110.3	215.5	155	107.1	110.9	218.0
126	105.0	108.5	213.5	156	96.1	105.0	201.1
127	101.2	103.3	204.5	157	104.1	108.8	212.9
128	109.1	111.6	220.7	158	110.4	114.8	225.2
129	107.2	107.4	214.6	159	109.7	112.9	222.6
130	107.6	110.0	217.6	160	107.3	110.6	217.9
131	106.3	110.1	216.4	161	106.7	108.4	215.1
132	106.4	98.9	205.3	162	100.6	101.4	202.0
133	109.5	106.8	216.3	163	111.8	106.2	218.0
134	112.9	105.5	218.4				
135	113.2	109.1	212.3				
136	108.6	112.3	220.9				
137	105.2	112.3	217.5				
138	109.3	108.9	218.2				
139	105.4	111.0	216.4				
140	112.0	110.2	212.2				
141	109.6	109.6	219.2				
142	107.0	107.8	214.8				
143	110.8	112.6	223.4				
144	112.6	115.7	228.3				
145	110.6	108.4	219.0				
146	112.4	114.3	226.7				
147	114.4	110.5	224.9				
148	106.9	112.0	218.9				
149	107.2	114.1	221.3				
150	107.3	113.4	220.7				