

CRITERIA FOR GRADING WOMEN STUDENTS IN THE REQUIRED
PROGRAM OF PHYSICAL EDUCATION AT THE
COLLEGE/UNIVERSITY LEVEL

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CHAPTER I

INTRODUCTION

Every new era has a name or label attached to it to define or describe its area of emphasis or concentration. This decade, heralded as the "Great Society," has focused its attention on education, which is actually the main pursuit of the "Great Society."¹ This nation is now concerned with educating the public, both young and old, since "in a free society an effective citizenry must be educated to the level demanded by that society."² In line with this belief, former President Lyndon Johnson committed this nation to the endeavor that no youth, however disadvantaged, who genuinely desires to further his education, will fall victim to the dilemmas which may accompany his socio-economical status in life as long as he is able to benefit by this education.³ One agency in the Federal Government, the Census Bureau, predicted in January, 1968, that:

The college age group--18 to 21 years--will number about 14.4 million in 1970 and 17.1 million in

¹Lawrence Dennis, ed., "Higher Education and the Great Society," The Educational Record, XLV (Fall, 1964), 434.

²Francis Keppel, "Opportunity for Higher Education," Higher Education, XX (April, 1964), 10.

³Dennis, op. cit., p. 433.

1980, as compared with the 12.9 million in this age group in 1966, there will be an increase of nearly one-third between 1966 and 1980.¹

With the impact of such emphasis on education at the national level, there can be no doubt of the pressures placed on personnel in institutions of higher learning to produce qualified teachers to staff the additional facilities required on such a large scale and at such an accelerated rate. Up to now, economics have played a big role in stabilizing the number of college applicants to one with which institutions could cope. Another means by which enrollments have been controlled has been through the use of entrance examinations.

In keeping with the predicted enrollment figures and the commitment of this nation, there may be some modifications in the present selective admission policies of institutions of higher learning. In this way, the opportunity will be available, but the desire for education must be accompanied by ability. Although President Johnson stated that the Government will build twenty-five to thirty new public community colleges every year,² the enrollments will far exceed the facilities available. Therefore, requirements for entrance to colleges, as well as displayed ability to

¹American Council on Education, "Census Bureau Sees 17.1 Million College Age Group in 1980," Higher Education and National Affairs, Vol. 17, No. 1 (January 5, 1968), p. 5.

²"President Johnson's Remarks Upon Signing the Higher Education Facilities," Higher Education, XX (January-February, 1964), 3.

benefit from this education, will necessitate some planned program of selection and retention of the college population. Ultimately, the problem of control will be one of evaluation or measurement of the student's ability to meet requirements, standards, objectives, et cetera which will, in turn, be reported by means of grades until a better method is devised.

The origin of grading developed from the need to assess achievement. From this beginning, grading assumed a further purpose--incentive to behavior. Society values grading by using it as a tool for bestowing honors, admission to further training, and consideration for employment opportunities.¹ Grades assume an important dimension in the administrative aspect of education. Further, the American system of higher education has been described as "an elaborate system of bookkeeping, and the most important number in the system is the single-index grade."²

In taking a critical look at the present system of reporting grades, it appears logical to consider some of the acceptable definitions of grading. According to Grace, grades mean three things:

- (1) that a student is as proficient as he can be with the subject matter, (2) that the student competes

¹Robert C. Birney, "The Effect of Grades on Students," Journal of Higher Education, XXXV (February, 1964), 96.

²Francis Stroup, "Of the Single-Index Grade," American Association of University Professors Bulletin, XL (Winter, 1954-1955), 643.

successfully against others, and (3) that the student has reached a standard of achievement as set by society for some occupation or profession.¹

He states that trouble arises when the only meaning applied to grading is competition with others in the class.² Travers and Gronlund, however, contend that "marks are expected to measure the extent to which the goals of the course are achieved or the progress made by the student in relation to his initial standing."³ The definition regarding student achievement as the primary goal of grading seems to be the general consensus of opinion among many authors.^{4,5,6,7} On the other hand, Haagen states that "education has made some progress when we recognize that grades are judgements of a

¹Harry A. Grace, "The Meaning of Grades," Peabody Journal of Education, XXXVII (September, 1959), 94.

²Ibid.

³Robert M. W. Travers and Norman E. Gronlund, "The Meaning of Marks," Journal of Higher Education, XXI (October, 1950), 374.

⁴Taylor Dodson, "Grading and Reporting Pupil Achievement," Bulletin of the National Association of Secondary School Principals, XXXVIII (February, 1954), 70.

⁵Ralph B. Spence, The Improvement of College Marking Systems (New York: Bureau of Publications, Teacher's College, Columbia University, 1927), p. 64.

⁶Robert L. Thorndike and Elizabeth Hagen, Measurement and Evaluation in Psychology and Education (New York: John Wiley and Sons, Inc., 1957), pp. 475-76.

⁷Otto J. M. Smith, "Grading Without Guesswork," Educational and Psychological Measurement, XIII (Autumn, 1953), 367.

student's performance, not absolute measures of accomplishment."¹

Among the problems regarding grading which presently confront administrators is the frequent concern with differences in grading standards from department to department, or even course to course, in the various schools and colleges of a university.² Berdie attributes this misunderstanding regarding the various interpretation of grades to the fact that:

College instructors and other teachers assign course grades on the basis of absolute achievement and relative standing. The first requires a determination of what is superior, satisfactory, and poor achievement; the second depends largely on the characteristics of the student population.³

Although fifty years of study have not produced a commonly acceptable system of grading, research has provided some limitations and suggested some directions for procedures in marking. There is hope that with wider agreement on the goals of instruction and the purpose of marking, the development of such a system will emerge.⁴

¹Hess Haagen, "The Origins of a Grade," Journal of Higher Education, XXXV (February, 1964), 90.

²O. F. Anderhalter, "Developing Uniform Departmental Grading Standards in a University," Journal of Experimental Education, XXXI (Winter, 1962), 210.

³Ralph F. Berdie, "A Solution to the Problem of Distributing Course Grades," School and Society, XCIII (October, 1965), 373.

⁴John E. Dobbin and Ann Z. Smith, "Marks and Marking Systems," Encyclopedia of Educational Research (3rd ed. rev.; New York: Macmillan Company, 1960), p. 789.

The problems of grading, perhaps, are more keenly felt among administrators and teachers in the area of physical education, since, for decades, this field has struggled to gain the prestige of equal merit with other departments in institutions of higher learning.¹ Secondary problems are very much in evidence. Among these are the disagreements regarding the meaning of the grade, methods of reporting, factors to consider and others dealing with the many facets of grading. Concerning these, Jackson states that surveys indicate there are great variations in marking practices in college physical education departments, and that "confusion seems to be the distinguishing characteristic."² To labor this point further, McCraw contends that "there are few issues on which there are such divergent views or so much concern and interest."³ In reflecting upon the problem of grading in physical education, Barrow and McGee comment that:

If physical educators are to wear the cloak of academic respectability with academic rank and credit, they must give evidence of good program planning, good organization for instruction, good

¹H. J. McCormick, "A Grading Procedure for the Physical Education Activity Program," Journal of Health, Physical Education and Recreation, XVIII (December, 1947), 716.

²Edward L. Jackson, "The Improvement of Marking in College Physical Education," The Physical Educator, XIV (December, 1957), 140.

³Lynn W. McCraw, "Principles and Practices for Assigning Grades in Physical Education," Journal of Health, Physical Education and Recreation, XXXV (February, 1964), 24.

teaching, efficient evaluation, and an acceptable system of reporting student achievement and progress.¹

An examination of the definitions of grading in physical education reveals a great divergence of viewpoints and philosophies. These, however, can generally be divided into two main schools of thought as expressed by Jensen:

Grades can be assigned on an absolute or a relative basis. An absolute grade is assigned solely on the basis of achievement without regard for potential, while a relative grade is assigned on achievement in reference to potentiality.²

Despite the different schools of thought, there appears to be a general concensus of opinion between the two that grades should be based on the attainment of the objectives of the course, as they would apply to the different viewpoints.^{3,4,5,6,7}

¹Harold M. Barrow and Rosemary McGee, A Practical Approach to Measurement in Physical Education (Philadelphia: Lea and Febiger, 1964), p. 436.

²Clayne Jensen, "Improve Your Marking System in Physical Education," The Physical Educator, XIX (October, 1962), 97.

³Charles A. Bucher, Administration of School Health and Physical Education Programs (St. Louis: The C. V. Mosby Company, 1955), p. 326.

⁴John F. Bovard, Frederick W. Cozens, and Patricia E. Hagman, Tests and Measurements in Physical Education (Philadelphia: W. B. Saunders Company, 1949), p. 7.

⁵Delbert Oberteuffer, Physical Education (New York: Harper and Brothers, 1956), p. 439.

⁶William F. Gustafson, "A Look at Evaluative Criteria in Physical Education," The Physical Educator, XX (December, 1963), 172.

⁷Donald K. Mathews, Measurement in Physical Education (Philadelphia: W. B. Saunders Company, 1958), p. 322.

Oberteuffer, however, in citing one of the arguments against the granting of grades in physical education, stated that many educators believe that:

In physical education, with its multiple objectives, it is mathematically impossible to equate the objectives in fair relationship for all students; therefore, any grade made up of fractional representation of the different objectives will be unsatisfactory.¹

Regardless of the philosophy concerning the meaning of grades, there remains the question of the actual method of grading to be implemented. In reporting on the Conference on College Grading Systems, where fifty-four institutions were represented, Downey observed that faculty in forty-six institutions gave letter grades in all subject matter areas while faculty in forty-three of these schools converted them to quality points and eleven granted pluses and minuses. Three gave letter grades converted to numerical grades, whereas, five gave only numerical grades. Three gave no special grade symbols, two gave no grades except when needed for retention and probation, and one did not report grades to students until after graduation.²

Some of the common methods for reporting marks in physical education are: (1) credit or non-credit, (2) pass or fail, (3) satisfactory or unsatisfactory, (4) numerical

¹Oberteuffer, op. cit., p. 439.

²Marjorie Downey, "Variations in College Grading Systems," Journal of Higher Education, XXXV (February, 1964), 99.

grades, and (5) letter grades.¹ The methods used in reporting grades should conform to that which is employed in other subject areas in that particular institution; however, the system of grading generally reflects the basic beliefs and philosophy of the grader.² This can easily be observed by reviewing the variety of elements which are often recommended for consideration as constituents of grades. According to Willgoose, the factors which might be included in determining a grade in physical education are: (1) knowledge, (2) social competency and attitudes, (3) posture, (4) attendance, (5) uniform, (6) cleanliness, and (7) skill.³ Bovard, Cozens and Hagman include: (1) skill, (2) knowledge, (3) social development, and (4) accomplishment of any other specific objective established for the course or unit.⁴ The four general factors which Moriarty lists are: (1) potential ability, (2) achievement, (3) attitude, and (4) knowledge.⁵ Broer lists the factors which are sometimes included in the final grade as: (1) skill, (2) knowledge, (3) attitude,

¹Carl E. Willgoose, Evaluation in Health Education and Physical Education (New York: McGraw-Hill Book Company, 1961), pp. 337-38.

²Barrow and McGee, op. cit., p. 437.

³Willgoose, op. cit., p. 340.

⁴Bovard, Cozens and Hagman, op. cit., p. 7.

⁵Mary J. Moriarty, "How Shall We Grade Them?" Journal of Health, Physical Education and Recreation, XXV (January, 1954), 55.

(4) sportsmanship, (5) effort, (6) social adjustment, (7) dress, (8) attendance, and (9) showering.¹ Still another source of conflict arises in trying to determine the exact weight which should be assigned to each factor included as an integral component of a grade. La Porte, for example, recommends twenty-five per cent on performance skills, twenty-five per cent on knowledge, twenty-five per cent on social attitudes, and twenty-five per cent on posture and bearing.² On the other hand, McCraw seems less rigid in his assignment of weights to factors by proposing a range in the weighting of the components. He allows five to twenty-five per cent of the final grade to be based on attitude, twenty to thirty-five per cent on skill, twenty to thirty-five per cent on physical fitness, five to twenty-five per cent on knowledge, and five to twenty-five per cent on behavior.³

Many components have been offered as significant enough for inclusion in the overall grade. Some of these are concrete and can readily be evaluated, whereas, others are intangibles and, at best, would have to be assessed a

¹Marion R. Broer, "Are Our Physical Education Grades Fair?" Journal of Health, Physical Education and Recreation, XXX (March, 1959), 27.

²Ralph W. La Porte, The Physical Education Curriculum (6th ed. rev.; Los Angeles: College Book Store, 1955), p. 89.

³McCraw, op. cit., p. 25.

weight purely on a subjective basis. Is it possible, then, to arrive at a fair grade composed of factors evaluated both objectively and subjectively? Oberteuffer¹ agrees with McCraw's contention that "a variety of instruments, both subjective and objective should be used in the evaluating process."² There is considerable support,^{3,4,5,6} however, for Thorndike and Hagen's assertion that: "a grade that is based in unknown proportions upon competence, effort, attitude, and collateral skills is an uninterpretable and unuseable hodgepodge."⁷ Even though there is no standardized grading system in physical education, it has been granted that no quarrel need arise over any plan which is based on sound philosophy, so long as an effort has been made to conscientiously evaluate the attainment of course objectives, either objectively or subjectively.⁸

¹Oberteuffer, op. cit., p. 439.

²McCraw, op. cit., p. 24.

³John E. Nixon, Lance Flanagan, and Florence S. Frederickson, An Introduction to Physical Education (Philadelphia: W. B. Saunders Company, 1964), p. 232.

⁴Bovard, Cozens and Hagman, op. cit., p. 7.

⁵Bucher, op. cit., p. 327.

⁶W. Herbert Grigson, "The Physical Education Report Card," The Physical Educator, XVI (May, 1959), 57.

⁷Thorndike and Hagen, op. cit., p. 475.

⁸Nixon, Flanagan and Frederickson, op. cit., p. 233.

Logically, it would seem practical to consider some of the principles for grading which have been expounded. Semantics seems to be the greatest divergence. The investigator favors Bolmeier's verbiage, however, since it reflects a more general form which would offer greater flexibility in designing grading systems than presently exists. He offers the following ten principles as guidelines for the best assurance of a satisfactory marking and reporting system:

1. The marking and reporting system should be in harmony with the philosophy of education held by the school for which the reporting system is to be used.
2. The marking and reporting system should be designed and utilized primarily for the purpose of benefiting the pupil rather than the teacher.
3. The marking and reporting system should be developed democratically with the cooperative participation of the person concerned.
4. The marking and reporting system should be sufficiently analytical to be meaningful and informative to pupil, parents and counselors.
5. The number and nature of the factors to be marked should bear a relationship to objectives which are considered germane to the course.
6. Each factor on the appraisal report should be marked with symbols which are immediately meaningful to all persons who have occasion to review the report.
7. The frequency of preparing reports and submitting them to the homes should be determined on the basis of relative values.
8. The manner in which the appraisal reports are submitted to the parents should be determined by the relative importance of economy and the assurance that they reach their intended destination.
9. The appraisal reports may be used to compute whatever final marks are required but not to revive the antiquated principle of competition.
10. The marking and reporting system should be evaluated continuously and modified, when deemed desirable, in accordance with the same democratic principles by which it was originally designed.¹

¹E. C. Bolmeier, "Principles Pertaining to Marking and Reporting Pupil Progress," *School Review*, LIX (January, 1951), 15-24.

More specifically, Thorndike and Hagen, in asserting that "the grade should represent as pure a measure of competence in a field as can be prepared,"¹ propose four steps to ascertain competence:

1. Define the knowledges and skills that constitute competence in a field and decide what weight should be given to each.
2. Decide what type of evidence will be accepted as evidence of this competence, determine what effective weight should be given to each component, and handle the weighting of raw scores so that the desired weighting is in fact achieved.
3. Reach a negotiated agreement on the statistical meaning of the grading symbols in terms of percentiles of a defined group or groups.
4. Work out procedures for adapting the definition to small or atypical class groups.²

Certain trends in grading have, during the course of this investigator's research, come into focus. Of these, the most widely accepted is the trend toward a preference for descriptive reporting in all subject matter areas rather than the numerical or alphabetical symbols.^{3,4,5}

The University of Utah, in 1960, conducted a study which indicated that, of the fifty-seven universities surveyed, only eleven had made any recent changes in their grading practices. Furthermore, at that time only one was considering any changes.⁶

¹Thorndike and Hagen, op. cit., p. 489.

²Ibid.

³Barrow and McGee, op. cit., p. 450.

⁴Jackson, op. cit., p. 141.

⁵William Bruce Cameron, "A Deliberate Radicalness," Journal of Higher Education, XXXII (March, 1961), 155.

⁶Downey, op. cit., pp. 99-100.

The use of grades as a motivational instrument has been questioned and studied. Murstein,¹ in 1965, reported on a study of the relationship of grades perceived, grades believed to be deserved, and actual grades received in four sections of an educational psychology course at Louisiana State University. His findings indicate that almost no student perceives of himself as a "poor" or even "mediocre" student deserving a grade of "C" or lower. Therefore, Murstein believes that grades as positive forces in motivation are negligible. Mannello,² in 1962, conducted a study at Hofstra College of seventy-one students enrolled in a course entitled Teaching in the Elementary School. Grades were not received on tests, reports, or assignments, although a final mark at the end of the semester was to be reported to the administration. His findings revealed that: (1) less cheating took place, and (2) students felt less tension in connection with class tests, and maintained both the quantity and quality of their academic performance. Although experiments have been conducted in which marks are not received by the students, grades will continue to be a necessary function in colleges and universities unless, as Thorndike and Hagen recommend, "more comprehensive examinations or such

¹Bernard I. Murstein, "The Relationship of Grade Expectations and Grades Believed to be Deserved to Actual Grades Received," *Journal of Experimental Education*, XXXIII (Summer, 1965), 357-62.

²George Mannello, "College Teaching Without Grades," *Journal of Higher Education*, XXXV (June, 1964), 328-34.

standardized appraisals as the Graduate Record Examination come more into general use."¹

Fulton observes that very few institutions have studied the extent to which their record systems are serving those objectives of general education which they have professed important.² Moreover, the entire educational process is organized around the system of credits, which exert a profound effect upon all that is included in the academic curriculum of the school.³ Since grading is an established custom in the educational realm of this country, it is necessary that physical educators utilize some method of reporting progress or status of students. Yet, according to Grigson, physical education "of all school subjects (except perhaps music) . . . has the poorest method of measurement."⁴

Although the foregoing material should amply demonstrate a need for the present investigation, it should be pointed out that the controversies which exist among authorities concerning grading in physical education are all serious conflicts of opinion. There is no doubt that a teacher could select a particular authority and adopt his

¹Thorndike and Hagen, op. cit., p. 489.

²Margaret J. Fulton, "Relation of Record Systems to Goals of General Education," School and Society, LXXVI (November, 1952), 34.

³Jessie Feiring Williams, Principles of Physical Education (Philadelphia: W. B. Saunders Company, 1959), p. 320.

⁴Grigson, op. cit., p. 57.

suggestions concerning all of the facets of grading. Furthermore, additional authorities could be found to support these views. The need would still exist, however, for a meeting of the minds between administrators and physical educators to arrive at a common agreement with regard to those problems of grading which prevail in physical education. The desirable outcome would be a sound philosophy of grading which would satisfy the objectives of education while bringing physical education into its proper perspective in the educational field.

The investigator became interested in the problem of grading as it concerned the required physical education program for women on the college or university level first as a student and more vitally as a teacher viewing the problem of grading as an inevitable and necessary practice. The necessity of satisfying administrative regulations concerning grading, conforming to personal standards, and at the same time remaining equitable toward the students represented serious conflicts to this investigator.

Statement of the Problem

The problem of this investigation was to develop and administer an opinionnaire to a Jury of Experts composed of outstanding authorities in the field of physical education and a panel of Academic Deans regarding theories of grading women students in the required physical education program in selected institutions of higher learning in the United States.

Based on a comparison of these data, the investigator proposed to establish general criteria for grading women in required physical education classes in institutions of higher learning.

Definitions and/or Explanation of Terms

To promote a clear understanding of the problem, the following definitions and/or explanations of terms were established for this inquiry:

- A. Grading: meaningful marks representing a given level of accomplishment in a course. These marks may encompass skill, knowledge, attitude, attendance, daily work, et cetera.
- B. Activity courses: laboratory courses in the required physical education program in higher education which involve the actual practice of rules, theory, form, or movement and/or skill techniques.
- C. Required program: the physical education program designed for the college or university student whose major sequence is not in Health, Physical Education and/or Recreation.
- D. Evaluation: the process of ascertaining or judging the value or amount of something by careful appraisal.¹

¹Carter V. Good, ed., Dictionary of Education (2nd ed. rev.; New York: McGraw-Hill Book Company, 1959), p. 209.

- E. Educational measurement: a broad term for the general study and practice of testing, scaling, and appraisal of aspects of the educational process for which measures are available and of the individuals undergoing the educational process.¹
- F. Criteria: a standard, norm, or judgment selected as a basis for quantitative and/or qualitative comparison.²
- G. Jury of Experts: a selected group of authorities in the field of physical education in the United States.
- H. Panel of Academic Deans: a group of Academic Deans from selected colleges and universities in the United States, whose responsibilities include grading policies for the institution.

Limitations of the Study

This study was subject to the following limitations: (1) the selected authorities who participated as the jury of experts; (2) the selected group of Academic Deans who participated in the study; (3) the awarding of grades or marks in activity classes for women students in the required physical education program in institutions of higher learning;

¹Ibid., p. 338.

²Ibid., p. 146.

(4) data which resulted from the administration of the opinionnaire; and (5) the total number of responses received from the Academic Deans and the Jury of Experts.

Purposes of the Study

The general purpose of this study was to develop and administer an opinionnaire to a Jury of Experts composed of outstanding authorities in physical education and a Panel of Academic Deans, the results of which constituted the basis for establishing criteria for grading women students in the required physical education program in institutions of higher learning. Specific purposes underlying the study were:

- A. To develop an opinionnaire regarding grading in physical education based upon the objectives of higher education and physical education on the college and university level.
- B. To ascertain current theories and opinions regarding grading in physical education by obtaining answers to the following questions from two sources: (1) a Jury of Experts composed of outstanding authorities in the field of physical education and (2) a Panel of Academic Deans.
 - 1. Does physical education have a definite place in the curriculum of higher education?
 - 2. How should physical education be offered in terms of credit or non-credit or elective or required?

3. Should physical education grades be included in computing the overall college grade point average?
4. Should the method of reporting physical education grades to the registrar be the same as that used by other components within an institution?
5. What is the best method of reporting grades for physical education activity classes to the registrar?
6. Should departmental grading systems be imposed?
7. Should there be any variation in the grading practices when men students and women students are enrolled in the same coeducational class?
8. Should variations exist in the grading practices for a class that has various skill levels within that class?
9. Should self-evaluations by students be considered in determining the final grade in physical education?
10. Should the factors considered in determining the final grade in physical education be based on the objectives of the course?
11. Should the weight of the factors considered in the final grade in physical education correspond with the value the teacher places on each of the objectives of the course?

12. With respect to factors used for determining grades:

- a. What factors should be included in determining the final grade:
 - (1) in a team sport class
 - (2) in an individual or dual activity class
 - (3) in an aquatic class
 - (4) in a dance class
 - (5) in a movement fundamentals class
 - (6) in an adapted physical education class
- b. How much weight should be granted each factor considered in the final grade?
- c. How should these factors be evaluated?

Survey of Previous Studies

A survey of related literature revealed that this inquiry was not identical in purpose or scope with any previous investigation. A review of previous studies which have similarities, however, was of assistance to the investigator in the development of this study.

Halladay,¹ in 1948, conducted a survey of marking practices employed in physical education activity courses for men in selected colleges and universities. One hundred

¹D. W. Halladay, "Marking in College Physical Education Activities," Research Quarterly, XIX (October, 1948), 178-84.

and ten questionnaires from representative groups of accredited colleges and universities throughout the nation yielded the findings for his study. The sampling of the institutions was planned to include: (1) a group of twenty-five colleges and universities in California; (2) one state university, one state teacher's college or equivalent, and one private college or university from each remaining state; (3) eighteen Negro institutions; and (4) the Universities of Alaska and Puerto Rico, the United States Military Academy and the United States Naval Academy. Several states did not have enough accredited institutions for sampling in each category; therefore, additional schools from the District of Columbia, Illinois, New York, Ohio, and Pennsylvania were included to complete the one hundred and ten institutions which served as the sampling for the study.

Halladay was concerned with four aspects of grading: (1) the method of reporting marks for physical education, (2) the weight accorded to factors considered in determining marks, (3) the types of tests used in physical education activity courses, and (4) the criteria by which the student was marked. On the basis of the findings, Halladay concluded that the institutions sampled varied to such an extent in systems of marking that it was impossible to determine a basis for a reasonable evaluation of the work of students engaged in physical education activities.

This study and that conducted by Halladay were similar in that both were concerned with grading procedures in physical education activity courses in colleges and universities. The studies were similar, too, in that both employed a type of questionnaire as the instrument for collecting data. The studies differed, however, in that Halladay's study was based upon the grading practices employed by a representative group of teachers in colleges and universities throughout the United States, while this study concentrated on the grading philosophies of a representative group of authorities in the field of physical education and a panel of Academic Deans in the United States. Further differences existed in that this study considered a wider range of aspects than Halladay included, and the results constituted the basis for establishing criteria for grading women in the required physical education program, whereas, Halladay had no basis for evaluating the results of his study which was concerned with grading men students only.

Fox,¹ in 1956, as chairman of the National Association of Physical Education for College Women Committee on Research and Studies, reported the results of a survey conducted by the Committee on grading practices in the college service or required programs for women students throughout the United States. The Committee was concerned with:

¹Margaret G. Fox, "Grading Practices in the Women's College Service Program," Research Quarterly, XXVII (March, 1956), 121-22.

(1) the system of marking, (2) department grading systems, (3) coeducational grading practices, (4) the least important item in determining grades, (5) items tested to determine final grades, and (6) physical education grades used in computing college averages.

Results of the study revealed that: (1) the Eastern District showed the greatest deviation from national practice in using physical education marks in computing overall college averages; (2) only forty-five per cent of the colleges used a departmental grading scheme, with the Eastern District more apt to use such a system; (3) men and women were more apt to be graded on the same standards than on different ones; (4) attendance, attitude, effort, costume, daily work, improvement, knowledge of rules, knowledge of techniques, and skill were factors considered in the final grade; (5) correct costume and daily work were considered the least important items in the final grade; and (6) knowledge of rules and techniques were considered the most important items in the final grade and were actually tested, whereas, skill was not apt to be tested.

This study and that reported by Fox were similar in that both were concerned with grading procedures in physical education activity courses for women students in colleges and universities. The studies were similar, too, in that both employed a type of questionnaire as the instrument for collecting data. They differed, however, in that the study

reported by Fox was based upon the grading practices employed by a representative group of teachers in colleges and universities throughout the United States, and this study concentrated on the grading philosophies of a representative group of authorities in the field of physical education and a panel of Academic Deans in the United States. Further differences existed in that this study culminated in establishing criteria for grading women in required physical education in higher education, whereas, the aforementioned study was limited to reporting the results of a survey on grading practices currently being employed by physical education teachers in institutions of higher learning.

Shaw and Rogers,¹ in 1946, conducted a survey to ascertain the status of physical education in colleges and universities in the United States. Findings from 246 questionnaires from representative groups of college and universities served as the basis for the study. The sampling of the institutions included: (1) forty-two state controlled universities; (2) forty-six privately controlled universities; (3) thirty-nine state controlled colleges; (4) seventy-four privately controlled colleges; and (5) forty-five state controlled Teachers' Colleges. The purpose of

¹John H. Shaw and Millard R. Rogers, "The Status of Required Physical Education in Colleges and Universities of the United States," Research Quarterly, XVII (March, 1946), 2-9.

this survey was threefold: (1) to determine the physical education requirement in colleges and universities in the United States; (2) to discover to what extent grades in physical education were counted in determining honors by semesters and at graduation; and (3) to discover present practices in excusing students from physical education requirements. On the basis of the findings, Shaw and Rogers made the following conclusions: (1) approximately 96 per cent of the schools surveyed required physical education; (2) full academic credit for each semester of required physical education was granted in 69 per cent of the schools surveyed, 5 per cent gave some credit, and 24 per cent gave no credit; (3) physical education grades were included in computing honors by semesters in 50 per cent of the sampling; and 49 per cent included them at graduation; (4) private schools were much more conservative in granting credit and counting physical education grades towards honors both by semesters and at graduation than were state-controlled schools; (5) some schools were inconsistent in their practices in regard to giving credit and honors for physical education; and (6) there were no major differences between the groups of schools studied in regard to their practices of granting excuses from physical education.

This study and that conducted by Shaw and Rogers were similar in that both were concerned with the granting

of credit in physical education and whether it was used in computing honors. The studies were similar, too, in that both employed a type of questionnaire as the instrument for collecting data. The studies differed, however, in that the study conducted by Shaw and Rogers was based on practices of granting credit in physical education in colleges and universities throughout the United States, while this study concentrated on the grading philosophies of a representative group of authorities in the field of physical education and a panel of Academic Deans in the United States. Further differences existed in that this study encompassed a wider range of aspects than that which Shaw and Rogers included, and the results constituted the basis for establishing general criteria for grading women in the required physical education program, whereas, Shaw and Rogers limited their survey to determining the status of required physical education in colleges and universities throughout the country.

Greene,¹ in 1954, conducted a survey of colleges accredited by the North Central Association of Colleges and Secondary Schools to ascertain the extent to which physical education was required for graduation. Two hundred and fifty-three questionnaires from college administrative officers served as the basis for the study. The district

¹Mack M. Greene, "Physical Education as a College Graduation Requirement," Journal of Health, Physical Education and Recreation, XXVI (December, 1955), 25-26.

sampled included nineteen states, and seventy-six per cent of the institutions contacted responded to the survey. Greene was concerned with: (1) whether physical education was a requirement for graduation; (2) if not, why not; (3) whether the credit received in required physical education was included in the grade point of honor graduates; and (4) if not, why not. Results of the study revealed that: (1) over 94 per cent of the institutions responded that physical education was a requirement for graduation; (2) the main reason for not requiring physical education for graduation was the substitution of a military requirement; (3) one-tenth of the colleges surveyed did not assign college credit to required physical education, and the physical education requirement was satisfied by one hundred and forty-four clock hours over a two year period; (4) physical education requirements ranged from one to eight semester hours, with four hours the most frequent regulation; (5) seven out of ten indicated the use of the same type of grading system as was used in all other areas; (6) two-thirds of the responding institutions indicated they placed the same valuation on required physical education grades as they do on other academic courses, and the other one-third indicated that they considered physical education as below the "academic value" of the other course offerings; and (7) the majority of college administrators responding recognized required physical

education as an integral and constructive part of their curriculum.

This study and that conducted by Greene were similar in that both were concerned with the opinions held by administrators concerning the place and value of the physical education grade. The studies were similar, too, in that both were concerned with credit in physical education being required for graduation and the inclusion of this grade in the computation for honor graduates. Similarity also existed in that both employed a type of questionnaire as the instrument for collecting data. The studies differed, however, in that the study conducted by Greene was based on the physical education grade as a requirement for graduation as surveyed in one of the six districts in the United States, and this study concentrated on the grading philosophies of a representative group of authorities in the field of physical education and a panel of Academic Deans from all six districts of the United States. Further differences existed in that this study considered a wider range of aspects than the inquiry conducted by Greene, and the results constituted the basis for establishing general criteria for grading women in the required physical education program, whereas, Greene limited his survey to determining the status of physical education as a requirement for graduation.

Summary

In the foregoing chapter, the investigator presented a brief review of the changing role of education in this country, and the problem of grading as an administrative necessity vital to the educational system. Definitions of grading were presented and revealed that divergent viewpoints on this topic existed among educators. Student achievement as the main goal of grading seemed to have general support, whereas, in some instances, competition, attainment of specific goals, and measurement of improvement were considered the purpose of assigning a mark. Although methods for reporting pupil progress in physical education have been devised, grading is an issue on which physical educators have not concurred. The differences were generally classified into two schools of thought: (1) grades representing an absolute measure of achievement, or (2) grades representing a relative measure of achievement based on potential. A common agreement was found between the two philosophies in the basis for assigning grades on the attainment of course objectives.

A review of the methods of reporting grades indicated the use of letter grades, numerical grades, credit or non-credit, pass or fail, and satisfactory or unsatisfactory. Of these methods, letter grades were most commonly used.

A survey of the literature revealed a variety of factors which are used to determine the final grade. A cumulative list of those factors used includes: skill, knowledge, attitude, social competency, posture, attendance, uniform, cleanliness, potential ability, sportsmanship, effort, and showering. Although recommendations for the weighting of the above mentioned factors were reviewed, the investigator found it extremely difficult to obtain a convergence of opinions on the weights to be assigned to each factor included. The question of evaluation with regard to the factors included in a grade resulted in equally conflicting answers, since some authorities believe that only objective means of evaluation are desirable, and still others believe that both objective and subjective means are imperative to the fairness of the person being graded and the attainment of the goals of the course.

Ten principles were listed as guidelines for the best assurance toward a satisfactory marking and reporting system. These were underscored by four procedures for devising an equitable method of evaluating competence in a particular area.

A trend toward the elimination of alphabetical or numerical methods of reporting grades was noted, with a preference for more descriptive reporting. Of significance, however, was a study revealing lack of activity on the part

of personnel in colleges and universities with regard to undertaking any changes in their methods of reporting grades.

The investigator believes that the need for this study was revealed and well-substantiated. A statement of the problem was presented. Included, also, in this chapter were definitions and/or explanation of terms, limitations of the study, purposes of the study and a survey of related literature.

In the following chapter, the procedures utilized in the development of the present study are presented.

CHAPTER II

PROCEDURES FOLLOWED IN THE DEVELOPMENT OF
THE STUDY

Introduction

The questionable evaluation of students' learning, having been transformed into a symbol called a "grade" at the end of a designated number of class hours, heretofore, has represented the total measurement and evaluation of those students' ability to achieve certain preconceived course objectives. This evaluation, which, at times, has been labeled a "necessary evil," is necessary, yet need not always be feared as evil nor upheld as unquestionably just. Concerns over the nature of such evaluations have presented sufficient disturbances to this investigator to constitute the necessary challenge which has led to the development of the present study.

As the basic research design of this study, opinions regarding grading women students in required programs of physical education activity classes on the college and/or university level were solicited from a Jury of Experts in the field of physical education. Recognizing the responsibility and/or necessity of compliance to administrative policies

regarding grading procedures, it was deemed desirable to compare the expressed opinions of a Jury of Experts with opinions expressed by a Panel of Academic Deans. The results of the comparison led to the establishment of criteria for grading women participating in the required physical education program in higher education.

Definite procedures were set forth as sequential in the development of this study in an effort to insure continuity. This sequence of procedures, which served as a guide throughout the study, was: (1) selection of the sources of data, (2) selection of the Jury of Experts, (3) selection of the Panel of Academic Deans, (4) development of the opinionnaire, and (5) tabulation of the data obtained. These procedures are enumerated in the succeeding pages of this chapter.

Sources of Data

The collection of data utilized in this study were from human and documentary sources. The human data represented three sources: (1) a Jury of Experts, (2) a Panel of Academic Deans, and (3) members of the investigator's dissertation committee. The documentary sources of data included books, pamphlets, periodicals, research studies, theses, other printed material which pertained to this study, and the opinionnaire developed by the investigator.

Selection of the Jury of Experts

Representing the Jury of Experts in this study were a selected group of authorities in the field of physical education throughout the United States. Criteria, therefore, were established for selecting members of this group, which included: (1) authorities in the area of tests and measurements; (2) recognized leaders in the development of principles and philosophy of physical education; (3) authors of publications in the area of tests and measurements, principles or philosophy; (4) past or present active members of the National Association for Physical Education of College Women; (5) Chairmen of Physical Education Departments for Women; (6) teachers, recognized as outstanding, in the area of sports, dance or aquatics; (7) past presidents of the American Association for Health, Physical Education and Recreation; and (8) approval of the list of prospective jury members by the members of the dissertation committee.

To insure a national sampling of authorities in physical education, as well as one that would be representative of the entire country, the investigator hoped to obtain 144 individuals to serve as the Jury of Experts. To achieve this, twenty-four members were solicited from each of the six districts created by the American Association for Health, Physical Education and Recreation, namely: (1) Eastern District, (2) Southern District, (3) Central District,

(4) Western District, (5) Southwestern District, and (6) Midwest District.

A list of qualifying prospects was compiled by districts. Various sources were consulted from which these prospective names were obtained, including: (1) the published membership lists of the National Association for Physical Education of College Women,^{1,2} which identified Department Heads, National and District Associations' Officers, committee members and representatives, and active members of the Association; (2) contributors of articles to the 1966-1967 Guide Books of the Division for Girls and Women's Sports of the American Association for Health, Physical Education and Recreation; (3) authors of dance education publications and articles; (4) authors of books and articles pertaining to tests and measurements, principles and philosophy of physical education; and (5) the 1965-1966 Roster of Officers and Committees of the American Association for Health, Physical Education and Recreation,³ which listed the Board of Directors, Division and Section Officers, National

¹Barbara C. Hall, ed., National Association for Physical Education of College Women Biennial Record 1963-1965 (Washington, D. C.: American Association for Health, Physical Education and Recreation, 1966), pp. 1-12, 157-92.

²National Association for Physical Education of College Women, Membership List 1960-1961, Published membership list as of June 30, 1961, pp. 1-21.

³"1965-1966 Roster Officers and Committees," Journal of Health, Physical Education and Recreation, XXXVI (October, 1965), 33-48.

Staff, District Officers, Committee members, State Presidents, Publications Directors, Membership Directors, and State Directors of Health, Physical Education and Recreation.

Copies of the compiled list were reproduced and distributed to the investigator's dissertation committee requesting additions and/or deletions of names which met the established criteria. The final list contained 161 names. A breakdown of this total revealed that there were twenty-seven names each from the Southwest, Eastern, and Southern Districts. Both the Northwest District and the Central District had twenty-six names, whereas, there were twenty-eight from the Midwest District. The entire group on the approved list were solicited to serve on the Jury of Experts. This action seemed imperative as the investigator was striving to obtain a total of 144 responses. An alphabetic list, by Districts, of the participating Jury of Experts may be found in the Appendix. The number solicited and the percentage of respondents from each District are illustrated in Table 1, on the following page.

Selection of the Panel of Academic Deans

A group of Academic Deans or Vice Presidents in Charge of Academic Affairs, whose responsibilities included grading policies in selected colleges and universities throughout the United States, composed the Panel of Academic Deans used in this study. Each of the six regions, as

TABLE 1
NUMBER AND PERCENTAGE OF RESPONSES FROM
SOLICITED JURY MEMBERS BY DISTRICTS

Districts	Number Solicited	Number of Responses	Percentage of Responses
Southwest	27	19	70.4
Eastern	27	19	70.4
Southern	27	22	81.5
Northwest	26	20	76.9
Central	26	14	53.8
Midwest	28	23	82.1
Total	161	117	72.6*

*Mean average.

divided by regional accrediting agencies recognized by the National Commission on Accrediting,¹ was allotted twenty-four representatives in the formulation of this Panel. These regional accrediting agencies are the: (1) Middle States Association of Colleges and Secondary Schools, (2) New England Association of Colleges and Secondary Schools, (3) North Central Association of Colleges and Secondary Schools, (4) Northwest Association of Secondary and Higher Schools,

¹Allan M. Cartten, ed., American Universities and Colleges (Washington, D. C.: American Council on Education, 1964), pp. vii-viii.

(5) Southern Association of Colleges and Schools, and (6) Western Association of Schools and Colleges.

For random sampling purposes, the criteria established for the selection of the institutions from which to solicit the Academic Deans to serve on the Panel were based on the enrollment and classification of the institutions listed by the aforementioned accrediting agencies. Institutions were first categorized according to their enrollment by colleges and/or universities with: (1) less than 1,000 students, (2) between 1,000 and 2,000 students, (3) between 2,000 and 5,000 students, (4) between 5,000 and 10,000 students, and (5) over 10,000 students. Secondly, each institution was categorized according to its classification as to: (1) coeducational private institutions, which were not supported by state or local governments; (2) coeducational state supported institutions; and (3) private or state institutions designated for women students only.

A check list form was prepared to indicate the enrollment and classification of each accredited institution listed in American Universities and Colleges.¹ A breakdown of these totals, according to districts, is shown on Table 2.

In the interest of better sampling, an equal number of private and public institutions was selected from each of the six districts, since there were more private schools

¹Ibid., pp. 1283-1304.

TABLE 2

CLASSIFICATION AND ENROLLMENT DISTRIBUTION OF ACCREDITED
AMERICAN COLLEGES AND UNIVERSITIES BY DISTRICTS

Enrollment	District												Total	
	Northwest		New England		Middle States		Western		Southern		North Central			
	Pub	Pvt	Pub	Pvt	Pub	Pvt	Pub	Pvt	Pub	Pvt	Pub	Pvt	Pub	Pvt
Women Only	0	1	1	24	1	49	0	9	7	30	1	54	10	167
Under 1,000 Students	3	15	7	9	7	19	3	11	7	74	14	92	41	220
1,000-2,000 Students	5	8	7	9	10	26	1	14	15	28	25	54	63	139
2,000-5,000 Students	9	3	9	5	25	22	6	5	37	16	44	19	130	70
5,000-10,000 Students	3	0	1	5	0	16	5	1	18	5	23	11	50	38
Over 10,000	4	1	1	3	10	10	6	1	10	1	22	5	53	21
Total	24	28	26	55	53	142	21	41	94	154	129	235	347	655

Note: Pub = Public; Pvt = Private

with small enrollments and more public schools with large enrollments. Two private and two public schools, therefore, were selected from each of the five enrollment categories and from institutions for women only.

Those institutions having less than 100 men students enrolled were classified as women's schools. Those schools having less than 100 women enrollees were classified as men's schools, and, therefore, not considered in this study.

Two separate records were maintained: (1) the devised form listing all of the schools, and (2) an index card file of all the institutions including enrollment and classification information. The card file was divided into private and public institution classifications, then alphabetized within student population categories. Stratified random sampling was achieved by taking the number of institutions in each group and dividing by the number desired from that category. The answer indicated the spacing between selections. The representative group of Academic Deans solicited and respondents from each district are shown in Table 3.

Having completed the selection of schools from which the Academic Deans were to be solicited, addresses were secured. Inasmuch as a list of Academic Deans was not available, letters were addressed to the Presidents of the selected institutions, requesting them to refer the opinionnaire to the Academic Dean or Vice President in Charge of Academic Affairs.

TABLE 3

NUMBER AND PERCENTAGE OF RESPONSES FROM
SOLICITED ACADEMIC DEANS BY DISTRICTS

Districts	Number Solicited	Number of Responses	Percentage of Responses
Northwest	24	20	83.3
New England	24	21	87.0
Middle States	24	18	75.5
Western	24	16	66.7
Southern	24	19	79.2
North Central	24	18	75.5
Total	144	112	77.7*

*Mean average

A copy of this letter and a list of the colleges and universities represented by the participating administrators may be found in the Appendix.

Development of the Opinionnaire

A variety of methods for collecting data were studied for consideration as the most appropriate for use in this particular study. The desired number of responses from such a large geographical area narrowed the choices available to the investigator to the questionnaire-type instrument as the most feasible for collecting data.

Many authorities in the field of educational research laud the questionnaire as a valuable instrument in that it is an impersonal method of obtaining data from a great number of individuals, scattered throughout an expansive territory, whose judgments and information are of expert calibre.^{1,2} Economy of implementation was an important factor, which was also an advantage in its favor.

Good's appraisal of the questionnaire regards it as an instrument which:

. . . extends the investigator's powers and techniques of observation by reminding the respondent of each item, helping insure response to the same item from all respondents, and tending to standardize and objectify the observations of different enumerators (by singling out particular aspects of the situation and by specifying the units and terminology for describing the observations).³

A questionnaire brings to the investigator answers which may not be available through documentary sources, such as opinions and/or judgments. Since this investigator sought opinions held by the respondents, rather than factual information or statements of actual practice, it was decided to call the instrument for collecting data an opinionnaire instead of a questionnaire.

¹Leonard V. Koos, The Questionnaire in Education (New York: Macmillan Company, 1928), pp. 147-51.

²Harold H. Abelson, The Art of Educational Research (New York: World Book Company, 1933), p. 72.

³Carter V. Good, Essentials of Educational Research (New York: Appleton-Century-Crofts, 1966), pp. 213-14.

In the construction of this opinionnaire, check-lists and questions requiring brief responses were used, whenever possible, in an attempt to increase objectivity, by providing greater accuracy in tabulating responses. This attempt for greater objectivity, combined with the arrangement of questions in logical sequence to promote more accurate responses, enhanced the reliability of the instrument.

Each section of this opinionnaire was constructed to include explicit directions for responding. Where deemed necessary, definitions of terms were provided, and only those questions considered pertinent to the study were included.

Copies of the completed opinionnaire were distributed to members of the investigator's dissertation committee for a trial run. Their evaluation, suggestions and/or criticisms were solicited for incorporation into a second draft. The recommended changes were made and resubmitted to the committee members for their approval. Having been approved, contingent upon some minor basic changes, the opinionnaire was prepared in its final form.

Three sections constituted the completed opinionnaire. Section I contained general statements reflecting a point of view regarding grading in physical education. The respondents were instructed to indicate their agreement or disagreement with each statement. They were to select, also, from a list of phrases, those representative of the reason for their response to the statement. If none of the reasons

stated seemed appropriate, a space was provided for additional concepts the respondents might wish to convey.

Section II contained a chart listing twelve factors which might constitute a final grade and six types of activity courses. The respondents were requested to indicate by percentages the weight of those factors they would include in determining the final grade for each type of course. An additional column was provided to be checked if the weight did not vary according to the type of course.

In Section III, ten factors were listed which might be included in determining the final grade in a physical education activity course. The respondents were requested to briefly explain how each factor should be evaluated or give their reason for not including a factor in the grade.

A space termed "General Comments" was provided for the respondents to make additional statements which more clearly reflected their philosophy of grading than the opinionnaire possibly indicated. It was anticipated that only a small percentage of the respondents would find this necessary.

An opinionnaire, along with an explanatory letter stating the purposes of the study and requesting the respondents' cooperation, was mailed to each of the persons selected to participate in this study. A copy of these may be found in the Appendix. A stamped, self-addressed envelope was included for the respondents' convenience in replying.

Treatment of the Data

In order to keep a check-list of those opinionnaires returned and those needing follow-up letters, it seemed imperative to code each one using a letter to indicate the district represented and a number to designate the school. The investigator also believed it necessary to distinguish between those opinionnaires sent to Academic Deans and the ones mailed to the Jury of Experts in order to know the number responding from each group. To make this differentiation, the letters AD or J were placed next to the letter designating the different districts.

Each addressee received an explanatory letter, as the cover page on the opinionnaire, requesting that it be completed and returned within thirty days, if he agreed to participate in the study. At the end of this period, a total of 110 Jury members and seventy-two Academic Deans had returned the completed opinionnaire. A total of eighteen Academic Deans and seven solicited Jury members responded negatively. It was deemed necessary to mail follow-up letters to those Academic Deans who did not respond in an effort to obtain a higher percentage of returns. The deadline for responding was extended an additional thirty days from the date of this second letter, which may be found in the Appendix. At the end of this period, an additional twenty-two had responded bringing the total of Academic Deans participating to ninety-four, which represents a 75 per cent positive return as

compared to the 71 per cent positive return from the Jury of Experts. Table 4 provides the reader with a summary of the solicitation and response of the Jury of Experts and the Panel of Academic Deans.

TABLE 4
NUMBER, PER CENT, AND TYPE OF RESPONSES RECEIVED
FROM SOLICITED JURY OF EXPERTS AND PANEL
OF ACADEMIC DEANS

Classified Response	Jury of Experts		Panel of Academic Deans	
	Number	Per Cent	Number	Per Cent
Solicited	161		144	
No Response	44	27	32	22
Responded	117	73	112	78
Negative	7	4	18	13
Positive	110	71*	94	75*

*Percentage based on the total number solicited less the negative responses of individuals who reported they did not wish to participate in the study.

Although Good and Scates advocate securing a one hundred per cent return from questionnaires, subsequent research reveals the mean percentages of responses from various studies to be significantly less than that recommended, citing the following:

170 masters' theses at Indiana State Teachers College, 71.74 per cent; 204 doctoral dissertations at Teachers

College, Columbia University, 70.65 per cent; and 59 research studies reported in the Journal of Educational Research, 80.71 per cent.¹

Since Sections I and II of the opinionnaire lent themselves to IBM tabulations, the investigator solicited the services of a consultant from the Computing Center at Southern Methodist University in Dallas, Texas, for the proper procedures to follow for computer tabulation. Accordingly, permission was secured to tabulate this section of the study through the use of cards punched for IBM computer. Sections I and II were subsequently coded and the IBM cards properly punched, indicating the responses received. The frequency tabulations of these two sections were converted into percentages of responses for each answer. It was decided to treat the first section statistically through subjecting the data to the z test, thereby demonstrating the significance of the difference of the percentages obtained from the two sample groups. The reader is referred to Dornbusch and Schmid² for a detailed description of the computation procedures utilized by this technique.

In the tabulation of Section I, two separate records for each statement were established for: (1) comments recorded in the space marked "other," and (2) unsolicited

¹Carter V. Good and Douglas E. Scates, Methods of Research (New York: Appleton-Century-Crofts, Inc., 1954), pp. 626-27.

²Sanford M. Dornbusch and Calvin F. Schmid, A Primer of Social Statistics (New York: McGraw-Hill Book Company, Inc., 1955), pp. 149-50.

qualifying endings which some respondents inserted into the phrases offered in the opinionnaire as descriptive of the reason for their particular answer. These records were maintained for the Jury of Experts and the Panel of Academic Deans, alike, although kept separately.

Section II required the tabulation of responses which had been indicated on the chart found on page six of the opinionnaire. The responses, therefore, were tabulated on master score sheets which were prepared for each individual column designated for each type of activity course. Separate master score sheets were used to tabulate the responses from the Jury of Experts and the Panel of Academic Deans. The procedure used for the treatment of the data collected on this section included finding the range of the percentage weightings for each factor by the type of activity course for both groups of respondents. From these percentage ranges, the mean and standard deviations were computed and the results were subjected to the t test, which indicated any significant difference between means of two independent groups. Procedures entailed in the calculation of these statistical techniques may be found comprehensively described by Koenker.¹ In an effort to more graphically present the varied weightings of each factor and where the clusterings had been achieved by each of the two groups responding, the

¹Robert H. Koenker, Simplified Statistics for Students in Education and Psychology (Bloomington, Illinois: McKnight and McKnight Publishing Company, 1961), pp. 12-17, 86-87.

results were tabulated in five percentage ranges: (1) 0-15 per cent, (2) 16-30 per cent, (3) 31-45 per cent, (4) 46-60 per cent, and (5) 61 per cent and over. These ranges then were converted into percentages.

In Section III, the respondents were to state briefly how they believed each factor listed should be evaluated. A card was prepared to record the responses to each factor, listing key words used by the respondents. Positive responses stating techniques of evaluating a factor were listed on the left side of the card, while reasons for not including a factor in grading were posted on the right. Separate tabulations of each factor were maintained for the Jury of Experts and the Panel of Academic Deans. This section did not lend itself to exhaustive statistical treatment; however, the frequencies were converted to percentages.

The additional comments were divided according to general areas and a cumulative record of them was maintained. The sole purpose of this record was to provide the investigator with these comments for possible consideration in the final feat of this study, the establishment of a philosophy for grading women students in the required program of physical education in institutions of higher learning.

Summary

Chapter II has presented a review of the procedures which the investigator utilized in the development of the study. Basically, these procedures were categorized into

three major areas: (1) sources for collecting data, which involved the selection of the Jury of Experts and the Panel of Academic Deans; (2) the development of an opinionnaire; and (3) the treatment of the data.

Three sources for collecting data were utilized by the investigator. These included published materials, a Jury of Experts representing authorities in the field of physical education, and a Panel of Academic Deans representing public and private institutions of all sizes from throughout the country. As qualitative and quantitative measures, criteria were established for the selection of these sources. A definite scheme was formulated for sampling, which insured its adequacy in terms of representing all areas of the country. The techniques devised for the selection of these two sources were approved by the dissertation committee, thus solicitation ensued.

A questionnaire was considered the most appropriate method for collecting data. The particular instrument developed, however, was called an opinionnaire, as most descriptive of its purpose: that of eliciting opinions. While constructing the opinionnaire, all conceivable means were employed by the investigator in the efforts to insure objectivity, reliability, validity, and brevity, as well as clarity of meaning. As part of these efforts, trial runs were conducted to test participants' reactions to the instrument, instructions, wording, et cetera.

The approved opinionnaire contained four major sections: (1) general statements concerning grading to which the respondents were to reply positively or negatively, as well as indicate the reasons for their answer; (2) a chart for weighing the factors included in the final grade; (3) a space for eliciting brief statements regarding techniques for evaluating each factor included in the final grade assigned; and (4) a space for additional concepts. An explanatory letter stating the purposes of the study accompanied each opinionnaire.

The methods for treating all the data obtained varied within the different sections of the opinionnaire and were described as to tabulation of responses received. Coding was used on each opinionnaire for follow-up purposes. After responses to the second letter were in, a seventy-five per cent return from the Academic Deans and a seventy-one per cent return from the Jury of Experts were obtained.

An analysis and interpretation of the data obtained in this study are presented in the succeeding Chapter.

CHAPTER III

ANALYSIS AND INTERPRETATION OF THE DATA

This chapter will be devoted exclusively to the analysis and interpretation of the data collected in this study. The presentation of the material will be divided into sections coinciding with those in the opinionnaire used to collect the data. The reader is reminded that a copy of the opinionnaire may be found in the Appendix.

Part I of the opinionnaire requested that the respondent agree or disagree with each of eleven statements of belief regarding physical education and grading. A compilation of the respondents' answers is presented in Table 5, which denotes the percentage of respondents agreeing or disagreeing, the z-score, and the level of significance, where appropriate.

On examination of Table 5, it should be noted that a significant difference in percentages was revealed at the .01 level of confidence only in the following three instances: (1) to Statement three, "The physical education grade should be included in computing the overall college/university grade point average," slightly over half of the Academic Deans, 58.511 per cent, agreed, whereas, practically all of the Jury members agreed, 91.818 per cent; (2) to Statement four, "The

TABLE 5

SIGNIFICANCE OF THE DIFFERENCE BETWEEN PERCENTAGE OF THE JURY OF EXPERTS AND THE PANEL OF ACADEMIC DEANS AGREEING TO THE ELEVEN STATEMENTS IN PART I OF THE OPINIONNAIRE

Statement Number	Jury of Experts				Academic Deans				z-Value	
	Agree		Disagree		Agree		Disagree		<u>z</u>	P
	#	%	#	%	#	%	#	%		
1	108	98.182	2	1.818	90	95.745	4	4.255	1.026	
2	109	99.091	1	0.909	90	95.745	4	4.255	1.540	
3	101	91.818	9	8.182	55	58.511	39	41.489	5.590	.01
4	102	92.727	8	7.273	61	64.894	33	35.106	4.944	.01
5	88	80.000	22	20.000	53	56.383	41	43.617	3.6393	.01
6	69	62.727	41	37.273	69	73.404	25	26.596	1.624	
7	44	40.000	66	60.000	35	37.234	59	62.766	0.404	
8	83	75.455	27	24.545	61	64.894	33	35.106	1.650	
9	30	27.273	80	72.727	15	15.957	79	84.043	1.942	
10	105	95.455	5	4.545	86	91.489	8	8.511	1.155	
11	95	86.364	15	13.636	74	78.723	20	21.277	1.442	

Note:

z-value required for significance at the .05 level = 1.960
z-value required for significance at the .01 level = 2.575

method of reporting physical education grades to the registrar (A, B, C; 1, 2, 3; or Pass/Fail) should be the same as that used by other components within an institution," the Jury of Experts agreed 92.727 per cent while the Academic Deans did so only 64.894 per cent; and (3) to Statement five, "The best method of reporting grades for physical education activity classes to the registrar is: Method 1--A, B, C, D, F or 1, 2, 3, 4, 5; or Method 2--Satisfactory/Unsatisfactory or Pass/Fail," over half of both groups checked the first method, however, 80 per cent of the Jury favored this method while only 56.383 per cent of the Academic Deans preferred this system. The reported significant differences, it should be noted, center around grading procedures more than the availability of physical education in the college/university curriculum or its place in the curriculum. Since the Jury of Experts and the Academic Deans were in general agreement on the remaining eight statements, it appears to the investigator that the major differences among the two reporting groups pertained to the questions of including the physical education grade as a point average in the overall grade, the method of reporting physical education grades to the registrar, and the best method of reporting the grades. It is interesting to note that in all but two instances over fifty per cent of the Jury and the Deans agreed with the general statements of belief regarding grading physical education activities. The two exceptions were Statements seven and

nine. To Statement seven--"There should be variations in the grading practices when men students and women students are enrolled in the same coeducational class (i.e., women students should not compete with men students for a grade)"--over 60 per cent of both groups expressed disagreement. Seventh--three per cent of the Jury and eighty-four per cent of the Deans disagreed with Statement nine--"Self-evaluation by students should be considered in determining the final grade in physical education." It also appears probable that the explanation for the differences which were apparent between the Jury and the Deans in this section possibly will be revealed in the succeeding section, where the respondents listed the reasons for their answers.

Under each statement in this section of the opinionnaire there were a number of phrases which might best describe the respondents' reason or reasons for their answer. Since it was permissible for each respondent to check more than one phrase as the reason for his agreement or disagreement with the statement in question, the number of respondents do not always coincide with the total number of respondents represented in the study. The z test was used to reveal any significant differences between the percentages of the two responding groups agreeing to the statement and the number, percentage and z value for the phrases under each statement is presented in the ensuing eleven tables.

Table 6, representing seven different phrases which might explain some differences in percentages between the responding groups regarding Statement one, "Physical Education has a definite place in the curriculum of higher education," reveals significant differences in per cents at the .05 and .01 levels of confidence respectively on the a and b phrases: (a) "the uniqueness of the objectives of physical education cannot be accomplished in any other department," and (b) "higher education should provide opportunities for students to gain knowledges and skills in all areas of learning which can contribute to a richer life." In considering the answers to these two statements, it is noteworthy that in neither instance was any percentage of disagreement revealed. Although there were significant differences between percentages revealed, all respondents reported agreement on the statements. A higher percentage of agreement was revealed on the b phrase by the Academic Deans than the Jury of Experts.

Except in one instance, phrase f, the number of respondents was few, and no significant differences were revealed. On phrase d, relative to physical education activities not being academically respectable in higher education, the percentages of agreement was 0 from each reporting group. Phrase f, relative to opportunities for college students to improve their physical fitness and learn recreational skills, received a percentage of 51.818 from the Jury of Experts and 39.362 from the Academic Deans, with no percentages of

TABLE 6

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 1
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree			
	#	%	#	%	#	%	#	%	<u>z</u>	P
a	68	61.818	0	0.000	45	47.872	0	0.000	1.9974	.05
b	97	88.182	0	0.000	69	73.404	0	0.000	2.7023	.01
c	3	2.727	0	0.000	1	1.064	0	0.000	0.8542	
d	0	0.000	0	0.000	0	0.000	1	1.064	0.0000	
e	2	1.818	0	0.000	1	1.064	0	0.000	0.4462	
f	57	51.818	0	0.000	37	39.362	0	0.000	1.7791	
g	10	9.091	2	1.818	5	5.319	1	1.064	1.0288	

Note:

z-value required for significance:

.05 = 1.960

.01 = 2.575

disagreement revealed in either instance. The most significant differences in per cents between the two reporting groups on the place of physical education as a definite part of the curriculum appear to center around the uniqueness of its

objectives and the provision of opportunities for learning knowledges and skills in all areas of learning which can contribute to a richer life.

Data in Table 7 reveal the per cent of the Jury of Experts and Academic Deans marking each phrase under Statement two, "Physical Education should be available to the general college/university student," as to how physical education should be offered. Agreement on the general statement as shown in Table 5 was high, with percentages of 99.091 and 95.745 respectively for the reporting groups. However, on five explanatory phrases of the general statement, significant differences were revealed in four instances relative to how physical education should be offered where it is available. On the a phrase 34.545 per cent of the Jury of Experts and 20.213 per cent of the Academic Deans reported favorably on offering the subject as an elective for credit. The difference between the two groups was significant at the .01 level when computed by the z test. Small percentages, 5.455 and 6.383 from the reporting groups respectively, favored offering physical education as an elective for no credit. The highest percentages of differences occurred on the c phrase where the subject would be offered as a requirement for credit, with 69.091 and 52.128 per cent shown for the two groups, respectively. When computed by the z test, a significant difference in per cents at the .05 level is revealed.

TABLE 7

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 2
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree			
	#	%	#	%	#	%	#	%	<u>z</u>	P
a	38	34.545	0	0.000	19	20.213	0	0.000	2.274	.01
b	6	5.455	0	0.000	6	6.383	2	2.128	0.280	
c	76	69.091	0	0.000	49	52.128	1	1.064	2.479	.05
d	5	4.545	0	0.000	22	23.404	1	1.064	3.962	.001
e	15	13.636	1	0.909	4	4.255	0	0.000	2.298	.05

Note:

z-value required for significance:

.05 = 1.960
.01 = 2.575
.001 = 3.291

The percentage of agreement by the Academic Deans, 23.404, was much higher than the Jury of Experts, 4.545, on the question of offering physical education as a requirement for no credit, which when computed revealed a significant difference in per cents at the .001 level of confidence. On "Other Suggestions," a significant difference of per cents at the

.05 level was revealed, with 24 opinions expressed by the Jury as compared to 4 by the Deans. The answers given by both groups were mainly justifying the reason for selecting the choice. Although agreeing on the general statement, the two reporting groups are found to have significant differences in percentages as to how physical education should be offered where available.

Two significant differences are revealed in Table 8 as to the phrases marked as the reason or reasons why the respondents agreed or disagreed to Statement three, "The physical education grade should be included in computing the overall college/university grade point average." A significant difference in per cents was revealed at the .001 level, 76.364 and 34.043 per cent respectively, between the reporting groups on the b phrase, "Achievement in physical education is as important as prowess in other subjects in determining overall accomplishments in higher education." This difference indicates a less favorable attitude toward the values of physical education on the part of the Academic Deans than the Jury of Experts. Again, at the .001 level of confidence, a significant difference in per cents was revealed on the f phrase, "The grade point average should represent all courses in which the student has invested time and money," with the percentages of agreement from the reporting groups being 60.909 for the Jury of Experts and 31.915 for the Academic

TABLE 8

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 3
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree			
	#	%	#	%	#	%	#	%	<u>z</u>	P
a	11	10.000	1	0.909	7	7.447	2	2.128	0.640	
b	84	76.364	1	0.909	32	34.043	1	1.064	6.083	.001
c	31	28.182	1	0.909	24	25.532	2	2.128	0.425	
d	1	0.909	1	0.909	0	0.000	22	23.404	0.926	
e	3	2.727	1	0.909	0	0.000	2	2.128	1.613	
f	67	60.909	1	0.909	30	31.915	2	2.128	4.133	.001
g	2	1.818	5	4.545	1	1.064	20	21.277	0.446	
h	5	4.545	4	3.636	1	1.064	3	3.191	1.467	

Note:

z-value required for significance:

.05 = 1.960

.01 = 2.575

.001 = 3.291

Deans. No significant differences in per cents were revealed on the other explanatory phrases, and it appears that the main points of difference as to how the physical education grade should be computed in the overall grade point average centered around the attitudes toward the values accorded physical education and its inclusion in the grade point average.

Another phase of grading in physical education is presented in Table 9 relative to Statement four, "The method of reporting physical education grades to the registrar (A, B, C; 1, 2, 3; or Pass/Fail) should be the same as that used by other components within an institution." A significant difference in per cents, at the .001 level of confidence, was revealed between the two reporting groups on the b phrase, "the final mark can and should be reported in a standardized way throughout the institution," with the percentages of agreement being 82.727 for the Jury of Experts and 47.872 for the Academic Deans. In the "Other" suggestions offered by the respondents, a significant difference at the .05 level of confidence was revealed as to the number of suggestions offered by the two groups of respondents. Of the comments expressed by the groups in the "Other" space, the Deans disagreed with the general statement and the suggestions offered were for reporting Pass/Fail only. The Jury members using this space generally agreed with the overall statement and were suggesting other means of reporting the grade such as

TABLE 9

NUMBER, PERCENTAGE AND $\bar{z}$ -VALUE FOR EACH PHRASE IN STATEMENT 4
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				$\bar{z}$ -Value	
	Agree		Disagree		Agree		Disagree		$\bar{z}$	P
	#	%	#	%	#	%	#	%		
a	12	10.909	1	0.909	6	6.383	1	1.064	1.136	
b	91	82.727	2	1.818	45	47.872	3	3.191	5.264	.001
c	39	35.455	4	3.636	24	25.532	6	6.383	1.529	
d	4	3.636	4	3.636	1	1.064	21	22.340	1.184	
e	5	4.545	2	1.818	0	0.000	5	5.319	2.092	.05

Note:

$\bar{z}$ -value required for significance:

.05 = 1.960
.01 = 2.575
.001 = 3.291

narrative evaluations and use of two records. Once again the attitudes revealed by the Academic Deans appear to influence their opinions on the method of reporting the physical education grade in the same manner as other components within an institution.

As shown in Table 5 relative to Statement five, "The best method of reporting grades for physical education activity classes to the registrar is (1) A, B, C, D, F or 1, 2, 3, 4, 5; or (2) Satisfactory/Unsatisfactory or Pass/Fail," there was a significant difference in percentages at the .01 level of confidence between the two reporting groups. Data in Table 10 reveal a significant difference in per cents on two explanatory phrases, a and b. In the a phrase, 58.182 per cent of the Jury of Experts and 40.426 per cent of the Academic Deans agreed that students want to know the degree of their achievement. On the b phrase, 44.545 per cent and 28.723 per cent respectively, of the two reporting groups agreed on a system of grading in physical education wherein achievement would be included in order for comparisons with other subject areas. On both these phrases on grading, a significant difference at the .05 level of confidence was revealed. Major differences on this phase of grading appears to be centered around including achievement as a factor in the final mark assigned in grading.

Table 11 presents data on the explanatory phrases of Statement six, "A single grading system or uniform method for determining grades should be established within the women's physical education department and used by all staff members. (For example: The factors and weight of the factors considered in the final grade should be uniform for all activity

TABLE 10

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 5
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree		<u>z</u>	P
	#	%	#	%	#	%	#	%		
a	64	58.182	7	6.364	38	40.426	4	4.255	2.528	.05
b	49	44.545	4	3.636	27	28.723	4	4.255	2.329	.05
c	6	5.455	4	3.636	7	7.447	9	9.574	0.580	
d	0	0.000	8	7.273	2	2.128	12	12.766	1.537	
e	0	0.000	9	8.182	0	0.000	17	18.085	0.000	
f	3	2.727	4	3.636	1	1.064	4	4.255	0.854	
g	0	0.000	12	10.909	1	1.064	12	12.766	1.084	
h	4	3.636	4	3.636	1	1.064	9	9.574	1.184	

Note:

z-value required for significance:

.05 = 1.960

.01 = 2.575

.001 = 3.291

TABLE 11

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 6
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree			
	#	%	#	%	#	%	#	%	<u>z</u>	P
a	56	50.909	6	5.455	52	55.319	6	6.383	0.629	
b	43	39.091	4	3.636	30	31.915	6	6.383	1.065	
c	41	37.273	3	2.727	27	28.723	5	5.319	1.291	
d	2	1.818	11	10.000	0	0.000	11	11.702	1.313	
e	1	0.909	19	17.273	0	0.000	12	12.766	0.926	
f	11	10.000	2	1.818	11	11.702	5	5.319	0.390	
g	1	0.909	18	16.364	0	0.000	15	15.957	0.926	
h	1	0.909	11	10.000	4	4.255	9	9.574	1.540	

Note:

z-value required for significance:

.05 = 1.960

.01 = 2.575

.001 = 3.291

courses taught within the department.)" No significant differences in per cents between the two reporting groups on either the general statement or the eight explanatory phrases were revealed.

Table 12 presents data on the seven explanatory phrases under the general Statement seven, "There should be variations in the grading practices when men students and women students are enrolled in the same coeducational class. (I.e., women students should not compete with men students for a grade.)" The reader will recall that over 60 per cent of both respondent groups disagreed with Statement seven. No significant differences in per cents were revealed on a uniform grading scale, different grading scales for skill performance, grades reflecting attainment regardless of sex, uniform systems of grading, and variations in grading between written work and skill performance. The only significant difference in per cents was revealed on the c phrase, "skill tests should contain separate norms for men students and women students, but the weight or value of the items should be the same for both sexes." In neither instance, however, were the percentages high: 30.000 per cent and 14.894 per cent, respectively, for the two reporting groups. At the same time, this was the highest percentage of agreement reported by the Jury of Experts, while the highest percentage of agreement by the Academic Deans was on the f phrase

TABLE 12

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 7
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree			
	#	%	#	%	#	%	#	%	<u>z</u>	P
a	21	19.091	5	4.545	12	12.766	10	10.638	1.222	
b	21	19.091	12	10.909	14	14.894	12	12.766	0.792	
c	33	30.000	43	39.091	14	14.894	34	36.170	2.554	.05
d	10	9.091	17	15.455	7	7.447	20	21.277	0.423	
e	7	6.364	24	21.818	4	4.255	23	24.468	0.664	
f	28	25.455	23	20.909	16	17.021	22	23.404	1.459	
g	1	0.909	14	12.727	3	3.191	12	12.766	1.172	

Note:

z-value required for significance:

.05 = 1.960
.01 = 2.575
.001 = 3.291

relative to variations in grading between written work and skill performance. On the basis of the reported reasons, it appears to the investigator that there was a high degree of unanimity between the two reporting groups opposing variations in grading practices in physical education activity classes where coeducational.

Significant differences in per cents on some explanatory phrases between the two reporting groups are revealed in Table 13 on Statement eight, "There should be variations in the grading system in a class that has various skill levels within that class (i.e., students with beginning, intermediate, or advanced skills in one class)." On the general statement, as shown in Table 5, no significant differences of opinion were revealed. However, in three instances, e, f and "Other," significant differences were developed. On the e phrase, 42.727 per cent of the Jury of Experts and 25.532 per cent of the Academic Deans agreed that "improvement should be only one of the factors considered of students in the skill grade," a significant difference in per cents at the .05 level of confidence was revealed. Percentages of agreement were 25.455 and 10.638 respectively from the two reporting groups on the f phrase, "written examinations should be developed for each skill level represented in the class rather than a single test used for all skill levels." A significant difference at the .01 level of confidence was revealed on "Other" suggestions made by the two reporting groups.

TABLE 13

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 8
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree			
	#	%	#	%	#	%	#	%	<u>z</u>	P
a	50	45.455	7	6.364	31	32.979	9	9.574	1.815	
b	5	4.545	11	10.000	6	6.383	18	19.149	0.579	
c	33	30.000	7	6.364	23	24.468	9	9.574	0.882	
d	38	34.545	5	4.545	26	27.660	11	11.702	1.056	
e	47	42.727	13	11.818	24	25.532	10	10.638	2.570	.05
f	28	25.455	3	2.727	10	10.638	10	10.638	2.709	.01
g	13	11.818	7	6.364	1	1.064	9	9.574	3.028	.01

Note:

z-value required for significance:

.05 = 1.960

.01 = 2.575

.001 = 3.291

Of the ten Academic Deans and twenty Jury members using the "Other" space, most stated that the classes should be homogeneous in regard to skill level, regardless of whether they agreed or disagreed to the general statement. Two different answers by the Deans were: (1) that there should not be any grades, and (2) in most academic situations the standards are set and the student must meet them. The only "Other" statement by the Jury members not concerned with homogeneous classes was that any variations should reflect the same kind of variations as used in other college or university courses. It appears that the overall opinion, developed from the answers to the opinionnaire, indicate that there should be variations in the grading system in a class that has various skill levels within that class and that a student possessing a high level of skill upon entering an activity should not be expected to achieve the same level of improvement as a student entering the activity with little or no skill. In other words, there should be variations in the grading system for various skill levels represented in the class.

The reader is reminded that over 70 per cent of the Jury and the Deans disagreed with Statement nine, "Self-evaluation by students should be considered in determining the final grade in physical education." Table 14 depicts the reasons given by the respondents to this statement. Of the seven explanatory phrases, significant differences in per cents were revealed on two of these. On phrase b, 14.545

TABLE 14

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 9
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree		<u>z</u>	P
	#	%	#	%	#	%	#	%		
a	16	14.545	3	2.727	9	9.574	5	5.319	1.079	
b	16	14.545	14	12.727	4	4.255	6	6.383	2.463	.05
c	0	0.000	24	21.818	0	0.000	19	20.213	0.000	
d	2	1.818	4	3.636	1	1.064	5	5.319	0.446	
e	15	13.636	9	8.182	4	4.255	6	6.383	2.298	.05
f	9	8.182	62	56.364	3	3.191	47	50.000	1.510	
g	2	1.818	7	6.364	0	0.000	14	14.894	1.313	

Note:

z-value required for significance:

.05 = 1.960

.01 = 2.575

.001 = 3.291

per cent of the Jury of Experts and 4.255 per cent of the Academic Deans agreed on the phrase, "students should be able to determine whether they have accomplished the objectives of the course and to what degree." When this difference between percentages was computed by the z test, a significant difference in per cents was revealed at the .05 level of confidence. The percentage of disagreement on the question by the Academic Deans was higher than the percentage of agreement. On phrase e a significant difference in per cents at the .05 level of confidence was revealed on the question of "this system offers students the opportunity to compare their personal evaluation with teacher evaluation and vice versa." Again, the percentages of disagreement reported by the Academic Deans was greater than the percentages of agreement. Neither of the reporting groups agreed on the c phrase that students have a tendency to rate themselves either very high or very low. Percentages reported on these phrases, however, were very low, with the range from 14.545 to 0 from the Jury of Experts and from 9.574 to 0 from the Academic Deans. It appears to the investigator that these data indicate that the question of self-evaluation as a part of the grade does not have any significant degree of interest or support from either reporting group in this inquiry.

Table 15, relative to Statement ten, "The factors considered in determining the final grade in physical education

TABLE 15

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 10
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree			
	#	%	#	%	#	%	#	%	<u>z</u>	P
a	71	64.545	3	2.727	58	61.702	4	4.255	0.419	
b	68	61.818	3	2.727	46	48.936	4	4.255	1.847	
c	82	74.545	3	2.727	45	47.872	5	5.319	3.917	.001
d	8	7.273	3	2.727	4	4.255	5	5.319	0.913	
e	37	33.636	4	3.636	6	6.383	5	5.319	4.757	.001
f	10	9.091	4	3.636	0	0.000	4	4.255	2.997	.01
g	3	2.727	4	3.636	3	3.191	4	4.255	0.195	

Note:

z-value required for significance:

.05 = 1.960

.01 = 2.575

.001 = 3.291

should be based on the objectives of the course," revealed significant differences on three of the explanatory phrases. On the c phrase, 74.545 per cent of the Jury of Experts and 47.872 per cent of the Academic Deans agreed that "the grade should be reflective of the significant purposes of the course," representing a significant difference in per cents at the .001 level of confidence. Incidentally, these are the highest percentages reported by either group on the question. On phrase e, 33.636 and 6.383 per cent, respectively, of the two reporting groups agreed that "some objectives cannot be objectively measured." Again, a significant difference in per cents at the .001 level of confidence was revealed. On phrase f, "there is no justification for including intangible factors in determining the final grade even if they are included in stated course objectives," 9.091 per cent of the Jury agreed while none of the Deans agreed and 4.255 per cent disagreed, resulting in a difference significant at the .01 level of confidence. Although there were some significant differences in per cents revealed, these differences appear to be of degree only; the highest percentage of both reporting groups indicate that the grade should be related to the objectives of the course.

The data represented in Table 16 relative to Statement eleven, "The weight of the factors considered in the final grade in physical education should correspond with the value the teacher places on each of the objectives of the

TABLE 16

NUMBER, PERCENTAGE AND z-VALUE FOR EACH PHRASE IN STATEMENT 11
REPORTED BY THE JURY AND ACADEMIC DEANS AS DESCRIBING WHY
THEY AGREED OR DISAGREED TO THE STATEMENT

Phrase Letter	Jury of Experts				Academic Deans				<u>z</u> -Value	
	Agree		Disagree		Agree		Disagree			
	#	%	#	%	#	%	#	%	<u>z</u>	P
a	27	24.545	8	7.273	18	19.149	10	10.638	0.926	
b	23	20.909	10	9.091	12	12.766	9	9.574	1.537	
c	11	10.000	8	7.273	9	9.574	11	11.702	0.101	
d	79	71.818	6	5.455	50	53.191	9	9.574	2.750	.01
e	1	0.909	7	6.364	1	1.064	12	12.766	0.111	

Note:

z-value required for significance:

.05 = 1.960

.01 = 2.575

.001 = 3.291

course," revealed a significant difference in per cents in one instance on the explanatory phrases, that being the d phrase. In this instance, 71.818 per cent of the Jury of Experts and 53.191 per cent of the Academic Deans agreed that "the weight of the factors to be included in the final grade to correspond with the value of course objectives makes the

grade more reflective of the significant purposes of the course." Computed by the z test, a significant difference in per cents at the .01 level of confidence was revealed. No significant differences in per cents were revealed on the other factors and percentages were low--the range being from 0.909 to 24.545 for the July of Experts and from 1.064 to 19.149 for the Academic Deans. Regardless of the significant difference between the groups on the d phrase, it appears to the investigator that both groups indicated that the weight of the factors considered in the determination of the final grade should correspond with and reflect the value the teacher places on the objectives of the course.

Part II of the opinionnaire offered the respondents a chart listing twelve factors which might be considered as components of a grade in six types of physical education activity courses: (1) Team Sports, (2) Individual and Dual Sports, (3) Aquatics, (4) Dance, (5) Movement Fundamentals, and (6) Adaptives. The respondents were asked to indicate the factors which they considered should constitute the grade and the weight expressed as a percentage for the factor in each of the different activities. A column was provided for the respondents to indicate that there should be no differentiation in the weight of factors according to the type of activity.

The following twelve tables present the results obtained from the respondents' answers to this part of the

opinionnaire. Each table represents the data obtained by factors listed, and indicates the mean, standard deviation, and t-value of the difference between the means. A t-value that has a level of confidence of .05 or .01 indicates that there is a significant difference between the means of the two population groups which is not due to chance or accident. An average mean was calculated for each group and the grand mean of the means established by the Jury and the Deans was computed to arrive at the percentage of weight which should be accorded to each factor.

Table 17, representing the weight which would be allotted to Knowledge as a grading factor, reveals no significant difference between the two respondent groups. Both groups indicated means of percentages to be accorded to Knowledge ranging from the lower to the upper twenties, with only one exception. While little can be said regarding any significant findings in this chart, it appears that: (1) both groups weighted Movement Fundamentals slightly higher than the other five types of activities, (2) the Jury would allocate the lowest weight to Knowledge in Dance activities, and (3) although there was a slight variance of ten points between all of the activities, the average mean between the two groups of respondents did not vary by as much as one half of one per cent. The average mean for the Jury was 23.7667, while the Academic Deans averaged a mean of 23.9268, bringing

TABLE 17

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF KNOWLEDGE AS A FACTOR IN
GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		t	P
Team Sport	25.0652	10.4036	23.2173	16.5816	69	0.47866	
Individual/Dual Sport	23.9756	10.5471	20.8947	14.5381	60	0.80843	
Aquatic	20.9729	9.6183	20.5000	12.74755	53	0.12919	
Dance	18.6944	9.6575	21.7500	15.6624	52	0.70065	
Movement Fundamentals	26.4210	16.6664	27.6875	15.4584	54	0.26160	
Adaptive	23.7142	11.5352	23.7142	15.1017	49	0.00000	
No Difference by Type	27.5238	7.3847	29.7241	18.0170	71	0.61206	

*Means represent per cents expressed by respondents

Jury of Experts Average Mean = 23.7667

Panel of Academic Deans Average Mean = 23.9268

Grand Mean = 23.8467

the grand mean to 23.8467 per cent to be accorded to Knowledge as a factor in grading.

From Table 18, it may be observed that there are striking differences between the responding groups, with the most outstanding difference occurring where the respondents did not differentiate weight accorded to Skill by type of activity, but felt that all activities should be given the same weight for this factor. The mean yielded from the Jury was 42.0540 per cent as compared to the mean of the Deans which was 20.5925 per cent. The t -score obtained was 5.1303 which is significant at the .001 level of confidence. The mean percentage weight for Team Sports by the Jury of Experts was 39.3461, while that of the Deans was 26.6956--the difference between these means is significant at the .01 level. In Individual or Dual Sports, the mean weight obtained from the Jury was 40.4467 per cent and the Deans' 28.4761 per cent. This difference yielded a t -score of 2.5679, which proved significant at the .05 level of confidence.

Both groups accorded the highest percentage means of 41.8636 and 30.2222 expressed by the Jury of Experts and the Panel of Academic Deans respectively, resulted in a t of 2.3399, statistically significant at the .05 level of confidence. In Dance activity, the Jury of Experts weighted Skill a percentage mean of 37.2222 and the Academic Deans only 24.7646 per cent. This difference effected a t -score of 2.5548, manifesting significance at the .05 level.

TABLE 18

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF SKILL AS A FACTOR IN
GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		<u>t</u>	<u>P</u>
Team Sport	39.3461	16.6732	26.6956	16.3665	75	3.0131	.01
Individual/Dual Sport	40.4467	15.8070	28.4761	18.0544	68	2.5679	.05
Aquatic	41.8636	14.3362	30.2222	18.4256	62	2.3399	.05
Dance	37.2222	17.1579	24.7646	16.5334	62	2.5548	.05
Movement Fundamentals	33.9523	15.9701	26.3333	14.2400	60	1.7884	
Adaptive	25.7941	17.4132	16.3333	11.4269	46	2.0617	.05
No Difference by Type	42.0540	19.2367	20.5925	13.7012	64	5.1303	.001

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 37.2398
Panel of Academic Deans Average Mean = 24.7753
Grand Mean = 31.0069

The only type of activity which did not vary substantially in the percentage weight mean accorded by both responding groups was Movement Fundamentals, with the Jury members allotting Skill a mean of 33.9523 and the Deans 26.3333. The t-score of 1.7884 was not relevant at the .05 level of confidence demanded. The lowest percentage weight mean granted to Skill was in an Adaptive activity. The mean weight conferred by the Jury here was 25.7941, whereas, the Deans allotted a mere 16.3333. This difference accrued a t of 2.0617, demonstrating a .05 level of confidence.

It seems relevant to note that the weight percentages in this table ranged from 25.7941 to 42.0540 for the Jury, while the Deans expressed a significant variance from 16.3333 to 30.2222. A difference of 13.5 percentage points was effected between the average means for the two groups, recording a grand mean of 31.0069 per cent for Skill as a factor in grading. With respect to the significant differences in weights assigned to this factor, it would seem that physical educators, having placed such heavy emphasis on skill, agree that it should be an important factor to consider in the grading of physical education courses, therefore, skill development should be a primary objective in activity classes. The Panel of Academic Deans did not establish an equally strong case for this factor, however, apparently considering it on a comparative basis with Knowledge.

In Table 19, no substantial differences existed between the respondents as to the percentage weight means recorded for Improvement as a factor to be considered in grading the various types of activities. The average mean of the percentage weight provided by the Jury members was 14.4599 per cent, and that of the Deans, 17.0989. A grand mean of 15.7794 per cent was achieved for this grading factor. It is pertinent, however, to point out the fact that the range of percentage weight means was from 12.6428 to 20.5757 for the Jury and 11.6206 to 30.5000 for the Academic Deans, with the highest mean in both cases assigned to Improvement in an Adaptive activity. It seems reasonable to assume that this should be attributed to the fact that the students enrolled in an Adaptive activity are physically handicapped and the grade would, therefore, have to be based to a greater degree on the improvement made in relation to their particular handicap, rather than on a set level of skill accomplishment.

Meaningful differences were not indicated in the weighting of Attitude as a factor in grading by the responding groups, as evidenced in Table 20. The Jury of Experts effected an average mean of 8.4538 in the percentage weighting for Attitude, and the Academic Deans 8.1042. A grand mean of 8.2790 resulted. While both groups recorded the highest percentage weight mean for this element to an Adaptive activity, the range from a high of 10.7272 to a low of

TABLE 19

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF IMPROVEMENT AS A FACTOR
IN GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		<u>t</u>	<u>P</u>
Team Sport	13.4285	10.3765	14.6666	13.6218	50	0.3055	
Individual/Dual Sport	13.2857	9.5575	15.1875	13.5748	51	0.4915	
Aquatic	13.7352	8.6714	16.3333	14.6249	46	0.5574	
Dance	12.6428	6.3987	14.9230	14.7463	41	0.5145	
Movement Fundamentals	14.5517	8.3152	16.4615	13.6416	42	0.4504	
Adaptive	20.5757	14.0411	30.5000	29.4037	45	1.0779	
No Difference by Type	13.0000	8.5972	11.6206	9.1817	52	0.5464	

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 14.4599

Panel of Academic Deans Average Mean = 17.0989

Grand Mean = 15.7794

TABLE 20

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF ATTITUDE AS A FACTOR
IN GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		<u>t</u>	<u>P</u>
Team Sport	7.0740	5.6169	8.8333	4.9300	39	0.9508	
Individual/Dual Sport	7.7826	5.8007	8.9090	5.1425	34	0.5513	
Aquatic	8.4347	5.4996	6.0000	3.3166	33	1.5108	
Dance	8.4761	5.0954	7.0909	7.0123	32	0.5556	
Movement Fundamentals	7.7727	4.3893	6.0000	2.4494	32	1.4084	
Adaptive	10.7272	5.5855	11.1818	10.0617	33	0.1334	
No Difference by Type	8.9090	11.5440	8.7142	6.0327	43	0.0681	

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 8.4538
Panel of Academic Deans Average Mean = 8.1042
Grand Mean = 8.2790

7.0740 varied by only 3.6532 per cent for the Jury, while the Deans showed a slightly wider variance of 5.1818, with a high of 11.1818 and a low of 6.0000 per cent. Although the range of means is slight, attention is drawn to the fact that the physical educators weighed Attitude in a Team Sport the lowest of all activities, whereas, Aquatics and Movement Fundamentals were accorded the lowest percentage means by the administrative sector of the respondents.

Table 21 denotes no variance by the respondents in weighting Potential Ability as a factor in grading physical education activities. An average mean of 5.7404 was accrued by the Jury and 5.8188 by the Panel of Deans, with a range of from 4.3636 to 8.0000 and 4.5000 to 9.0000 for the respective groups. A grand mean of 5.7796 was manifested. It is noteworthy to point out that where the average mean derived from the Jury in this instance was 5.7404, an 8.000 mean was allotted to Adaptives, which was the only activity receiving a weight over the 5 per cent level. The Deans also indicated that Potential Ability should receive more weight in the determination of the final grade in Adaptives than in the other types of activities. Least favored by both groups was the idea of no differentiation in weighting Potential Ability among six types of activity courses.

Three significant differences are revealed in Table 22 in the allocation of percentage weight means for Sportsmanship in Team Sports, Individual Sports, and Aquatic activities.

TABLE 21

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF POTENTIAL ABILITY AS A
FACTOR IN GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		<u>t</u>	<u>P</u>
Team Sport	5.2727	3.2777	4.8750	2.4206	19	0.2876	
Individual/Dual Sport	5.2727	3.2777	5.1428	2.4743	18	0.0897	
Aquatic	5.9166	4.3100	5.8571	3.6421	19	0.0301	
Dance	5.5000	2.5000	5.8571	3.6421	15	0.2027	
Movement Fundamentals	5.8571	2.4743	5.5000	2.5000	13	0.2370	
Adaptive	8.0000	4.7673	9.0000	4.8989	16	0.3476	
No Difference by Type	4.3636	2.2268	4.5000	2.2912	21	0.1312	

*Means represent per cents expressed by respondents

Jury of Experts Average Mean = 5.7404

Panel of Academic Deans Average Mean = 5.8188

Grand Mean = 5.7796

TABLE 22

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF SPORTSMANSHIP AS A
FACTOR IN GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		t	P
Team Sport	5.1153	3.1540	11.5294	10.6777	43	2.3383	.05
Individual/Dual Sport	4.5909	2.3288	10.5000	11.0397	38	2.0408	.05
Aquatic	4.2500	2.1650	7.2857	1.7496	19	3.1372	.01
Dance	4.8750	2.4206	5.1428	2.4743	15	0.1965	
Movement Fundamentals	5.2222	2.4845	6.0000	2.4494	14	0.5160	
Adaptive	5.5000	3.5355	6.3333	2.3570	11	0.3901	
No Difference by Type	5.0588	4.8685	6.8888	5.6655	35	0.9969	

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 4.9446

Panel of Academic Deans Average Mean = 6.6844

Grand Mean = 5.8145

A mean of 5.1153 per cent established by the Jury in a Team Sports activity as compared to an 11.5294 mean by the Academic Deans resulted in a t of 2.3383, significant at the .05 level of confidence. Again at the .05 level of significance, the Jury percentage weight mean in Individual Sports was 4.5909 and the Deans 10.5000. Although both groups gave the Sportsmanship factor less weight in a Dance activity, a 4.2500 mean by the Jury and a mean of 7.2859 by the Deans effected a t of 3.1372, indicating significance at the .01 level of confidence. Aquatic activity received the lowest percentage mean for this factor recorded by the physical educators, while the lowest recorded by the administrators was in Dance activity. With a range of from 4.2500 to 5.5000, the largest percentage mean by the Jury was in an Adaptive activity, but the Deans, with a range of from 5.1428 to 11.5294, conferred the most weight for Sportsmanship to Team Sports. A grand mean for this factor was 5.8145 per cent. Attention is drawn to the fact that the administrators consistently weighed this factor higher than did the physical educators.

No significant differences in the percentage mean allocation for Social Adjustment were indicated as evidenced in Table 23. The weighting by the Jury of Experts ranged from 3.8333 to 7.5454 with an average mean of 5.4322 per cent. The range imparted by the Academic Deans was from 4.4285 to 10.1428 per cent resulting in a 5.8486 average mean. Combining the averages of the two groups eventuated a grand mean

TABLE 23

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF SOCIAL ADJUSTMENT AS A
FACTOR IN GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		t	P
Team Sport	5.2000	5.3066	6.333	4.2491	37	0.6755	
Individual/Dual Sport	4.4285	2.2587	4.8750	2.4206	29	0.4271	
Aquatic	3.8333	1.8633	4.4285	2.2587	25	0.5796	
Dance	5.6190	3.6576	4.8750	2.4206	29	0.6063	
Movement Fundamentals	4.4705	2.2782	4.4285	2.2587	24	0.0387	
Adaptive	7.5454	4.9793	10.1428	5.2489	29	1.0810	
No Difference by Type	6.9285	7.8327	5.8571	4.1032	28	0.4368	

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 5.4322
Panel of Academic Deans Average Mean = 5.8486
Grand Mean = 5.6404

of 5.6404 per cent. The greatest allocation of weight by both groups for this factor was to Adaptive activity. The activity receiving the least amount of percentage weight by the Jury was in Aquatics, while the Deans indicated that both Aquatics and Movement Fundamentals would receive their lowest weighting of Social Adjustment as a factor in grading.

From Table 24, it may be observed that no relevant differences between the two sample groups in their weighting of Uniform as a factor in grading were revealed. The percentage mean range was extremely narrow for both groups, with that of the Jury being from 3.0000 to 4.8750, and from 3.0000 to 3.8333 for the Deans. A grand mean of 3.5706 per cent computed from the average means of 4.0223 and 3.1190 by the Jury and Deans, respectively, was the lowest weighting of all the twelve factors included in the opinionnaire.

Data reflected in Table 25 revealed one significant difference between the responding groups in their weighting of Attendance, which occurred in not differentiating by type of activity, with a mean percentage of 4.000 accrued by the Jury of Experts and a 7.7500 by the Academic Deans. This difference resulted in a t-score of 2.2751, which proved significant at the .05 level of confidence. The Jury's average mean was 5.7167, with a range of from 4.0000 in no differentiation of weight by type of activity, to 8.0000 in an Adaptive activity. The Deans' average mean was 7.9427, with a range in means from 7.0000 in Aquatics and Dance

TABLE 24

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF UNIFORM AS A FACTOR
IN GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		<u>t</u>	<u>P</u>
Team Sport	3.7692	1.8040	3.0000	0.0000	20	1.47710	
Individual/Dual Sport	4.0000	2.0000	3.0000	0.0000	15	1.5000	
Aquatic	4.2500	2.1650	3.0000	0.0000	11	1.5275	
Dance	4.8750	2.4206	3.0000	0.0000	11	2.0493	
Movement Fundamentals	4.4285	2.2587	3.0000	0.0000	10	1.54919	
Adaptive	3.8333	1.8633	3.0000	0.0000	8	1.0000	
No Difference by Type	3.0000	0.0000	3.8333	2.7638	21	1.0000	

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 4.0223
Panel of Academic Deans Average Mean = 3.1190
Grand Mean = 3.5706

TABLE 25

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF ATTENDANCE AS A FACTOR
IN GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	<u>t</u> -Value	
	Mean	S.D.	Mean	S.D.		<u>t</u>	<u>P</u>
Team Sport	6.1579	4.9232	8.0000	6.5465	33	0.8548	
Individual/Dual Sport	5.6470	3.0281	8.3846	6.9230	30	1.2809	
Aquatic	5.9411	3.4551	7.0000	6.2449	27	0.4698	
Dance	5.1875	2.4803	7.0000	6.2449	26	0.8322	
Movement Fundamentals	5.0833	2.4650	8.5555	7.2435	21	1.3020	
Adaptive	8.0000	6.8138	8.9090	8.47943	25	0.2771	
No Difference by Type	4.0000	2.0000	7.7500	6.79614	35	2.2751	.05

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 5.7167
Panel of Academic Deans Average Mean = 7.9427
Grand Mean = 6.8297

activities to 8.9090 in no differentiation by type of activity. These averages yielded a grand mean weight of 6.8297 per cent for Attendance as a factor in grading.

No significant differences between the responding groups were revealed in Table 26 regarding the weighting of Creativity as a factor in grading. An average mean of 7.4345 per cent was established by the Jury of Experts and a 7.2139 mean by the Panel of Academic Deans, resulting in a grand mean of 7.3242 per cent. The range of percentage means for the Jury was from 3.5555 to 15.7777, with the low accorded to no differentiating by type of activity and the high in Dance activity. The Deans' range of percentage means was from 4.6666 to 11.1250, the low recorded in Team Sports and Individual Sports and the high in Movement Fundamentals activity.

Table 27 does not denote substantial differences between the sample groups in weighting Student Self-Evaluation as a factor in grading. The weighting by the Jury ranged from 3.5555 to 8.9090 with an average mean of 5.2952 per cent. The range derived by the weighting of the Deans was from 3.0000 to 6.3333, with an average mean of 4.6734 per cent. A grand mean of 4.9843 per cent was accrued. No differentiation by type of activity received the lowest weight by the Jury, while the highest was recorded in Adaptive activity. The low imparted by the Deans was in Team Sports, and the high in Dance and Movement Fundamentals activities.

TABLE 26

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF CREATIVITY AS A FACTOR
IN GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		<u>t</u>	<u>P</u>
Team Sport	4.8750	2.4206	4.6666	2.3570	14	0.1492	
Individual/Dual Sport	4.2500	2.1650	4.6666	2.3570	14	0.3122	
Aquatic	5.0833	3.2004	5.8571	3.6421	19	0.4365	
Dance	15.7777	11.5135	11.0000	5.9999	46	1.7121	
Movement Fundamentals	11.0555	12.3759	11.1250	8.6376	26	0.0156	
Adaptive	7.4444	5.9835	7.0000	3.7416	14	0.1573	
No Difference by Type	3.5555	1.5713	6.1818	4.4069	20	1.7505	

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 7.4345
Panel of Academic Deans Average Mean = 7.2139
Grand Mean = 7.3242

TABLE 27

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF STUDENT SELF-EVALUATION
AS A FACTOR IN GRADING SIX TYPES OF ACTIVITY COURSES

Activity	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		t	P
Team Sport	3.6250	1.6535	3.0000	0.0000	12	1.0000	
Individual/ Dual Sport	3.6250	1.6535	4.6666	2.3570	11	0.5852	
Aquatic	5.5000	5.0000	4.0000	2.0000	13	0.7015	
Dance	6.1250	4.9607	6.3333	5.5277	14	0.0671	
Movement Fundamentals	5.7272	3.2777	6.3333	2.3570	14	0.3087	
Adaptive	8.9090	5.9613	4.6666	2.3570	14	1.6860	
No Difference by Type	3.5555	1.5713	3.7142	1.7496	16	0.1754	

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 5.2952
Panel of Academic Deans Average Mean = 4.6734
Grand Mean = 4.9843

Of the twelve factors listed in the opinionnaire which might be included in grading, Student Self-Evaluation was the second lowest in weighting. The reader is reminded that neither the Jury nor the Deans believed that self-evaluation by students should be considered in determining the final grade in physical education (Table 5).

From a perusal of Table 28, it appears that one significant difference was revealed in the weighting of Physical Fitness by the responding groups. This difference occurred in Dance activity. A mean of 13.0000 per cent established by the Jury as compared to a 5.5000 by the Deans resulted in a t of 2.6790, significant at the .05 level of confidence. The Jury of Experts, with a range of percentage means of from 9.2500 to 16.0952, established an average mean of 11.6722. The range of percentage means of the Deans was from 5.5000 to 11.6363, resulting in an average mean of 9.9755. Calculating the average means eventuated a grand mean of 10.8239 per cent. The lowest weight for this factor, Physical Fitness, accorded by the Jury was in Team Sports, and the highest in Adaptive activity. Dance activity and Aquatic activity received the lowest and highest weighting, respectively, by the Panel of Academic Deans.

Table 29 provides the reader with a summary of the percentage mean average weights assigned by the Jury of Experts and the Panel of Academic Deans to each grading factor as it pertains to six types of activity courses

TABLE 28

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS* OF THE JURY OF EXPERTS AND
THE PANEL OF ACADEMIC DEANS IN WEIGHTING OF PHYSICAL FITNESS AS A
FACTOR IN GRADING SIX TYPES OF ACTIVITY COURSES

	Jury of Experts		Academic Deans		df	t-Value	
	Mean	S.D.	Mean	S.D.		t	P
Team Sport	9.2500	6.8083	10.2727	5.3782	23	0.3836	
Individual/Dual Sport	9.5000	6.3442	10.5000	6.4779	24	0.3603	
Aquatic	9.6666	6.8718	11.6363	12.4482	23	0.4427	
Dance	13.0000	6.5465	5.5000	2.5000	17	2.6790	.05
Movement Fundamentals	12.3478	8.2494	11.5000	12.6589	33	0.1854	
Adaptive	16.0952	10.6319	10.8571	5.8901	28	1.5490	
No Difference by Type	11.8461	7.6343	9.5625	9.7977	29	0.6806	

*Means represent per cents expressed by respondents.

Jury of Experts Average Mean = 11.6722

Panel of Academic Deans Average Mean = 9.9755

Grand Mean = 10.8239

TABLE 29

AVERAGE MEAN WEIGHTS ASSIGNED BY THE JURY OF EXPERTS
AND THE PANEL OF ACADEMIC DEANS TO EACH GRADING
FACTOR BY THE SIX TYPES OF ACTIVITY COURSES

Factors	Team Sport		Individual/ Dual Sport		Aquatic	
	J	D	J	D	J	D
Knowledge	25.06	23.21	23.97	20.89	20.97	20.50
Skill	39.34	26.69	40.44	28.47	41.86	30.22
Improvement	13.42	14.66	13.28	15.18	13.73	16.33
Attitude	7.07	8.83	7.78	8.90	8.43	6.00
Potential Ability	5.27	4.87	5.27	5.14	5.91	5.85
Sportsmanship	5.11	11.52	4.59	10.50	4.25	7.28
Social Adjustment	5.20	6.33	4.42	4.87	3.83	4.42
Uniform	3.76	3.00	4.00	3.00	4.25	3.00
Attendance	6.15	8.00	5.64	8.38	5.94	7.00
Creativity	4.87	4.66	4.25	4.66	5.08	5.85
Student Self-Evaluation	3.62	3.00	3.62	4.66	5.50	4.00
Physical Fitness	9.25	10.27	9.50	10.50	9.66	11.63

Note: J = Jury of Experts
D = Panel of Academic Deans

TABLE 29--Continued

Dance		Movement Fundamentals		Adaptive		No Change in Weight by Type		Grand Mean
J	D	J	D	J	D	J	D	
18.69	21.75	26.42	27.68	23.71	23.71	27.52	29.72	23.84
37.22	24.76	33.95	26.33	25.79	16.33	42.05	20.59	31.00
12.64	14.92	14.55	16.46	20.57	30.50	13.00	11.62	15.77
8.47	7.09	7.77	6.00	10.72	11.18	8.90	8.71	8.27
5.50	5.85	5.85	5.50	8.00	9.00	4.36	4.50	5.77
4.87	5.14	5.22	6.00	5.50	6.33	5.05	6.88	5.81
5.61	4.87	4.47	4.42	7.54	10.14	6.92	5.85	5.64
4.87	3.00	4.42	3.00	3.83	3.00	3.00	3.83	3.57
5.18	7.00	5.08	8.55	8.00	8.90	4.00	7.75	6.82
15.77	11.00	11.05	11.12	7.44	7.00	3.55	6.18	7.32
6.12	6.33	5.72	6.33	8.90	4.66	3.55	3.71	4.98
13.00	5.50	12.34	11.50	16.09	10.85	11.84	9.56	10.82

included in a required program of physical education at the college and/or university level.

Part III of the opinionnaire requested that the respondents briefly explain how a list of ten factors should be evaluated if they were utilized in arriving at a final grade in a required physical education activity class. These were the same factors that were included in Part II of the opinionnaire, with the exception of Uniform and Attendance. The investigator assumed that these two factors would be evaluated by the instructor's daily records. If the respondents did not believe a factor should be included in the final grade, they were requested to state the reasons for that opinion. A tally sheet of each of the responses for each factor was made in an attempt to discern possible trends and generalized agreement regarding the evaluative techniques preferred.

Of the ninety-four Academic Deans included in the study, forty-six did not answer Part III, representing a fifty-one per cent response, as compared to fourteen out of one hundred and ten Jury members, or an eighty-seven per cent response to this section. Speculation regarding the poor response offered by the Deans is that the factors listed were too specific and they did not feel adequately qualified to give such specifics. Further, the investigator believes that a time factor was involved on the part of busy administrators, since it is recognized that this part of the

opinionnaire required time and a great deal of consideration, which busy administrators, unfortunately, lack.

A total of thirty-six techniques for evaluating one or another of the factors was suggested by the Deans, whereas, the Jury offered fifty-five procedures. Table 30 reflects the percentage of times techniques were suggested by the Academic Deans and the Jury of Experts and Table 31 represents the percentage of times techniques were suggested by the Jury which were not offered by the Deans. As shown in Table 30, the three most frequently suggested techniques offered by the Academic Deans for evaluating all factors, in order of preference, were: (1) tests in general, with the omission of attitude; (2) observation; (3) reports, with the omission of potential ability, student self-evaluation and physical fitness; and (4) performance, with the omission of potential ability, social adjustment, student self-evaluation, and sportsmanship. The Jury of Experts similarly selected tests and observation as two of the best techniques for evaluation of the various factors, as revealed in Table 30. The Jury of Experts, however, included ratings and subjective evaluation as important evaluative devices. It is to be expected that tests, whether written, oral, or demonstrated, would be offered as the most favored technique, since it is one of the few objective means of determining status. In all instances where the respondents did not specify the type of tests preferred, the investigator was

TABLE 30

PERCENTAGE OF JURY OF EXPERTS AND ACADEMIC DEANS ADVOCATING VARIOUS
TECHNIQUES FOR GRADING EACH OF THE TEN FACTORS LISTED

Jury N = 96

Deans N = 48

Techniques of Evaluation	Knowledge		Skill		Improvement		Attitude		Potential Ability		Social Adjustment		Student Self- Evaluation		Creativity		Sportsmanship		Physical Fitness	
	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D
Written Tests	46	8		2		2								8						
Oral Tests	9	4																		
Objective Tests	4		4	2																
Pre/Post Tests					33	21			2	4										
Physical Fitness Test																			9	4
Educability Test										2										

TABLE 30--Continued

Techniques of Evaluation	Knowledge		Skill		Improvement		Attitude		Potential Ability		Social Adjustment		Student Self- Evaluation		Creativity		Sportsmanship		Physical Fitness	
	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D
Tests (General)	44	69	82	50	29	42	3		8	35	4	6	3	6	2	13	3	4	28	40
Achievement				4						2										
Observation	19	27	41	50	27	46	36	56	18	31	40	50	1	6	31	40	31	58	7	27
Performance	1	10	13	27	3	6		2							8	8			7	2
Participation					1						4						1	4		
Ratings	1		19	2	6	2	6	2			5	2	5	2	4		3	2		
Rankings			2			2														
Subjective Evaluation			5	2	12		14	2	6		6	2	6		5		7	2		2

TABLE 30--Continued

Techniques of Evaluation	Knowledge		Skill		Improvement		Attitude		Potential Ability		Social Adjustment		Student Self- Evaluation		Creativity		Sportsmanship		Physical Fitness	
	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D
Student Self- Evaluation			1		5		6				5	2	9			2		2		2
Reports	18	31	1	4		2	2	2			1	8	5		2	15		6		
Projects	3	6														6				
Term Reports	1					2				2										
Assignments				2		2				2										
Inventory														2						
Attitude Inventory								4				2	1							

TABLE 30--Continued

Techniques of Evaluation	Knowledge		Skill		Improvement		Attitude		Potential Ability		Social Adjustment		Student Self- Evaluation		Creativity		Sportsmanship		Physical Fitness	
	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D
Charts			1			2		2												
Incidence Charts			2	2																
Tournaments			13	10	2															
Discussion	10	6					1		1		1		2	2			1	2		
Socio-Metric Measures					1		1				6	4								
Behavior	9						1	4									4			
Attendance							1	2											1	
Cooperativeness							3	4												

TABLE 30--Continued

Techniques of Evaluation	Knowledge		Skill		Improvement		Attitude		Potential Ability		Social Adjustment		Student Self- Evaluation		Creativity		Sportsmanship		Physical Fitness	
	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D	J	D
Effort							3	2												
Conferences													1	4	2					
Medical Exam																		1	8	
Body Make-up	1								1										2	
Mental Alertness																			2	
Cumulative Records						2														
Score Card																	2			

TABLE 31

PERCENTAGE OF JURY OF EXPERTS ADVOCATING VARIOUS TECHNIQUES
OF GRADING EACH OF THE TEN FACTORS LISTED WHICH
WERE NOT SUGGESTED BY THE ACADEMIC DEANS

Techniques of Evaluation	Knowledge	Skill	Improvement	Attitude	Potential Ability	Social Adjustment	Student Self- Evaluation	Creativity	Sportsmanship	Physical Fitness
Subjective Tests	2	2								
Motor Ability					5					
Standardized Measures										1
Demonstrated Skill Competency		8								
Objective Evaluation			4	2						
Problem-Solving	2							2		
Notebooks	1									
Anecdotal Record				3		1		1	2	
Classwork	1									
Personal Diaries				1						
Achievement Inventory		1								

TABLE 31--Continued

Techniques of Evaluation				
	Opinionnaire	Photography	Leadership/ Followership	
	Knowledge	1	1	
	Skill		1	
	Improvement			
	Attitude			
	Potential Ability			
	Social Adjustment		1	
	Student Self- Evaluation	4		
	Creativity			
	Sportsmanship			
	Physical Fitness			

forced to create a categorical listing herein noted as "Tests (General)."

Although statistical treatment was not applied to this section for determining significant differences, the investigator deems it relevant to note several discrepancies in the percentages of the responding groups suggesting various techniques for evaluating the different factors. It is believed that such notations will help to better illustrate these discrepancies to the reader and help the investigator in arriving at the following speculations:

Knowledge

Forty-six per cent of the Jury of Experts suggested "Written Tests" as a means of evaluating Knowledge, whereas, only eight per cent of the Deans specified this technique. On the other hand, a closely related technique, "Tests (General)" received a forty-four per cent response from the Jury and a sixty-nine per cent response from the Deans. Jury members' closeness to the problems of evaluating Knowledge more specifically preferred "Written Tests" in this case. The Deans, however, seemed less rigid in their choice of techniques for this evaluation as reflected by the larger percentage (69 per cent) indicating "Tests (General)" for lack of acquaintance with evaluating techniques or perhaps lack of time for getting specific in their choice.

Only one per cent of the Jury indicated that Knowledge could be evaluated through "Performance" as compared to ten per cent of the Deans. The Deans seemed to rely on performance, observation and/or reports as a barometer for indicating knowledge acquired, to a certain degree. Perhaps the Jury did not suggest this technique for evaluating this factor since it involves observation, which in itself is subjective evaluation, and the Jury did not offer this technique at all for evaluating Knowledge.

Skill

The technique most favored for evaluating Skill was "Tests (General)." Both groups were in accord, with the lower percentage being fifty per cent from the Deans. The Jury's response of eighty-two per cent favoring this particular technique is not surprising since it is generally understood that skill is easily tested through a variety of tests.

The Deans accorded a greater percentage to the utilization of "Performance" as a technique for evaluating Skill, perhaps because they considered that skill level would be demonstrated during each class period. It should be pointed out that the Deans accorded "Tests (General)" fifty per cent making a total of seventy-seven per cent for these two techniques. The Jury, on the other hand, seemed more hesitant in the use of this technique. It would seem that this hesitancy was based on the Jury members' experience in

the field which means this procedure would require observing each student with careful scrutiny and rating her daily skill progress. Needless to say, in large classes or when attempting to give individualized instruction, the implementation of this technique presents quite a feat, although forty-one per cent of the Jury suggested "Observation" as a technique for evaluation. The investigator speculated that the ninety-five per cent accorded to "Tests (General)" and "Performance" fairly well exemplifies the Jury's two preferred techniques for evaluating Skill with a much greater preference for tests.

Nineteen per cent of the Jury and two per cent of the Deans selected "Ratings" as a means for evaluating Skill. Ratings by students and teachers help augment performance tests and indicate relationships between test results and the students' opinions of actual ability demonstrated. The Deans might not have accorded this device a high percentage because of their lack of insight into procedures used in the utilization of ratings by teachers in the field of physical education. It should be noted that "Ratings" received a six per cent greater preference from the Jury than did "Performance" in the evaluation of Skill.

Improvement

The higher percentage of Deans suggesting "Tests (General)" for evaluating Improvement, forty-two per cent

as compared to twenty-nine per cent for the Jury, appears to indicate one of two things: (1) they were unfamiliar with specific techniques for evaluating Improvement, or (2) they could not afford the time required to specifically indicate the types of tests to recommend, thereby making a flexible choice.

Attitude

In every case the Deans accorded a higher percentage for "Observation" as a technique for evaluating each factor. In this instance, fifty-six per cent as compared to thirty-six per cent of the Jury. The percentages here appear to indicate that observation, although a subjective means of evaluation, seemed to both groups a more justifiable procedure for evaluating Attitude.

It appears rather strange that such a small percentage of the Jury members, fourteen per cent, should select "Subjective Evaluation" as a technique for evaluating Attitude since there is such limited means for this purpose. On the other hand, it seemed that the mere two per cent of the Deans suggesting this procedure were either opposed to subjective evaluation or that the two per cent could see no other feasible means. The figures, however, seem to reflect a felt need for evaluating Attitude and a struggle for a device which would be equitable.

Potential Ability

A mere eight per cent of the Jury selected "Tests (General)" as a technique for evaluating Potential Ability. It would appear their selection was based on their familiarity with the varied types of tests available in physical education and the realization that specific tests for Potential Ability are limited mainly to those classified as motor educability. The Deans may not be as aware of the existing test limitations in this field. It is the investigator's speculation that this may be the main reason for the thirty-five per cent of the Deans responding to "Tests (General)" as a proper technique.

Social Adjustment, Student Self-Evaluation, Creativity, and Sportsmanship

The number of suggested techniques offered by the Jury and the Deans for evaluating Social Adjustment, Student Self-Evaluation, Creativity and Sportsmanship were so few that a general discussion of these factors is not warranted at this point in the manuscript.

Physical Fitness

It seems logical to expect the Jury to respond with such a low percentage, seven per cent, to "Observation" as a procedure for evaluating Physical Fitness since they are all too aware of the task involved in trying to closely observe students individually in large classes. A second

assumption for the small response may be it is considered too subjective for the objective-conscious physical educator unless daily anecdotal records were maintained. The twenty-seven per cent of the Deans selecting this device are not, perhaps, as aware of specific evaluative tools available for the measurement of Physical Fitness as were the Jury members.

The responding groups submitted a wide variety of reasons for not including a specific factor in determining the final grade. Each different reason stated by the respondents as their rationale for omitting a factor has been listed below, without exception, thereby eliminating the necessity for presenting a frequency distribution.

Jury of Experts

Panel of Academic Deans

Knowledge

most tests are constructed
poorly

is reflected in attitude
and skill

Skill

observations are more objec-
tive
tests do not reflect a game
situation environment

the unskilled would be more
involved if the fear of
the grade were removed

Improvement

impossible to grade fairly
no tests available
unfair for advanced student

should only be appraised
would underachieve to show
improvement

Jury of ExpertsPanel of Academic Deans

would necessitate a grading
scale for each individual

Attitude

should be reflected in over-
all performance

cannot be measured objec-
tively

it is an outgrowth of the
teacher's skill in
motivating

not included in other
subject areas

students must be free to
be disinterested or to
dislike an activity with-
out prejudice to their
actual accomplishments

not a proper objective of
any course
validity difficult to estab-
lish
irrelevant
reflected in improvement
is not considered in other
areas

Potential Ability

impossible to calculate
more pertinent to the teach-
ing process than includ-
ing in the grade
not included in other sub-
ject areas

too difficult to determine
should not penalize those
who lack it
is too subjective
irrelevant
no tests available

<u>Jury of Experts</u>	<u>Panel of Academic Deans</u>
should only be used for	is not important unless
guidance and grouping	realized
should not give a bonus for	not considered in other
a handicap	areas

Social Adjustment

is a by-product of any	no tests available
gathering	should not be an objective
should only be used for	of the course
guidance and grouping	irrelevant
irrelevant	
cannot be measured objec-	
tively	
is included in attitude	

Student Self-Evaluation

use as motivational device	unreliable
only	ratings too high or too low
use as a guidance tool only	should be used for coun-
student has difficulty being	seling purposes only
fair and objective	not used in other subject
value of process is lost if	areas
grade becomes involved	irrelevant
this is "passing the buck"	
inaccurate and invalid	

Creativity

too difficult to deter-	not pertinent
mine	

Jury of Experts

not used in other subject
 areas
 should not punish those with
 less ability
 is an integral part of skill

Panel of Academic Deans

end result revealed in
 skill
 too difficult to determine

Sportsmanship

is reflected under attitude
 should be used for guidance
 purposes only
 cannot be measured
 only recognize "poor sports-
 manship" and not much
 variance in "good sports-
 manship"

too difficult to determine
 not considered in other
 areas
 is an expected outcome

is reflected in skill grade
 is a concomitant outcome

Physical Fitness

is an incidental outcome
 is evident in performance
 insufficient time for
 development
 is reflected in skill grade

student should not be admit-
 ted to course unless
 physically fit
 is a concomitant product

As can be readily discerned, the main reasons given
 by both groups for not including a factor were: (1) it was

irrelevant; (2) it is too difficult to determine; (3) it should be included elsewhere; and (4) it is not considered in other subject areas. It was observed, also, that the groups, particularly the Jury, could not agree on where each factor overlapped or was an integral part of another factor. Techniques for evaluation were not given if one factor was recommended to be included in another factor.

In the overall analysis of the results from this section regarding the responses received, it may seem that the wide divergency in responses make this section appear of little value. However, this wide range of opinion is valuable as a basis for the development of more specific criteria that should be applied in determining the final grade in a required program of physical education at the college/university level.

Summary

Chapter III was exclusively devoted to the analysis and interpretation of the data relative to the opinions of the Jury of Experts and the Academic Deans on eleven statements of belief regarding physical education and grading, and the weight which should be assigned to each possible factor used in computing the final mark. In Section I, a compilation was made of the respondents' answers, percentages figured as to agreement and disagreement, and subjected to the z-test to determine the degree of significant differences of per cents between the two groups of respondents.

Compilation and analysis and interpretation was first made of the eleven general statements relative to opinions of the respondent groups regarding physical education and grading. Significant differences in percentages were revealed in only three instances and these pertained to whether physical education grades should be included as a point average in the overall grade, the method of reporting physical education grades to the registrar, and the best method of reporting the grades.

Included under each of the eleven general statements was a series of phrases which might describe the reason or reasons the respondents agreed or disagreed to the statement. Significant differences in percentages as to the reasons why a specific opinion was held were revealed in all but one of the eleven general statements. The exception was to Statement six regarding utilization of a uniform departmental grading system.

The opinionnaire provided a space marked "Other" for the respondents to complete if the phrases used were inadequate to express their reasons for agreement or disagreement with each of the eleven general statements of belief. The "Other" space was used in reference to all eleven statements; however, significant differences were revealed in only three instances: (1) how physical education should be offered; (2) the method of reporting physical education grades to the

registrar; and (3) variations in grading within a class composed of students with a wide variance of skill level.

In Section II, both groups of respondents were requested to assign weights to each of twelve factors which would constitute the final grade in physical education activity classes. The respondents were not required to assign a weight to each factor for each type of activity, and a number of the factors were rarely weighted at all.

An overall look at the results of the weighting by both groups for all activities reveals the following as a mere ranking for the sake of comparison between the two sectors:

Jury of Experts	Panel of Academic Deans
1. Skill	1. Skill
2. Knowledge	2. Knowledge
3. Improvement	3. Improvement
4. Physical Fitness	4. Physical Fitness
5. Attitude	5. Attitude
6. Creativity	6. Attendance
7. Potential Ability	7. Creativity
8. Attendance	8. Sportsmanship
9. Social Adjustment	9. Social Adjustment
10. Student Self-Evaluation	10. Potential Ability
11. Sportsmanship	11. Student Self-Evaluation
12. Uniform	12. Uniform

It should be noted that both groups of respondents generally agreed on the top five factors. Interestingly enough, however, according to the average percentage means, the Jury group ranked Sportsmanship eleventh of the twelve factors, indicating that Uniform was the only factor of lesser importance. The Deans, however, designated a position of greater prominence to Sportsmanship, ranking it eighth, and thereby superior to Social Adjustment, Potential Ability, Student Self-Evaluation, and Uniform as a factor to be considered in grading students in a required program of physical education activity classes at the college/university level.

The greatest number of respondents from both groups weighted Skill, Knowledge, Improvement, and Physical Fitness with the heaviest percentage weights in this order respectively. Significantly, the greatest discord was evidenced between the two respondent groups in their assignment of percentage weight to Skill as a factor to be considered in grading.

It was observed that Improvement, Sportsmanship and Attendance received heavier percentage weightings from the Deans for all activities than weights assigned these factors by the Jury. Both groups, however, agreed that there should be no differentiation between the activities as to the percentage weight assigned for Knowledge.

The method of determining significance in this section was by computing the mean and the standard deviation,

and subjecting the difference between the means to the t-test.

There was a wide range of opinion in Part III as to the best techniques for determining the final grade for each of the ten factors listed. Speculations were made by the investigator regarding possible reasons for the respondents' choices. Although only forty-eight Academic Deans completed this section, a total of thirty-six techniques were received as compared to fifty-five from the ninety-six Jury of Experts who responded to this section of the opinionnaire. An overall look at the reasons why both groups would not include a factor in the final grade supplied four general motives for this opinion: (1) it was irrelevant; (2) it was too difficult to determine; (3) it should be included elsewhere; and (4) it is not considered in other subject areas.

Chapter IV will present a summary of the study, criteria and implications for grading, and recommendations for future studies.

CHAPTER IV

SUMMARY, CRITERIA AND IMPLICATIONS FOR GRADING, AND RECOMMENDATIONS FOR FUTURE STUDIES

The intent of this chapter is to provide an overall summary of the study, establishment of criteria and the implications for grading women students in a required college/university physical education program, and recommendations for future studies. The investigator believed that the criteria established should not be done through merely attempting to answer the initial questions posed to the respondents. Instead, the investigator has given careful consideration to the answers received in the establishment of the criteria set forth in this chapter.

Summary

The growing need for higher education has necessitated that institutions of higher learning revise their roles and the problems of administration have grown with the increase of students. The grading aspect in education has many divergent viewpoints. Student achievement, competition, attainment of specific goals, and measurement of improvement were concluded to be the purposes of marking in higher

education. Not only does the meaning of a grade vary among educators, but there is widespread disagreement as to what should constitute the grade, how it should be weighed, and how it can be evaluated. Philosophical differences in grading in physical education can be divided into two schools of thought: (1) grades should represent achievement only, and (2) grades should represent achievement based on potential. Regardless of the conflict of thought, attainment of course objectives is considered to be the basis for grading.

Assignment of letter grades is recommended by more authorities than the numerical, credit/non-credit, pass/fail, or satisfactory/unsatisfactory methods. A trend seems to be developing, however, for more descriptive reporting, in terms of specific evaluation of status and/or achievement, as it tends to give a more overall picture of the student's accomplishments, since the other methods may be misinterpreted. Even though there is agreement that the present systems of reporting grades leaves much to be desired, it is apparent that colleges and universities are not prone to undertake a change in their established systems.

Many factors have been used to determine the final grade in physical education activity classes, including: knowledge, skill, attitude, social competency, posture, attendance, uniform, cleanliness, potential ability, sportsmanship, effort and showering. Opinions among physical educators as to the weight that should be assigned to each

factor varies to a great extent. This disagreement, in part, is in relationship to the factors recommended for determining the mark and the means by which these can be evaluated. Some teachers believe that either objective or subjective means of evaluation should be employed, while many believe that both means should be utilized in order to determine a fair measure of the grade assigned.

The dilemma which continues to exist for the physical education teacher in the area of grading has come about partially because authorities in the field are not in general agreement as to factors that should be weighted in evaluating a student's accomplishments. It is believed that though guidelines, indeed, have been established, they are formulated in a generalized way, leaving specific application or implementation of these to the discretion of the teacher.

The purpose of this study was to develop some criteria for grading women students in the required physical education program on the college/university level. As a basis for these criteria an opinionnaire study was made from a selected group labeled a Jury of Experts in the field of physical education and from a Panel of Academic Deans of institutions of higher learning. Each of these groups was asked to express opinions on various phases of grading in a physical education activity program.

Representing the Jury of Experts in this study was a selected group of authorities in the field of physical education throughout the United States. Criteria on which this selection was made included: (1) authorities in the area of tests and measurements; (2) recognized leaders in the development of principles and philosophy of physical education; (3) authors of publications in the area of tests and measurements, principles or philosophy; (4) past or present active members of the National Association for Physical Education of College Women; (5) Chairmen of Physical Education Departments for Women; (6) teachers, recognized as outstanding, in the area of sports, dance or aquatics; (7) past presidents of the American Association for Health, Physical Education and Recreation; and (8) approval of prospective Jury members by the members of the dissertation committee. To ensure proper representation of all areas, geographically as well as specialized fields of interest, a minimum of twenty-four respondents were chosen from each of the six districts created by the American Association for Health, Physical Education and Recreation.

Various sources were consulted in selecting qualified prospects, including: (1) the published membership lists of the National Association for Physical Education of College Women, which identified Department Heads, National and District Association officers, committee members and representatives, and active members of the Association;

(2) contributors of articles to the 1966-1967 Guide Books of the Division for Girls and Women's Sports of the American Association for Health, Physical Education and Recreation; (3) authors of books and articles pertaining to dance, tests and measurements, principles and philosophy of physical education; and (4) the 1965-1966 Roster of Officers and Committees of the American Association for Health, Physical Education and Recreation, which listed the Board of Directors Division and Section Officers, National Staff, District Officers, Committee members, State Presidents, Publications Directors, Membership Directors, and State Directors of Health, Physical Education and Welfare. The compiled list was submitted to the investigator's dissertation committee for approval.

The Panel of Academic Deans was selected from colleges/universities on the basis of proper representation considering enrollment and classification by six regional accrediting agencies as recognized by the National Commission on Accrediting. Twenty-four Deans were solicited, using a random sampling technique, from each district to include representation from: (1) private, public, and institutions for women only; and (2) student populations with less than 1,000, between 1,000 and 2,000, 2,000 to 5,000, 5,000 to 10,000, and over 10,000.

Representatives from these two groups, the investigator believed, would constitute a reputable forum for a

study of all phases of grading women students in physical education activity classes. To this end an opinionnaire was formulated as the best means for collecting data, and was designed to elicit opinions relevant to the underlying philosophy of grading and of specific phases of grading in different types of physical education activities.

The completed opinionnaire was separated into three sections. Section I contained general statements regarding grading to which the respondents expressed agreement or disagreement, and a series of phrases under each statement for indicating the reason or reasons why this opinion was held. The Jury and Deans were provided space to write in the appropriate reason if the check list of phrases was inadequate in revealing their reasons for a particular belief.

Section II defined a list of twelve factors which might be included in determining a grade in physical education activity classes. These were: (1) knowledge, (2) skill, (3) improvement, (4) attitude, (5) potential ability, (6) sportsmanship, (7) social adjustment, (8) uniform, (9) attendance, (10) creativity, (11) student self-evaluation, and (12) physical fitness. The respondents were requested to indicate by percentages on a chart the weight they thought should be given to those factors they believed should be included in determining the final grade in various types of activities. These activity groups were: (1) team

sports, (2) individual or dual sports, (3) an aquatic activity, (4) a dance activity, (5) movement fundamentals, and (6) an adaptive class. An additional column was provided in this section of the opinionnaire for the respondents to use if they believed that there should not be any differentiation in weighting factors by type of activity.

In Section III, all of the factors weighed in the second part of the opinionnaire were listed, with the exception of uniform and attendance, and the respondents were to explain how these factors were to be evaluated, or why they should not be considered part of the grade.

Of the solicited groups, a total of 110 Jury members and 94 Deans agreed to participate in the study. The percentage of response from these groups (seventy-one per cent and seventy-five per cent, respectively) was believed to be average for this method of collecting data.

Tabulation of Sections I and II were statistically treated by computer and significant differences between the (1) percentage of agreement or disagreement as revealed by the z-test, and (2) percentage means as revealed by the t-test, for the Jury and the Deans. After tabulating Section III according to the number of respondents suggesting each technique of evaluating the factors included, it was the writer's opinion that conversion of raw scores into percentages based on the number replying would be the most

informative way to discern the techniques preferred by the two groups.

Findings were developed from a study of the data computed from the opinionnaire. Not all of the respondents marked every phase of the instrument. Section I revealed:

1. The highest percentages of responses were noted in this section, rendering a range of agreement of the Jury of Experts from 27.273 to 99.091 and from 15.957 to 96.745 from the Academic Deans to each statement.

2. Although significant differences in per cents were noted between the reporting groups, there was substantial agreement among the respondents relative to the eleven general statements as a whole. The two groups agreed to nine statements and both disagreed to two statements: Statement 7, "There should be variations in the grading practices when men students and women students are enrolled in the same coeducational class (i.e., women students should not compete with men students for a grade)" and Statement 9, "Self-Evaluation by students should be considered in determining the final grade in physical education."

3. Three significant differences were accrued at the .01 level of confidence:

a. Statement 3, "The physical education grade should be included in computing the overall college/university grade point average," with the Jury agreeing 91.818 per cent and the Deans 58.511 per cent.

b. Statement 4, "The method of reporting physical education grades to the registrar (A, B, C; 1, 2, 3; or Pass/Fail) should be the same as that used by other components within an institution," the Jury agreed 92.727 per cent and the Deans 64.894 per cent.

c. Statement 5, "The best method of reporting grades for physical education classes to the registrar is: (1) A, B, C, D, F or 1, 2, 3, 4, 5; or (2) Satisfactory/Unsatisfactory or Pass/Fail," registered an 80 per cent agreement to method one by the Jury and only 56.383 per cent for the Deans.

4. Significant differences in per cents as to the reasons why the respondents agreed that physical education has a definite place in the curriculum of higher education were revealed on two phrases at the .05 and .01 level of confidence respectively with the Jury of Experts indicating a higher percentage:

a. "the unique objectives of physical education can not be accomplished in any other department"

b. "higher education should provide opportunities for students to gain knowledges and skills in all areas of learning which can contribute to a richer life"

5. Significant differences in per cents relative to how physical education should be offered were revealed on four phrases at the .01, .05, .001 and .05 level of confidence,

respectively, with the Jury indicating a higher percentage in all but the third instance:

- a. "as an elective for credit"
- b. "as a requirement for credit"
- c. "as a requirement for no credit"
- d. "Other," which were sentences written to justify agreeing to one of the phrases selected.

6. Significant differences in per cents referable to the reasons why the respondents believed that the physical education grade should be included in computing the overall college/university grade point average were revealed in two instances, at the .001 level of confidence, with the Jury according the higher percentage:

- a. "achievement in physical education is as important as prowess in other subjects in determining overall accomplishments in higher education"
- b. "the grade point average should represent all courses in which the student has invested time and money"

7. Regarding the method of reporting grades to the registrar being the same in physical education as that used by other components within an institution, significant differences in per cents of the reasons checked, with the Jury deriving a higher percentage, were revealed in two phrases at the .001 and .05 level of confidence, respectively:

- a. "evaluation of physical education achievement may differ from other subject matter areas as to

techniques or methods employed, but the final mark can and should be reported in a standardized way throughout the institution"

b. "Other," relevant in that the Deans utilizing this space disagreed with the general statement and were in favor of a Pass/Fail system.

8. Significant differences in per cents relative to the rationale for suggesting the technique that should be used for reporting grades in physical education were recorded at the .05 level of confidence, with the Jury evidencing a higher percentage than the Deans:

a. "students want to know the degree of their achievement--how they 'measured up'--not just pass/fail"

b. "a system of grading in physical education that indicates degrees of achievement allows for comparison with other subject areas"

9. No significant differences in per cents were revealed in regard to possible reasons why the respondents believed that a uniform system of grading should be used within the women's physical education department.

10. One significant difference in per cents regarding the reason why the respondents oppose variations in grading practices for men and women students in a coeducational class was revealed at the .05 level of confidence with the Jury again yielding the higher percentage: "skill tests should contain separate norms for men students and

women students, but the weight or value of the items should be the same for both sexes."

11. Three significant differences in per cents as to reasons why the respondents believed that variations in grading should be employed in a class composed of students with a wide range of skill level were revealed at the .05, .01, and .01 level of confidence, respectively, Jury members effecting a higher percentage in each instance:

a. "improvement should be only one of the factors considered of students in the skill grade"

b. "written examinations should be developed for each skill level represented in the class rather than a single test used for all skill levels"

c. "Other," both groups indicating that classes should be homogeneous in regard to skill level.

12. Significant differences in per cents referable to the reasons why the respondents believed that student self-evaluations should not be considered in grading were revealed at the .05 level in two instances, with larger percentages accrued by the Jury:

a. "students should be able to determine whether they have accomplished the objectives of the course and to what degree"

b. "this system offers students the opportunity to compare their personal evaluation with teacher evaluation or vice versa"

13. Three significant differences in per cents regarding the reasons why the respondents believed that the factors considered in determining the final grade should be based on the objectives of the course were revealed at the .001, .001, and .01 level of confidence respectively, the Jury according the highest percentages:

a. "the grade should be reflective of the significant purposes of the course"

b. "some objectives cannot be objectively measured"

c. "there is no justification for including intangible factors in determining the final grade, even if they are included in stated course objectives"

14. One significant difference in per cents as to the reason why the respondents believed that the factors considered in the grade should correspond with the value the teacher places on each of the course objectives was revealed at the .01 level of confidence, the Jury again deriving the higher percentage: "the weight of the factors to be included in the final grade to correspond with the value of course objectives makes the grade more reflective of the significant purposes of the course"

Section II of the opinionnaire revealed significant differences of percentage means in the weighting of four factors which should be included in the final grade by type of activity. The weighting assigned to each of these factors

by the Jury and the Deans as well as the levels of confidence achieved for each of these factors are listed as follows by type of activity where the differences were noted:

<u>Factor</u>	<u>Jury</u>	<u>Deans</u>	<u>Level of Confidence</u>
Skill			
Team Sports	39.346	26.695	.01
Individual or Dual Sports	40.446	28.476	.05
Aquatic Activity	41.863	30.222	.05
Dance Activity	37.222	24.764	.05
Adaptive	25.794	16.333	.05
No differentiation by type	42.054	20.592	.001
Sportsmanship			
Team Sports	5.115	11.529	.05
Individual or Dual Sports	4.590	10.500	.05
Aquatic Activity	4.250	7.285	.01
Attendance			
No differentiation by type	4.000	7.750	
Physical Fitness			
Dance Activity	13.000	5.500	.05

Average means of the weights that the Jury and the Deans believed should be accorded for each factor were computed for each of the responding groups. These scores were then converged into a grand mean which encompasses both groups' weightings. These overall, grand percentage means are indicated below.

1. Knowledge -- 23.846
2. Skill -- 31.006
3. Improvement -- 15.779
4. Attitude -- 8.279
5. Potential Ability -- 5.779
6. Sportsmanship -- 5.814
7. Social Adjustment -- 5.640
8. Uniform -- 3.570
9. Attendance -- 6.829
10. Creativity -- 7.324
11. Student Self-Evaluation -- 4.984
12. Physical Fitness - 10.823

Section III provided thirty-six suggested techniques by the Academic Deans and fifty-five techniques proposed by the Jury of Experts for evaluating ten of the factors included in the second section of the opinionnaire, excluding Uniform and Attendance. Four general rationals for excluding a factor in determining the grade were: (1) it was irrelevant, (2) it was too difficult to determine, (3) it should be included elsewhere, and (4) it is not considered in other subject areas. Of the many suggestions supplied by the Academic Deans, the four procedures receiving the highest percentages were: (1) tests, (2) observation, (3) reports, and (4) performance. The Jury suggested: (1) tests, (2) observation, (3) ratings, and (4) subjective evaluation.

It was comforting to the investigator to find out, throughout this study, that the Academic Deans illustrated a much greater understanding about physical education than would be suspected. The wide range of agreement between the two groups implied a parallelism which was not anticipated at the onset of the study and which was contrary to the writer's original hypothesis.

Criteria and Implications

On the basis of the foregoing statements in Chapter I concerning the overall views from authorities in the field of higher education and among physical educators, as well as the viewpoints of the 204 respondents in this study, the following criteria are suggested by the investigator as guidelines for consideration in determining women students' grades in a required college/university physical education program:

1. Physical Education has a definite place in the curriculum of higher education.

The three statements most frequently checked by the respondents as their reasons for agreeing or disagreeing to the above statement of belief were: (1) "higher education should provide opportunities for students to gain knowledges and skills in all areas of learning which can contribute to a richer life," by 88 per cent of the Jury and 73 per cent of the Deans; (2) "the uniqueness of the objectives of physical education can not be accomplished in any other

department," by 61 per cent of the Jury and 47 per cent of the Deans; and (3) "opportunities for college students to improve their physical fitness and learn recreational skills are as important as increasing knowledge in the traditional liberal arts subjects," by 51 per cent of the Jury and 39 per cent of the Deans.

Physical education should uphold the standards of the institution in re-evaluation of objectives and conduct a program based on sound educational philosophy without sacrificing the uniqueness inherent in its makeup. Although it sometimes may be necessary to justify the inclusion of certain activities in the program because their value in attainment of some specific objective is questioned, it should be remembered that there are intrinsic values, however, which may not be readily apparent to those demanding their justification. It is true that there are some intangible objectives of physical education which overlap those in other disciplines, however, the goals of learning through which these objectives are achieved are different.

2. Physical education should be available to the general college/university student.

It is apparent that some differences exist between the respondents as to how physical education should be offered. A simple majority of both groups checked "as a requirement for credit." Two other means chosen by the respondents were: (1) "as an elective for credit," which

was checked by over 34 per cent of the Jury and 20 per cent of the deans, and (2) "as a requirement for no credit," checked by only 4 per cent of the Jury and 23 per cent of the Deans. The big discrepancy between the 23 per cent of the Deans and the 4 per cent of the Jury on this reason seems significant since the Deans are the institutional policy makers; however, the investigator questions the likelihood of this taking place on any widespread basis. There is a definite possibility that in the future the students may be given the choice of taking the courses for credit or non-credit.

Physical education should be available to the general college/university student regardless of how it is offered--credit or non-credit, required or not required. The challenge rests with the program itself. Physical education should be interesting and offer the student enough of what she is seeking to be selected regardless of the requirement status. Institutions of higher learning have a responsibility for guiding students in their curricular choices, a responsibility which parallels that of the parents in disciplining their children. Purportedly, a student attends college seeking further education. Many a bewildered student is delayed in selecting a major subject until her junior year because of the lack of knowledge of self and career opportunities available. Likewise, poorly skilled students might tend to avoid physical education courses because of their

lack of movement education background and fear of failure. Physical education courses in higher education should put more stress on learning than having students practice skills already acquired.

The investigator projects that the future may bring a change in institutional patterns of curriculum design which will place all presently required courses in the institution, which are not in the major area of study, on an elective basis. No doubt credit will be assessed to these courses, but on such an elective basis the student would have the opportunity to take as many and as wide a variety of courses as desired to help her select the area of most interest to her.

3. The physical education grade should be included in computing the overall college/university grade point average.

Although the majority of respondents agreed with the above statement, it should be pointed out that the Jury were more unanimous in their agreement than were the Deans. The 41 per cent of the Deans who disagreed with the statement checked two basic reasons for their belief: (1) "physical education is non-academic and, therefore, should not 'clutter' the grade point average," and (2) "there should be no credit attached to physical education, therefore, grades would not be a part of the overall grade point average."

A large percentage of the Jury, 76 per cent, as compared to 34 per cent of the Deans checked "achievement in physical education is as important as prowess in other subjects in determining overall accomplishments in higher education" as the reason for agreeing to the statement of belief. Two other reasons checked by a large portion of the respondents were: (1) "the grade point average should represent all courses in which the student has invested time and money," by 60 per cent of the Jury and 31 per cent of the Deans; and (2) "students are motivated to achieve if they know the grade counts," by 28 per cent of the Jury and 25 per cent of the Deans. It would be reasonable to assume that the reason for the discrepancies between the percentages for these phrases as the reasons for agreeing to the statement of belief in this instance is due to the fact that a large percentage of the Deans disagreed with the statement.

The majority of the educators and administrators believed that inclusion of the physical education grade in the overall grade point average would lend more significance to the physical education program. This implies that, in their opinion, a course in physical education is as significant to the overall educational program as any other course in the institution. Where some of the students with high point averages tend to disfavor the inclusion of physical education grades in the overall point average, the investigator believes that if equal significance were placed on the

physical education programs and guidance was provided to assist the student to enroll in courses at the appropriate level, equal preparation time for physical education classes which might result in better grades for all students

It is entirely possible that in the not too distant future the student may be permitted to decide which courses she would like to receive credit for, how the grade should be reported, the total number of semester hours to take, and whether the grade is to be included in her overall grade point average. In such an eventuality these decisions should be made by the student during the enrollment procedure for each semester.

4. The method of reporting physical education grades to the registrar (A, B, C; 1, 2, 3; or Pass/Fail) should be the same as that used by other components within an institution.

Whereas 92 per cent of the Jury agreed with this statement of belief, the Deans only agreed 64 per cent of the time. Eighty-two per cent of the Jury and 47 per cent of the Deans checked "evaluation of physical education achievement may differ from other subject matter areas as to techniques or methods employed, but the final mark can and should be reported in a standardized way throughout the institution" as the reason for agreeing to the statement of belief. A second reason checked by 35 per cent of the Jury and 25 per cent of the Deans was "the grading and reporting

system used in physical education should clearly reflect the end product regardless of the system."

Because physical education is a significant and integral part of the program of higher learning, it should be consistent and conform with the procedure of reporting grades to the registrar as established for all other courses in the institution. If optional procedures for reporting grades are available within the institution, it is assumed that physical education departments would also have such options. The choice of receiving A, B, C, D, F or Pass/Fail should be left to the student.

5. The best method of reporting grades for physical education to the registrar is A, B, C, D, F or 1, 2, 3, 4, 5.

Eighty per cent of the Jury and 56 per cent of the Deans checked this means of reporting grades, whereas, only 20 per cent of the Jury and 43 per cent of the Deans checked Satisfactory/Unsatisfactory or Pass/Fail as the best means for reporting the physical education grade to the registrar. Two main reasons chosen by the respondents for selecting the alphabetical or numerical grading system were: "students want to know the degree of their achievement--how they 'measured up'--not just pass/fail," checked by 58 per cent of the Jury and 40 per cent of the Deans; and "a system of grading in physical education that indicates degrees of achievement allows for comparison with other subject matter

areas," checked by 44 per cent of the Jury and 28 per cent of the Deans.

While 20 per cent of the Jury and 43 per cent of the Deans chose Satisfactory/Unsatisfactory or Pass/Fail as the best method of reporting grades, their reasons varied to such a degree as to reflect very slight percentages for these reasons which easily might go unnoticed. It is deemed necessary, therefore, to point out the reason the respondents offered: (1) over 10 per cent of the Jury and 12 per cent of the Deans checked "pass/fail systems should take the pressure off grading techniques and allow more time for teaching and learning," and (2) 8 per cent of the Jury and 18 per cent of the Deans checked "grades in physical education activity classes reflect more than academic achievement and cannot be differentiated into specific A's, B's, C's, etc."

A Pass/Fail or any other "black-white" system of grading does not lend itself to differentiate between degrees of accomplishments. If a trend toward Pass/Fail were to develop in institutions of higher learning, the main effect it should have upon grading practices should be in the method of reporting the grade to the registrar. Basic principles, objectives and factors weighted should remain the same. The result of such a reporting system would be merely a failure to present a clear record of the students' degree of accomplishment. "Pass" would simply indicate that

the student had accomplished enough to meet the minimum requirements of the course.

The Pass/Fail system may very well be an appropriate and acceptable way of grading on the basis of eliminating the fear of a grade which might enhance the students' motivation to enroll in courses otherwise not elected.

6. A single grading system or uniform method for determining grades should be established within the women's physical education department and used by all staff members.
(For example: The factors and weight of the factors considered in the final grade should be uniform for all activity courses taught within the department.)

This was one of the three statements of belief in which a larger percentage of Deans, 73 per cent, than the Jury, 62 per cent, agreed. It seems relevant, also, that 50 per cent of the Jury and 55 per cent of the Deans checked the same reason for their belief--"the grade is more easily interpreted if there is uniformity within the department." This statement seems to have brought both groups closer together in their agreement, disagreement and the reasons for agreement. It appears to point out the belief that uniformity in grading is believed to be essential. It seems reasonable to assume that the means of determining the grade should be uniform regardless of the activity, if overall objectives are similar. An exception to this general guideline is the weighting of the factors included in the

grade for adapted physical education classes where factors such as skill, improvement and attitude would need to be considered perhaps even more than in other types of activities.

7. There should be no variations in the grading practices when men students and women students are enrolled in the same coeducational class (i.e., women students should not compete with men students for a grade).

The reason checked by 39 per cent of the Jury and 36 per cent of the Deans for the above statement was "skill tests should contain separate norms for men students and women students, but the weight or value of the items should be the same for both sexes." It is interesting to note that 30 per cent of the Jury who checked that there should be variations in the grading practices in coeducational classes also checked the same reason as those disagreeing with the statement.

Variations in the grading scale should exist for women students and men students in coeducational classes, except for some aquatic and dance activities, although the factors used to determine the grade should remain the same. In all activities where strength, power and endurance are essential, women students in coeducational classes clearly would be at a disadvantage if compared with men. Provocative questions regarding classification of students by different skill levels would be aroused if some of the women students

proved to be more highly skilled than the male students in the strength, power and endurance type activities. Placement according to skill level should apply to coeducational classes and the use of different grading scales for men and women students are necessary also. The investigator is of the opinion that a coeducational class might motivate women students to attain a higher level of skill than a class for women students only and suggests that this may become a more widespread practice, particularly in the activities designated lifetime sports.

8. There should be variations in the grading system in a class that has various skill levels within that class (i.e., students with beginning, intermediate or advanced skills in one class).

It is interesting to note that although a majority of the responding groups agreed with this statement of belief, they did so for a wide variety of reasons. Among the reasons checked for agreeing with this statement, no single reason was favored by as much as 50 per cent by either group. The highest percentage of response by both groups was to "a student with a high level of skill upon entering an activity should not be expected to achieve the same degree of improvement as a student entering the activity with little or no skill," with 45 per cent of the Jury and 32 per cent of the Deans checking this as the reason for agreeing to the statement of belief. Three other phrases checked by a

substantial number of Deans and Jury members were: (1) "improvement should be only one of the factors considered of students in the skill grade," by 42 per cent of the Jury and 25 per cent of the Deans; (2) "the grade should take into consideration individual differences of students," by 34 per cent of the Jury and 27 per cent of the Deans; and (3) "the grade should be based on achievement in reference to potentiality," by 30 per cent of the Jury and 24 per cent of the Deans.

Many institutions are employing tests for advanced placement of students in various academic areas where superior ability is demonstrated. Or, on the basis of the test scores, students are exempted from certain courses. Departments of physical education should follow suit in this respect because they cannot justify insisting upon requiring students to take a course which they do not need--simply to fulfill a requirement. The investigator poses the question, "Are physical educators afraid they will be out of a job unless college/university students are required to take courses--regardless of their needs?"

When proper placement of the student is assured, the meaning of the grade in a course would not vary as to whether it should represent final achievement only, or final achievement based on potential. If different level placement of students is properly utilized, the specific objectives for

the course may vary, however, the factors considered in the final grade and the weights accorded to them should remain the same.

If a skill classification system is not utilized to place students in classes according to their skill level, criteria for each level should be predetermined and variations in grading each skill level should exist within each class where this situation exists. While the factors considered in determining the grade should remain the same, the achievement goals should differ for the different skill level groups. Pre-tests must be administered to classify students into the various skill levels, although it is acknowledged that the pre-test may be misleading because no skill test is perfect. Teacher observation, along with the pre-test scores, will facilitate determining student status for a more realistic classification.

9. Self-evaluation by students should not be considered in determining the final grade in physical education.

The respondents strongly supported the above statement of belief, and only minute percentages from the Jury and Deans were in favor of considering student self-evaluation in determining the final grade. The two phrases receiving the highest percentages as the reasons for supporting the statement were: (1) "student self-evaluation should be obtained for guidance and counseling purposes and/or as a means of course evaluation, but not used for actual grading

purposes," which was checked by 56 per cent of the Jury and 50 per cent of the Deans; and (2) "students have a tendency to rate themselves either very high or very low, which would render their self-determined grades meaningless," which was checked by 21 per cent of the Jury and 20 per cent of the Deans.

The responses from both groups seem to imply that the student is not in a position to objectively evaluate her achievement. It appears, however, that the Academic Deans and the Physical Educators agree that a technique is useful for guidance purposes--for the student and as an evaluation of the course.

10. The factors considered in determining the final grade in physical education should be based on the objectives of the course.

Although one reason was checked more frequently by the Jury, 74 per cent, than by the Deans, 47 per cent, "the grade should be reflective of the significant purposes of the course"; the phrase, "there is no point in having grades unless they relate to the objectives of the course" suggests a close unity between the two groups of respondents in their strong support, with 64 per cent of the Jury and 61 per cent of the Deans checking the latter reason for their agreement with the statement.

There is a strong implication suggested by both groups of respondents that without course objectives to provide

guidelines for grading and something to relate the grade to, there is little use for grades. The results of the weighting of the factors by the respondents indicate three main factors which should be considered in the determination of the grade: (1) knowledge, (2) skill, and (3) improvement.

All academic components within an institution are concerned primarily with the dissemination of knowledge and its practical application. Other factors such as attitude, potential ability, sportsmanship, social adjustment, uniform, creativity, student self-evaluation, and physical fitness should not be individually computed in the grade, as they are by-products or concomitant outcomes and would, therefore, be included in either knowledge, skill or improvement regardless of the type of activity. The teacher considers many factors when planning course content, however, they cannot all be effectively measured, therefore, progressive accomplishment of such factors must be assumed. Other academic components in institutions of higher learning (i.e., Nursing and Home Economics) consider factors such as attitude, uniform, and sportsmanship in the determination of the student's final grade. Physical educators, therefore, might find it very worthwhile to investigate the techniques utilized by these components in evaluating such factors.

11. The weight of the factors considered in the final grade in physical education should correspond with the

value the teacher places on each of the objectives of the course.

Seventy-one per cent of the Jury and 53 per cent of the Deans checked as the reason for agreeing to the statement "the weight of the factors to be included in the final grade to correspond with the value of course objectives makes the grade more reflective of the significant purposes of the course." It is relevant to point out that some 34 per cent of the Jury and slightly smaller percentage of the Deans, 28 per cent, indicated a belief that some factors are intangible and either cannot be measured objectively or should only be considered as by-products of other achievements.

The three factors weighted heaviest by the respondent groups were knowledge, skill and improvement, with skill weighted twice as much as improvement and only 8 per cent higher than knowledge.

Guidelines for evaluating Knowledge:

a. Both written and subjective tests should be used for evaluating the students' knowledge as well as the teacher's success in the dissemination of the information she has attempted to impart. Tests should be administered periodically in an effort to assist the student in understanding what is considered significant. This gives the student her bearings as to what will be or is emphasized in the course. Results from periodic testing can constitute a minor portion of the final grade. If, on the other hand,

only one or two written tests are administered during the semester, the student's final grade is based on this one factor which may be representative only of the one or two hours time it took the student to complete the test.

b. Teachers should construct their own written tests to be used along with tests which have been published and are standardized. The tests constructed should be reflective of the objectives which have been emphasized by the teacher during the course. The questions formulated should not be leading, asking for memorized facts alone, nor intended to trick the student. These questions should, however, be so worded that the student will be required to think, reflect, and make associations in order to answer. The students' needs and interests should be taken into consideration, also, in the construction of the tests.

c. Class discussion and/or participation lends itself as a very informal means of evaluating the knowledge acquired by the student as well as bringing out confusion which might exist without the teacher's awareness. The types of questions the students ask in class give the teacher an idea of the information gained and what is lacking, as well as provides the teacher a clear picture of the students' interpretation of the information absorbed in class.

d. Observation of performance should be utilized as a technique to evaluate how well the student has grasped the information imparted during the course, and how well that

knowledge acquired is being transferred into actual performance. This will include execution of techniques, strategy, rules, etiquette, et cetera. The investigator believes this technique is more accurate than a test which gears the student toward isolate learning, whereas, observation provides the teacher and the student an opportunity to observe how well the knowledge gained is applied in the reality of the situation. This tool can also be of great assistance to the teacher in planning future class presentations.

Guidelines for evaluating Skill:

a. Skill tests should not be used exclusively to evaluate the grade. This would give too much weight to one test which involves such a short period of time per person involved. Basing the skill grade on one performance alone cannot be justified by the time factor involved for each student--even though administration of the test itself involves one or more class periods for the teacher.

b. Standardized skill tests should be used only if they measure what the teacher desires measured. Such tests are of little value unless they meet the needs of the objectives of the course under consideration. The teacher should determine the objectives of the course realistically in consideration of the needs and interests of the students. If certain parts of the test do not meet these needs, those parts should be left out completely. In addition to

standardized skill tests, teachers may wish to devise a test which will evidence competency in the various isolated test items.

c. National norms for standardized skill tests should not be used exclusively for evaluating a student's achievement in a course. Instead, each class should stand on its own merit.

d. Ranking by other students in the class should be utilized for the purpose of equalizing or verifying the student's grade where outside influences might have affected her performance on a specific test on a particular day.

e. Daily check lists should be used for checking student status and progress. This technique can easily be employed in small classes. In large classes it is difficult to utilize this technique of evaluation, however, it can be done during the review period and observing a small number of students at a time.

Guidelines for evaluating Improvement:

a. Pre- and post-tests should be administered to determine level of ability at the beginning and end of the semester. This method alone, however, leaves much to be desired, especially when students realize that an increase in improvement will increase the grade standing.

b. Learning curve charts which would indicate periodic progress in the student's ability are deemed necessary to aid in determining the student's rate of improvement.

These can be of significant value to the teacher in gearing her teaching approach to meet the individual needs and interests of the students.

c. Observation should be utilized as a continuing tool for evaluating improvement, although too often the subjectivity of this technique deems it questionable. By using check lists or ratings of ability level during observation, the teacher more accurately can assess those isolated skills in which the student is demonstrating improvement, whereas, it may be difficult to observe the student performing and be able to differentiate improvement.

12. Evaluative techniques should be objective.

If physical educators are to continue on the premise that uniformity in grading constitutes a more equitable means of determining a student's grade, it should be pointed out that evaluation should remain objective in all other components in a university. This in no way rules out subjective testing, in which a predetermined set of criteria has been established for determining the grade. Such subjective measurement as essay-type testing which is found in other components does not in itself constitute subjective evaluation--if certain criteria have been established for grading the content of the answers.

13. Policies regarding Attendance should be standard throughout the institution.

Attendance, as such, should not be considered a factor in computing the grade, only in the adjustment of the final grade if such is the administrative policy. In many institutions of higher learning a student is penalized in one way or another for poor attendance. Where such a situation exists, if it is a university policy, it should remain as such, and not as a factor in determining the final grade in a specific course.

In the final analysis, the investigator agrees with the Academic Deans and the Jury of Experts who served as the forum for this study that the grade will be a reflection of the teacher's values and what she has emphasized during the semester. The emphasis in the course content will be determined significantly by the personality, character, and values of the teacher. At the onset, the evaluation program utilized by the teacher should be based on what she has emphasized as the objectives of the course and in consideration of the needs and interests of the student. These objectives must be established on the basis of sound educational principles.

Recommendations for Future Studies

Contemplation of the many integral facets of grading lead the investigator to propose other studies related to marking that should help to clarify aspects of varying magnitudes:

1. A study to determine the factors, weight accorded to these factors and techniques for evaluating the factors that are included in assessing Pass/Fail in institutions utilizing this system of grading.

2. A study of the objectives in various types of activity courses in relation to the factors and weight accorded to each factor in determining a student's final grade.

3. A study of the factors included, the weight accorded and the techniques of evaluation in institutions offering only an elective physical education program.

4. A study to determine how often evaluation in physical education takes place in all types of activities.

5. A study to determine how many physical education departments employ a departmentalized system of grading.

6. A study to determine what techniques are employed to classify students on the basis of skill level for advanced placement.

7. A study to determine whether variations in the grading system exist in the advanced courses for students with a high level of skill.

8. A study to compare the factors included and weight accorded in determining the final grade between high schools and colleges/universities.

9. A study to determine the use of grades as a motivational instrument in various physical education activities.

10. A study to determine the relationship of grades perceived, grades believed to be deserved, and actual grades received in various physical education activity courses.

11. A study to determine whether institutions are considering changing the methods of reporting grades by all the components in the institution.

12. A study to determine whether the highly skilled student in one sport activity can make excellent grades in: (1) other team sports, (2) individual sports, (3) dance activities, and (4) aquatic activities.

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APPENDIX

JURY OF EXPERTS

Note: Inclusion in District represents location of Jury member on the date of the circulated opinionnaire.

Central

Dudley Ashton
Mildred Barnes
A. Gwendolyn Drew
Richard E. Donnelly
Barbara Forker
Margaret Fox
Jeanne Galley
Dorothy Holsinger
Jessie Jutten
Mabel Lee
Kathryn Schaake
M. Gladys Scott
Shirley Winsberg

Eastern

H. Jean Berger
Margaret Coffey
Margaret E. Covert
Burris Husman
Leslie W. Irwin

Harold Jack
Viola Kleindienst
Kathryn Luttgens
Helen Mackey
Clayton T. Shay
Betty Spears
Margaret Varner
Lucille H. Verhulst
Margo Ver Kruzen
Eunice Way
Arthur Weston
C. E. Willgoose
Harriett Yingling

Midwest

Naomi Allenbaugh
Pearl Berlin
Thelma Bishop
Karl Bookwalter
Marguerite Clifton
Ray O. Duncan
Marie Hartwig
Laura Huelster
Paul Hunsicker
C. O. Jackson
Ellen Davis Kelly
Fran Becker Koenig

Katherine Ley
Marie Liba
Elizabeth Ludwig
King McCristal
Margaret Mordy
Delbert Oberteuffer
Lawrence Rarick
Kathryn Weber
J. Grove Wolf
Olive Young
Earle F. Zeigler

Northwest

Marjorie J. Anderson
Joan Armstrong
Pearl Atkinson
Edith Betts
Alice Bond
Yvonne Carson
Henry Harrison Clark
Dorothea Coleman
Anne Coulston
Gale Currey
Arthur Esslinger
Sister Marita Joan
Bette Lowery
Reba Lucey

Madge Phillips
Eva Seen
Gaydern Thompson
Ruth Wilson
Mildred B. Wohlford
Janet Woodruff

Southern

Joan Askew
Betty Autrey
Harold Barrow
Margaret Crickenberger
Ruth Fink
Grace Fox
Gail Hennis
Belle Mead Holm
Eveline Kappes
Joy W. Kistler
Nancy Lay
Ruth Lindsey
Lynn McCraw
Rosemary McGee
Betty McCue
Geneva Myrick
(Name not designated)
Sheila O'Gara
Sue Rainey

Caroline Sinclair

Jeanette Wieser

Southwest

Frances Cake

Kathleen Fox

Leona Holbrook

Aileen Lockhart

Ben W. Miller

Donna Mae Miller

Dorothy Mohr

John E. Nixon

Ann Paterson

Mary Pilgrim

Howard Slusher

Elizabeth Ann Stitt

Mary An Turner

D. B. Van Dalen

Earl Wallace

PANEL OF ACADEMIC DEANS

Note: Listed by Institutions of Higher Learning represented in this study.

Middle States

University of Delaware
District of Columbia Teachers College
Salisbury State College
Towson State College
University of Maryland
Jersey City State College
Hobart and William Smith Colleges
Hofstra University
Keuka College
New York University
Pratt Institute
State University College New York
Wells College
Cheyney State College
Shippensburg State College
Wilkes College

New England

University of Connecticut
University of Hartford

Bates College
Farmington State Teachers College
Nasson College
University of Maine
Merrimack College
State College at Bridgewater
State College at Framingham
Suffolk University
University of Massachusetts
Plymouth State College
Pembroke College
Johnson State College
Middleburg College
University of Vermont

North Central

Illinois Wesleyan University
Kansas State University
University of Detroit
Saint Louis University
Chadron State College
Mary Manse College
University of Cincinnati
Western Reserve University
Wittenberg University
Oklahoma College for Women

Southern State Teachers College

Yangton College

West Virginia University

Marquette University

Wisconsin State College

Northwest

Northwest Nazarene College

College of Great Falls

Eastern Montana College of Education

Montana State College

Rocky Mountain College

University of Alaska

Linfield College

Marylhurst College

Portland State College

Brigham Young University

Utah State University

Weber State College

Gonzaga University

Seattle Pacific College

Seattle University

University of Washington

Walla Walla College

Southern

Rollins College

North Georgia College
University of Georgia
West Georgia College
Woman's College of Georgia
Murray State College
Ursuline College
Western Kentucky State College
Tulane University
Jackson State College
Fayetteville State College
Western Carolina College
Limestone College
Baylor University
Hardin-Simmons University
Sam Houston State Teachers College
Southern Methodist University
Radford College

Western

Chico State College
Fresno State College
Humboldt State College
Occidental College
St. John's College
San Francisco State College
Sonoma State College

Stanislaus State College

University of California at Davis

College of Guam

Chaminade College of Honolulu

LETTER TO COLLEGE/UNIVERSITY PRESIDENTS

May 11, 1966
Box 353
Southern Methodist University
Dallas, Texas

As partial fulfillment of the requirements for a Doctor of Philosophy Degree at the Texas Woman's University in the field of physical education, I am undertaking a study of grading philosophies in an effort to establish criteria for grading women students in the required program of physical education. This study has been approved by my dissertation committee.

The answers to an opinionnaire completed by a representative panel of Academic Deans throughout the country will formulate the basis for one part of the study—the administrators' viewpoint. It would, therefore, be greatly appreciated if you would refer the enclosed opinionnaire to the Vice President in Charge of Academic Affairs or the Academic Dean, whose responsibilities include the supervision of grading policies at your institution.

Your cooperation is greatly appreciated.

Sincerely,

Shirley Corbitt

LETTER TO ACADEMIC DEANS

May 11, 1966
Box 353
Southern Methodist University
Dallas, Texas

Dear Sir:

As partial fulfillment of the requirements for a Doctor of Philosophy Degree at the Texas Woman's University in the field of physical education, I am undertaking a study of grading philosophies in an effort to establish criteria for grading women students in the required program of physical education. This study has been approved by my dissertation committee.

The answers to an opinionnaire completed by a representative panel of Academic Deans throughout the country will formulate the basis for one part of the study—the administrators' viewpoint. A second part consists of the opinions expressed by a selected group of authorities in the field of physical education. The third phase of the study will be concerned with a comparison of the first two and the theories and/or guidelines proposed for grading in works by authors in the field of physical education and higher education.

It is my sincere hope that you will consider this research worthy of your consideration and participate through the completion of the enclosed opinionnaire. A copy of the results will be made available to all respondents. Please return the enclosed opinionnaire at your earliest convenience, but prior to June 15.

Your help and cooperation in making this study a success will be greatly appreciated.

Sincerely,

Shirley Corbitt

LETTER TO PHYSICAL EDUCATION EXPERTS

May 15, 1966
Box 353
Southern Methodist University
Dallas, Texas

As partial fulfillment of the requirements for a Doctor of Philosophy Degree at the Texas Woman's University in the field of physical education, I am undertaking a study of grading philosophies in an effort to establish criteria for grading women students in the required program of physical education. This study has been approved by my dissertation committee.

The answers to an opinionnaire completed by a selected group of professionals in the field of physical education will formulate the basis for one part of the study. A second part consists of the opinions expressed by a representative panel of Academic Deans throughout the country, which will constitute the administrators' viewpoint. The third phase of the study will be concerned with a comparison of the first two and the theories and/or guidelines proposed for grading in works by authors in the field of physical education and higher education.

It is my sincere hope that you will consider this research worthy of your consideration and participate through the completion of the enclosed opinionnaire. A copy of the results will be made available to all respondents. Please return the enclosed opinionnaire at your earliest convenience, but prior to June 15.

Your help and cooperation in making this study a success will be greatly appreciated.

Sincerely,

Shirley Corbitt

FOLLOW-UP LETTER

In May, 1966, I mailed to you an opinionnaire with a cover letter requesting your assistance in referring this material to the Vice President in Charge of Academic Affairs or the Academic Dean, whose responsibilities include the supervision of grading policies at your institution. Since I failed to receive a response to my original inquiry, I am submitting a copy to replace the previous material sent in case it was misplaced or lost in the mail.

Again, I am soliciting your help in this matter and will greatly appreciate your cooperation.

Sincerely,

Shirley Corbitt

AN OPINIONNAIRE REGARDING GRADING IN THE REQUIRED PROGRAM OF
PHYSICAL EDUCATION FOR WOMEN IN HIGHER EDUCATION

Part I

Directions: In Part I, you are asked to respond to eleven statements reflecting a point of view regarding grading. If you agree with the statement, check "agree" --if you disagree, check "disagree". Under each of the eleven statements check the phrase or phrases which best describe why you agreed or disagreed with the statement of belief. Please use the space "other" to report additional concepts which you may wish to express.

I BELIEVE THAT:

- agree___ disagree___ 1. Physical Education has a definite place in the curriculum of higher education.
- ___ a. the uniqueness of the objectives of physical education can not be accomplished in any other department
 - ___ b. higher education should provide opportunities for students to gain knowledges and skills in all areas of learning which can contribute to a richer life
 - ___ c. higher education should concern itself with preparing an individual for a career--physical education is not concerned with accomplishing this purpose
 - ___ d. physical education activities are not academically respectable and therefore have no place in higher education
 - ___ e. over-crowded conditions in physical education activity classes make it impossible for basic objectives to be achieved--it is better to offer nothing than to do a poor job
 - ___ f. opportunities for college students to improve their physical fitness and learn recreational skills are as important as increasing knowledge in the traditional liberal arts subjects
 - ___ g. other:
- agree___ disagree___ 2. Physical Education should be available to the general college/university student.
If it is available, how should it be offered?
- ___ a. as an elective for credit
 - ___ b. as an elective for no credit
 - ___ c. as a requirement for credit
 - ___ d. as a requirement for no credit
 - ___ e. other:

- agree___ disagree___ 3. The physical education grade should be included in computing the over-all college/university grade point average.
- ___ a. it is one way for the physical education department to maintain prestige
 - ___ b. achievement in physical education is as important as prowess in other subjects in determining over-all accomplishments in higher education
 - ___ c. students are motivated to achieve if they know the grade "counts"
 - ___ d. physical education is non-academic and, therefore, should not "clutter" the grade point average
 - ___ e. honor students are usually poor in physical performance skills and should not be penalized
 - ___ f. the grade point average should represent all courses in which the student has invested time and money
 - ___ g. there should be no credit attached to physical education therefore, grades would not be a part of the over-all grade point average
 - ___ h. other:
- agree___ disagree___ 4. The method of reporting physical education grades to the registrar (A, B, C; 1, 2, 3; or Pass/Fail) should be the same as that used by other components within an institution.
- ___ a. it is one way for the physical education department to maintain prestige
 - ___ b. evaluation of physical education achievement may differ from other subject matter areas as to techniques or methods employed, but the final mark can and should be reported in a standardized way throughout the institution
 - ___ c. the grading and reporting system used in physical education should clearly reflect the end product, regardless of the system
 - ___ d. the objectives of physical education differ from most academic subjects, and the method of reporting grades to show accomplishment of objectives should differ
 - ___ e. other:
5. The best method of reporting grades for physical education activity classes to the registrar is:
- _____ A. B, C, D, F or 1, 2, 3, 4, 5
 - _____ Satisfactory/Unsatisfactory or Pass/Fail
 - _____ Other:

- ___ a. students want to know the degree of their achievement--
how they "measured up"--not just pass/fail
- ___ b. a system of grading in physical education that
indicates degrees of achievement allows for comparison
with other subject matter areas
- ___ c. other methods of marking in physical education do not
allow for leniency or individual differences
- ___ d. realistically, it is impossible to clearly differentiate
between fine degrees of achievement in physical education
activity classes
- ___ e. grades in physical education activity classes reflect
more than academic achievement and cannot be differentiated
into specific A's, B's, C's, etc.
- ___ f. grades signifying degrees of achievement may be used
as threats for motivational purposes
- ___ g. pass/fail systems should take the pressure off grading
techniques and allow more time for teaching and learning
- ___ h. other:

- agree___ disagree___ 6. A single grading system or uniform method for determining
grades should be established within the women's physical
education department and used by all staff members. (For
example: The factors and weight of the factors considered
in the final grade should be uniform for all activity
courses taught within the department.)
- ___ a. the grade is more easily interpreted if there is
uniformity within the department
 - ___ b. serves as a guide for teachers by emphasizing the
need to stress certain factors in teaching by following
a uniform system of grading
 - ___ c. uniformity and standards to strive for affect the
quality of teaching as well as grading
 - ___ d. uniform grading systems limit individualism and leniency
in considering variations in class personalities
 - ___ e. uniform grading systems limit the teacher's ability
to relate students to achievement
 - ___ f. students feel more secure in physical education classes
regardless of whom they have for a teacher
 - ___ g. uniform systems of grading are just one more step
toward removing individual identity of teacher and
student in higher education
 - ___ h. other:

- agree___ disagree___ 7. There should be variations in the grading practices when
men students and women students are enrolled in the same
coeducational class. (i.e., women students should not
compete with men students for a grade)

- ___ a. a uniform grading scale in coeducational classes is not equitable for women students
- ___ b. although men students may attain a higher skill level than women students, there should be two grading scales for skill performance so that the reported grade not reflect a difference by sex
- ___ c. skill tests should contain separate norms for men students and women students, but the weight or value of the items should be the same for both sexes
- ___ d. women students achieving a higher skill level than men students should receive a grade reflective of this attainment
- ___ e. there should be a uniform method of grading throughout the entire men's and women's physical education departments
- ___ f. grades for written work should be the same for both sexes, but variations are permissible in grading skill
- ___ g. other:

agree___ disagree___ 8. There should be variations in the grading system in a class that has various skill levels within that class. (i.e., students with beginning, intermediate or advanced skills in one class.)

- ___ a. a student with a high level of skill upon entering an activity should not be expected to achieve the same degree of improvement as a student entering the activity with little or no skill
- ___ b. the grade should be based on achievement alone, regardless of skill level
- ___ c. the grade should be based on achievement in reference to potentiality
- ___ d. the grade should take into consideration individual differences of students
- ___ e. improvement should be only one of the factors considered of students in the skill grade
- ___ f. written examinations should be developed for each skill level represented in the class rather than a single test used for all skill levels
- ___ g. other:

agree___ disagree___ 9. Self-evaluation by students should be considered in determining the final grade in physical education.

- ___ a. student self-evaluation should be considered in determining the final grade in all courses throughout the college/university

- ___ b. students should be able to determine whether they have accomplished the objectives of the course and to what degree
- ___ c. students have a tendency to rate themselves either very high or very low, which would render their self-determined grades meaningless
- ___ d. students see themselves more objectively than teachers
- ___ e. this system offers students the opportunity to compare their personal evaluation with teacher evaluation or vice versa
- ___ f. student self-evaluation should be obtained for guidance and counseling purposes and/or as a means of course evaluation, but not used for actual grading purposes
- ___ g. other:

agree___ disagree___ 10. The factors considered in determining the final grade in physical education should be based on the objectives of the course.

- ___ a. there is no point in having grades unless they relate to the objectives of the course
- ___ b. objectives provide valuable guidelines for grading
- ___ c. the grade should be reflective of the significant purposes of the course
- ___ d. objectives should be unique to teacher as well as the activity and consequently using objectives as the foundation for determining grades eliminates the possibility of a departmental grading system
- ___ e. some objectives cannot be objectively measured
- ___ f. there is no justification for including intangible factors in determining the final grade, even if they are included in stated course objectives
- ___ g. other:

agree___ disagree___ 11. The weight of the factors considered in the final grade in physical education should correspond with the value the teacher places on each of the objectives of the course.

- ___ a. some of the factors included in the final grade are intangibles and should be considered in the final grade only as by-products of other achievements
- ___ b. all of the objectives of the course do not need to be considered in determining the final grade
- ___ c. intangible factors which cannot be objectively measured and, therefore, cannot be justified, should not be included in determining the final grade
- ___ d. the weight of the factors to be included in the final grade to correspond with the value of course objectives makes the grade more reflective of the significant purposes of the course
- ___ e. other:

Part II - WEIGHT OF THE FACTORS IN GRADING

Directions: Using the chart at the bottom of the page to indicate your answers, place a zero (0) beside those items which you would not score. Please indicate by percentages the weight to be given those factors you consider should be included in determining the final grade in: (1) a team sports course, (2) an individual or dual sports course, (3) an aquatics course, (4) a dance course, (5) a movement fundamentals or body mechanics course, and (6) an adaptive or correctives course. Wherever feasible, distinguish between the six types of courses, however, if you believe that the weight of a factor should not vary regardless of the activity, use Column VII to indicate weight. For example: If you think that knowledge should constitute 40% of the final grade in all courses, write 40% in Column VII, and leave the other six columns blank.

To enhance the reliability of the data, the factors listed below encompass the following concepts:

1. Knowledge--scope of information regarding the activity
2. Skill--demonstrated physical ability; execution of the techniques used in the activity
3. Improvement--the difference between skill ability or skill technique at the beginning and at the end of the course
4. Attitude--effort evidenced; enthusiasms displayed, initiative and interest shown
5. Potential ability--inborn capacity to achieve; inherent capabilities
6. Sportsmanship--player cooperation; graceful acceptance of the results of competition
7. Social adjustment--acceptance and acknowledgement of the worth of an individual to the group; ability to function as a member of a group; ability to be accepted by a group
8. Uniform--the condition and appearance of the costume worn in the class
9. Attendance--presence and active participation during the class period
10. Creativity--ability to originate ideas; originality displayed
11. Student self-evaluation--student assessment of work and learning accomplished
12. Physical Fitness--demonstrated achievement in such factors as strength, endurance, balance, flexibility, speed and agility

FACTORS	I Team Sport	II Individual Dual Sport	III Aquatic	IV Dance	V Movement Fundamentals	VI Adaptive	VII No differ- entiation in weight of factors by type activity
Knowledge .							
Skill							
Improvement							
Attitude							
Potential ability							
Sportsmanship							
Social Adjustment							
Uniform							
Attendance							
Creativity							
Student Self-evaluation							
Physical Fitness							

Part III

Directions: Briefly explain how each of the following factors should be evaluated. (i.e., tests, observations, student reports, etc.) If you do not think an item should be included in the determination of the final grade, please indicate your reasons for holding this opinion.

1. Knowledge: _____

2. Skill: _____

3. Improvement: _____

4. Attitude: _____

5. Potential Ability: _____

6. Social Adjustment: _____

7. Student Self-Evaluation: _____

8. Creativity: _____

9. Sportsmanship:

10. Physical Fitness:

General Comments: In the space below and/or on the back of the page, please make any additional comments which will more clearly reflect your philosophy in regard to grading women students in the required physical education program than this opinionnaire may indicate.