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A COMPARATIVE EXAMINATION OF TWO ACCEPT-
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TO PHYSICAL EDUCATION PROGRAMS IN SELEC-
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THE UNIVERSITY OF OKLAHOMA
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A COMPARATIVE EXAMINATION OF TWO ACCEPTED CURRICULUM
EVALUATIVE TOOLS APPLIED TO PHYSICAL EDUCATION
PROGRAMS IN SELECTED STATE-SUPPORTED
COLLEGES AND UNIVERSITIES

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
degree of
DOCTOR OF EDUCATION

BY
FRANK DELANO PURNELL
Norman, Oklahoma
1968

A COMPARATIVE EXAMINATION OF TWO ACCEPTED CURRICULUM
EVALUATIVE TOOLS APPLIED TO PHYSICAL EDUCATION
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COLLEGES AND UNIVERSITIES

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DISSERTATION COMMITTEE

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Finally, the writer wishes to express his eternal appreciation to his devoted wife, Rosentene, for her sympathetic understanding, patience, sacrifice, and encouragement, without which this study could not have been completed.

DEDICATION

This investigation is respectfully dedicated to my beloved parents Mr. and Mrs. Walter Purnell*, to whom I owe all that I am or ever hope to be, and the "partner of my life," Rosentene Bennett Purnell.

*Deceased

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CHAPTER I

INTRODUCTION

Background of the Study

Assessment instruments within specific areas of study have been compared in order to determine the degree to which they in fact are measuring the same thing. More specifically, Anastasi¹ studied the relationship among various intelligence tests, and Catell² investigated the relationship among several personality indexes. Other comparisons of instruments have included the Stanford-

¹Anne Anastasi, Psychological Testing, New York (MacMillan, 1961).

²R. B. Catell, Personality and Motivation Structure and Measurement, New York (World Book Company, 1957).

Binet Scale and the Wechsler Intelligence Tests³, as well as Differential Aptitude Test and General Aptitude Test battery.⁴

Historically, physical education leaders have shown interest as well as initiated efforts in establishing competent standards for the teacher preparation institutions. At the initial meeting of the Association for the Advancement of Physical Education, in 1885, Walter Truslow introduced a resolution calling for a committee to study the professional qualifications of teachers and teacher training institutions.⁵

Throughout the periods that followed these early efforts of pioneer physical educators there has been continual manifestation of program evaluation in physical education, using score cards, check lists, and surveys. A majority of the evaluative instruments were jury validated. Neilson⁶, State Director of Health and Physical

³Georgia Sachs Adams, Measurement and Evaluation in Educational Psychology and Guidance, New York (Holt, Rinehart and Winston, 1965).

⁴Ibid., p. 202.

⁵H. L. Berridge, "Accreditation of Professional Education in Physical Education," Fifty-First Annual Proceeding College Physical Education Association, LI (Winter, 1948).

⁶N. P. Neilson and others, "National Study of Professional Education in Health and Physical Education," Research Quarterly, VI (December, 1935).

Education for the state of California, made a major breakthrough in the usage of standards for physical education programs when he published the report "The National Study of Professional Education in Health and Physical Education" in 1935. The report was the work of the National Study Committee, of the Department of the National Education Association. The Committee established a rating scale for evaluating institutions that claimed to prepare physical education teachers. The primary purpose of the study by Neilson was to establish continuity among the institutions preparing physical education teachers. A diversity of course contents, course names, and course numbers was so irregular that relating programs within states and between states was nearly impossible.⁷

The American Association for Health, Physical Education, and Recreation sponsored the development of a score-card in 1952, designed specifically for use throughout the nation in evaluating physical education programs. The Association cooperated with fourteen other accrediting organizations in the formulation of the evaluative criteria. Nordley⁸ chaired the Committee for the Improvement of

⁷Ibid., p. 48.

⁸Carl L. Nordley, "The Evaluation and Accreditation of Institutions Engaged in Professional Preparation in Health Education, Physical Education, and Recreation," Fifty Annual Proceedings College Physical Education Association, LV (1952).

Professional Preparation in Health Education, Physical Education, and Recreation, which had as one of its purposes the establishment of a set of standards and criteria to be used by the American Association of Colleges for Teacher Education in Accreditation of Institutions.

In 1957, a workshop was held to revise the criteria of the Nordley committee in view of the accumulation of suggestions since 1952. The result of that workshop was "The Evaluation Standards and Guides in Health Education, Physical Education, and Recreation." The purpose of that document was to provide the faculties of institutions of higher learning with the standards and guides which the workshop had extracted from the 1957 study.⁹

It was during the same year that Sauter¹⁰ developed a score-card that was validated by a jury of experts representing different geographical regions of the United States. He used this instrument to evaluate the undergraduate professional preparation programs in physical education for men in Indiana. Sauter's score-card included the following general areas: General Institution Practices; Faculty and Staff; Education Program; Professional Laboratory Experiences; Selection, Guidance, and

⁹Ibid., p. 42.

¹⁰W. E. Sauter, "The Status of Undergraduate Professional Preparation for Physical Education in Selected Colleges and Universities in the State of Indiana," Doctoral Dissertation (Indiana University, 1957).

Recruitment of Students; Library and Audio-Visual Materials; Indoor Facilities; Outdoor Facilities; Health Services; and Placement and Follow-up.

Baker¹¹ in his study of institutions of higher learning in the state of Arkansas used the "Northwest Council of Teacher Education Standards for Health, Physical Education and Recreation" questionnaire to evaluate the Physical Education programs in the seven state-supported teacher education institutions in that state. This instrument was used as a device to identify the needs, strengths, and weaknesses of a physical education program.

In recent years, score-cards as evaluative instruments have been used widely in the assessment of the status of physical education programs in institutions of higher learning. The relationships of the instruments to each other is somewhat vague. Prior studies which have dealt with assessing the status of physical education programs have used only one instrument in analyzing the strength, needs, and weaknesses of their programs.¹²

The Laporte Score-Card¹³ and the Bookwalter Score-

¹¹William B. Baker, "An Evaluation of Undergraduate Professional Preparation in Physical Education for Men in Seven State-Supported Institutions of Higher Learning in Arkansas," Doctoral Dissertation (University of Arkansas, 1962).

¹²Gladys M. Scott, Research Methods in Health, Physical Education, and Recreation (Washington, D.C., 2nd edition, 1959).

¹³William Ralph Laporte and John Cooper, The Physical Education Curriculum (Los Angeles:6th ed., 1955).

Card¹⁴ (Appendix A and B) are two commonly used instruments¹⁵ that are designed specifically for evaluating physical education programs. Since these instruments were used so often in the evaluation of physical education programs, comparison of the results produced by the instruments seems eminently pertinent to a concern for the improvement of physical education programs. Such an analysis would also be of assistance to the physical education directors of the institutions studied in their efforts to improve the programs of their own departments.

The first of the commonly used instruments was developed by Dr. Karl Bookwalter and Robert J. Dollenger¹⁶ at the University of Indiana in 1965. It is known as "A Score-Card for Evaluating Undergraduate Professional Programs in Physical Education (Revised Edition)." The score-card is organized under ten major headings. Each sub-heading has from two to twenty-five questions which have arbitrary-response type answers with numerical

¹⁴Karl W. Bookwalter and Robert J. Dollenger, A Score-Card for Evaluating Undergraduate Professional Preparation in Physical Education (Bloomington: 2nd ed., 1955).

¹⁵Robert J. Dollenger, "Evaluation of Undergraduate Professional Preparation Programs in Physical Education Association for Men," Proceeding for the National College Physical Education Association for Men (Washington, D.C., 1964), p. 102. Richard R. Buck, "The Evaluation of Undergraduate Professional Preparation Programs in Colleges and Universities in Oklahoma," Doctoral Dissertation (University of Arkansas, 1967).

¹⁶Bookwalter, op. cit., p. 1.

values. The major headings are weighted according to the importance placed upon that portion of the program by Bookwalter and Dollgener. For example, under Area II, Staff Standards (Appendix B) the sub-area "Qualifications in Their Major Field," includes six specific items concerned with qualifications, such as: "all teachers on the staff hold at least the master's degree," the partial steps toward this are: fifty percent, seventy percent, all do. Each of the ten areas, their sub-areas and relevant standards or items were assigned defensible and useful numerical, weighted values. It is noted by Dollgener that "Values or weightings were also assigned to partial compliance for a given standard or item."¹⁷ So, in the preceding example, the area "staff standards" had a weighted value of one hundred twenty-one of one thousand points for the total score-card; the sub-area "qualifications" in their major field has a weighted value of twenty-three points of the one hundred twenty-one points for that area; and the one item or standard under this sub-area, "all teachers on the staff hold at least the master's degree", had a weighted value of five points of the twenty-three points for that sub-area. The partial steps were weighted as follows: fifty percent (1), seventy-five percent (3), and all do (5).¹⁸ The scoring

¹⁷Dollgener, op. cit., p. 102.

¹⁸Ibid., p. 104.

makes it possible to obtain a total score for all ten major headings (Appendix B), which are listed below:

- I. General Institutional and Departmental Practices
- II. Staff Standards
- III. Curriculum Policies
- IV. The Teaching Act
- V. Service Program and Extended Curriculum
- VI. Student Services
- VII. Library-Audio-Visual
- VIII. Supplies and Equipment
- IX. Indoor Facilities
- X. Outdoor Facilities

The second frequently used instrument is the Laporte Health and Physical Education Score-Card No. II, (Appendix A). It was developed by Dr. William Ralph Laporte and John Cooper¹⁹ at the University of Southern California in 1955, and entitled "Health and Physical Education Score-Card No. II, (Revised Edition)." This score-card is also divided into ten major areas with arbitrary-response type answers with numerical values. The major headings are also weighted according to the importance placed upon that portion of the program by Laporte and Cooper. For example, under the area of program of activities, the total possible points that an institution can accrue is thirty. The ten standards included under this major area yield a total possible value of thirty if the institution being evaluated meets fully all the requirements under this major heading. Each of the ten major areas which comprise the Laporte

¹⁹Laporte, op. cit., p. 23.

Score-Card yields 30 points. Consequently the total possible score any institution can be assigned is 300.²⁰ The major headings are listed below:

- I. Program of Activities
- II. Outdoor Areas
- III. Indoor Areas
- IV. Locker and Shower Areas
- V. Swimming Pool
- VI. Supplies and Equipment
- VII. Medical Examination and Health Services
- VIII. Modified-Individual (Corrective) Activities
- IX. Organization and Administration of Class Programs
- X. Administration of Intramural and Interschool Athletics

Scott states that "regardless of the instrument that is to be used to assess a program, it should include all phases of the program that are to be compared."²¹ The Physical Education programs which were studied with the two evaluative tools were predominantly Negro state-supported institutions of higher education in seven Southern states.

Vernon W. Henderson noted that "the basic thrust of the transformation [of American society] is that race slowly but perceptibly is diminishing as a factor conditioning men's lives."²² Yet a study of predominantly Negro

²⁰Harold M. Barrow and Rosemary McGree, A Practical Approach to Measurement in Physical Education, Philadelphia. (Lea & Febiger, 1964).

²¹Scott, op. cit., p. 109.

²²Vernon W. Henderson, "The Role of Predominantly Negro Institutions," The Journal of Negro Education, XXXVI. (Summer, 1967).

institutions is timely, not only because of the general concern about their status, but also because many studies have been ostensibly inadequate as to methodology and thoroughness.²³ Moreover, what are presently Negro institutions will doubtless for a long time serve a real and necessary purpose in the preparation of what McGrath calls the "irrestible legion of oncoming students." Thus, there is a need to carefully study the quality and effectiveness of their programs and to test the adequacy of the measurement. In short, growth and development, not disestablishment of such institutions, should be the goal of educators.

A study that seeks to measure the quality by comparing the results of two different instruments cannot only be a guide for programmatic improvement and further development, but may also shed light on the instruments themselves. The need for more and better studies aimed at the evaluation of program in undergraduate preparation in physical education, particularly in Negro institutions, was recognized by Towns²⁴ as early as 1950. Little have intervening developments changed this need.

²³Stephen J. Wright, "Problems, Development and Issues Incident to Equality of Opportunity in the Higher Education of Negroes: A Critical Summary of the 1966 Yearbook," The Journal of Negro Education, XXXV (Fall, 1966), p. 506.

²⁴Ross R. Towns, "A Study of Professional Education in Physical Education in Selected Negro Colleges," Doctoral Dissertation (University of Indiana, 1950), pp. 3-4.

Statement of the Problem

The problem of this study was that of determining the similarity between two evaluative tools frequently measuring undergraduate professional preparation programs in physical education. In other words, do the Bookwalter and Laporte Score-Cards measure essentially the same - aspects of a physical education program? In addition to determining the relationship of the two instruments, the study determined the status of the undergraduate professional preparation physical education programs in selected predominantly Negro state-supported institutions of higher learning.

The problem of the study can best be understood and most efficiently examined in terms of the following questions which provide a structure for the study.

1. Is there a significant relationship between Laporte and Bookwalter Score-Cards used in the evaluation of physical education programs; that is, do institutions that score high on one instrument also score high on the other instrument?

2. What is the over-all status of the undergraduate professional preparation programs in the selected state-supported colleges and universities?

3. How do the ten major areas of physical education of the undergraduate professional preparation compare with each other at the institutions studied?

4. What recommendations can be made to these institutions to aid in strengthening the weak areas of their programs in physical education?

Limitations

The following limitations should be noted regarding this study:

1. The study was limited to the total possible points of the Bookwalter and Laporte score-cards, i.e., 1000 points for the Bookwalter and 300 total points for the Laporte.

2. This study was limited to the following colleges and universities:

Alabama A & M College, Huntsville, Alabama
Alabama State College, Montgomery, Alabama
Alcorn A & M College, Lorman, Mississippi
Arkansas A M & N College, Pine Bluff, Arkansas
Grambling College, Ruston, Louisiana
Jackson State College, Jackson, Mississippi
Langston University, Langston, Oklahoma
Mississippi Valley State College, Itta Bena,
Mississippi
Prairie View College, Prairie View, Texas
Southern University, Baton Rouge, Louisiana
Tennessee A & I University, Nashville, Tennessee.

3. This study was limited to an analysis of physical education programs in these selected institutions according to the standards of the Laporte and Bookwalter Score-Cards.

Purpose of the Study

The primary purpose of the study was to determine the relationship of two tools frequently used in evaluating physical education programs. This study aims to reveal the degree, if any, of similarity between the results obtained from the use of the two instruments. Thus one may determine to an extent the relative degree of validity of the instruments. In other words, are the two instruments measuring the same thing, when a physical education program is compared to the two-tool standards? Do institutions that score high on one instrument also score high on the other instrument? In addition to determining the relationship of the two instruments was the purpose of identifying the needs and weaknesses of the physical education programs in these institutions.

Definition of Terms

For purposes of understanding and clarification the following terms as defined below were used in the study:

State-Supported Colleges and Universities--refers to those colleges and universities which serve predominantly Negro students and that receive their complete or major financial support from state appropriations.

Evaluative Instruments--refers to the Modified Laporte and Bookwalter score-cards. This included the standards structured in the two score-cards.

Professional Preparation--the term used to describe the various phases of the physical education programs.

Facilities and Supplies--refers to the availability of physical education material which is necessary for the provision of scheduled activities in the physical education department.

Curriculum Policies and Practices--refers to the regulation of courses offered in the undergraduate physical education program.

Service Program--a term used to describe the various services provided for students by the institutions and the physical education departments.

Overview of Study

This study is divided into five chapters. The first chapter constitutes the introduction which identifies the problem investigated. The second chapter presents a study of selected literature related to the problem. The third chapter deals with procedures and methods of investigation used in the study. The fourth chapter contains an analysis and interpretation of the collected data. The fifth chapter is composed of a summary, conclusions and recommendations resulting from the study.

CHAPTER II

REVIEW OF RELATED RESEARCH AND LITERATURE

Numerous studies have been made in physical education in which a single instrument was applied to a single physical education program to examine its status.²⁵ However, the literature revealed that there is a scarcity of studies which deal with the predominantly Negro college, specifically, the status of the physical education department.²⁶ Yet increasingly various aspects of the physical education programs in such schools have been studied either by use of a single instrument: the Bookwalter

²⁵W. E. Sauter, "The Status of Undergraduate Professional Preparation for Physical Education in Selected Colleges and Universities in the State of Indiana," Doctoral Dissertation (Indiana University, 1957). Phillip E. Allsen, "An Evaluation of the Physical Education Program for Men in Selected Junior Colleges," Doctoral Dissertation (Utah University, 1965). Dexter L. Morehouse, "Certification Requirements of Physical Education Teachers Between 1953 and 1959," Research Quarterly, (March, 1961). N. P. Neilson and others, "National Study of Professional Education in Health and Physical Education Association," Fifty-First Annual Proceeding, College Physical Education Association, LI (Winter, 1948).

²⁶Earle H. West, "Summary of Research During 1964 Related to the Negro and Negro Education," The Journal of Negro Education, XXXV (Winter, 1966).

or Laporte, or some such similar instrument or the check-list or questionnaire. Increasingly validity has been shown to be a factor of great concern. Hence the addition of the visitation-interview method. Where such studies have not been done in predominantly Negro institutions, techniques have been instructive. Some of the more significant of such studies are herein reviewed.

Among the most significant studies which make use of individual score-cards to study physical education programs was the Munford²⁷ study of forty-eight private and public predominantly Negro senior colleges of various sizes located in nine different states. The aim of the study was to measure the relative status of the physical education programs in the private colleges as compared to the public. Munford used the Modified Laporte Score-Card No. II. His study revealed that the public and private colleges were significantly different in some of the headings on the score-card, particularly, in the indoor areas and program activities. The overall differences in the physical education programs when private colleges were compared to public colleges favored the public colleges. The major contribution of this study was to measure kinds of institutions as they rate according to one instrument.

²⁷Arnett W. Munford, "The Present Status of Health and Physical Education Programs in Negro Senior Colleges," The Research Quarterly, X (March, 1948), pp. 190-197.

Thus the limitations of the instrument would also limit the validity of the study. The study further pointed out another significant fact: that private and public Negro colleges had a highly mixed heterogeneous situation with respect to physical education programs--a situation running from little or nothing to some good programs. Thus a singular comparison of institutions based on their racial constituency was the focus of a study by Puckett later on.

Puckett's²⁸ study of selected Negro and white colleges in 1959 also made use of the Modified Laporte Score-Card No. II to compare the status of physical education programs. Emphasis in the investigation was placed on the quality of areas, such as facilities and equipment, staff personnel, organization of the program and curricula. Data for the study were collected primarily through personal interviews with the heads of the physical education departments and in some instances with other staff members of the selected institutions. The data indicated wide variations in areas of the colleges studied. The strongest areas were programs and curricula, outdoor facilities, gymnasium areas, equipment offices, staff facilities, medical examination, health services and locker and shower areas. The findings indicated little difference in the over-all

²⁸ John Ralph Puckett, "An Evaluation of Certain Areas of Physical Education Services Programs of Selected White and Negro Colleges in Tennessee," Doctoral Dissertation (University of Tennessee, 1959).

evaluation of the physical education service programs in those of white and those of Negro institutions. Here again the validity of the data collected was based on the degree of validity of a single instrument.

Dollenger²⁹, in a study closely related to Munford's, used the Bookwalter score-card to compare physical education programs of fifteen private and public institutions of higher learning in the state of Indiana. For each institution the existing conditions, policies, practices, and facilities were scored and recorded. After the collection of the data from the score-card was computed and analyzed, the author noticed that the average attainment of the total possible score was 67.9 percent. Six of the fifteen institutions evaluated scored greater than the mean and nine scored less than the mean. Further analysis of the data, as measured by the percent attainment revealed that among the top seven institutions, four were state supported. The average attainment of the four state institutions was 77.2 percent, as compared to the average attainment of 64.6 percent for the privately supported institutions that were included in the study sample. The author concluded on the basis of this study that state-supported institutions in the state of Indiana were better qualified to prepare physical education teachers.

²⁹Dollenger, op. cit., p. 102.

Additional significant information was obtained from a major heading of the score-card labeled organizational structure. The information obtained from this section on the score-card indicated that seven of the institutions were departments of a division or a school within the total institution. The average attainment for these seven institutions was 75.7 percent. The remaining eight institutions were departments within the total institutions; their average attainment was 64.5 percent. Thus, it appeared that institutions with physical education departments within a division or a school of physical education were better qualified to prepare physical education majors. A substantiating study by the use of a different instrument might have added significantly to the implications of this study.

A similar study to the preceding one, using the Bookwalter Score-Card, was conducted by Buck³⁰ in 1967 of selected institutions of higher learning in the state of Oklahoma. Here again the validity of one instrument was used to evaluate the present status of physical education programs.

The study indicated that sixteen institutions of higher learning were included in the study. Of the sixteen institutions studied, four were private institutions, and

³⁰Buck, op. cit., p. 15.

twelve were state-supported institutions. The mean percent attainment scores ranged from a score of 77.5 to a low of 50.1, resulting in a difference of 27.4 points.

Data in the form of percent of attainment score was used to determine (1) the rank order of the eleven institutions, (2) the strong and weak areas of each institution as determined by the score-card, and (3) the overall status of undergraduate professional preparation in physical education programs in these selected colleges and universities in Oklahoma.

Baker³¹ conducted a questionnaire study of institutions of higher learning in Arkansas. He used the "Northwest Council of Teacher Education Standards for Health, Physical Education, and Recreation" questionnaire to evaluate the seven state-supported teacher education institutions. The study was limited to those departments with white male students. This instrument evaluated the following areas: general institutional standards; physical education undergraduate curriculum standards; student personnel program standards; and facilities, equipment, and library facility standards.

³¹William B. Baker, "An Evaluation of Undergraduate Professional Preparation in Physical Education for Men in Seven State-Supported Institutions of Higher Learning in Arkansas," Doctoral Dissertation (University of Arkansas, 1962).

Each area was subdivided to enable more specificity per area. The questions were answered in a manner from which a numerical value was obtained. General areas were weighted according to the importance they played in the educational program, which resulted in a more realistic evaluation. The results of the study were recorded with reference to the strength and weakness of each institution and recommendations made as to needed improvement. Baker based the evaluation on a ten-point scale; a score of five or above was considered as strong and one below five as weak. He suggested that the validity of the study rested on the honesty of those completing the questionnaire. He does not seem to see any necessity for testing the comparative validity of the instrument as well.

Similar studies have been made on physical education programs with sex as the outstanding variable. In 1939 Ellis³² conducted a study on the status of health and physical education for women in Negro colleges and universities. The primary purpose of the study was to determine the history and present practice of health and physical education for women in those institutions. He used a questionnaire to secure some of the information gathered. A total of 67 institutions cooperated in the study. Ellis'

³²A. W. Ellis, "The Status of Health and Physical Education for Women in Negro Colleges and Universities," The Research Quarterly, X (March, 1939), pp. 135-141.

findings indicated that the physical education programs in the Negro colleges and universities rated comparatively low.

In 1950, Townes³³ compared physical education programs of six predominantly Negro state-supported and private institutions of higher learning. He used a self-developed checklist validated by a jury of experts in physical education to collect his data. The data gathered in the study was obtained by the visitation-interview method, and the application of the instrument to the respective physical education programs of each institution. A procedure of such nature, deployed in securing data, did increase greatly the validity of the study.³⁴

The study revealed that there were inadequacies in the physical education programs of the private institutions and in the public institutions as well. However, the inadequacies in the private institutions exceeded those of the publicly supported institutions in that a better quality of trained staff, better facilities, and a more adequate financial budget were made available to the publicly supported institutions.

³³Ross Emile Townes, "A Study of Professional Education in Selected Negro Colleges," Doctoral Dissertation (Indiana University, 1950).

³⁴Ibid., p. 61.

In 1964 Fant³⁵ made a study of specific elements in the physical education programs of seven larger universities. The following aspects of the programs were studied: organizational patterns and aims; professional preparation programs (undergraduate and graduate); basic programs for women; recreation programs for women; and policies concerning the faculties. Miss Fant also uses the visitation-interview method as a means of increasing validity.

Seven universities were visited for periods of approximately two weeks and data were gathered in interviews with faculty and students and through visits to a variety of classes. Information gathered in a review of pertinent literature was used as a basis for relating practices at the universities studied with those reported in the literature.

The findings of the study were as follows:

1. Physical education appears to be moving toward departmental status within liberal arts colleges and away from colleges of education.

2. Experimental and measurement research will become increasingly important as an aspect of graduate study in physical education.

³⁵Helen Elizabeth Fant, "An Investigation of Certain Aspects of Physical Education as Conducted in Selected Universities in the United States," Doctoral Dissertation (Louisiana State University, 1964).

3. It appears that there is a trend toward planning professional education courses for a fifth year in the curriculum.

4. The reputation of a department largely depends upon the quality of teachers within the department.

The study of health programs in the colleges has likewise received attention.

In order to make a better analysis of physical education programs of the Negro land-grant colleges studied, Brown³⁶ assigned codes to the institutions so that the various physical education departments could be examined for the purpose of comparing and ranking the institutions. Furthermore, he also ranked the institutions to reveal the institution with the highest quality physical education program. The present study aims to do a similar comparison and ranking on the findings based on two comparative instruments.

Summary

The preceding review of related research disclosed that there was an appreciable amount of specific research dealing with the use of single instruments to assess the status of physical education at the undergraduate level. Among the most significant studies pertaining to physical

³⁶William Crews Brown, "An Evaluation of the Present Status of Health Services in Negro Land-Grant Colleges," Doctoral Dissertation (New York University, 1964).

education programs have been those conducted by individuals and physical education professional education agencies. The examination further revealed that there was widespread usage of various types of instruments to compare physical education departments. However, none of the studies revealed or indicated the relationship between or among various instruments used in these studies. Also, the examination of significant research relating to undergraduate professional preparation indicated no study of the nature or scope as the one described herein had been undertaken and that there was, indeed, a need for such study, not only to increase the validity of the data gathered, but also to ascertain to a greater extent what the instruments do in fact measure.

CHAPTER III

METHODS AND PROCEDURES FOR COLLECTING THE DATA

The problem of this study was that of determining the relationship of two evaluative instruments used in the assessment of undergraduate physical education programs, namely, the Laporte and Bookwalter score-cards. Attempts were made to determine the status of physical education programs in the selected colleges and universities as to their strengths, weaknesses, and needs, according to the standards of the two score-cards.

The purposes of this chapter are: (1) to describe the procedures applied to the selection and adoption of the two evaluative tools used in this study. The two evaluative tools used, respectively, were, A SCORE-CARD FOR EVALUATING UNDERGRADUATE PROFESSIONAL PROGRAMS IN PHYSICAL EDUCATION and THE LAPORTE SCORE-CARD NO. II; (2) to describe the procedures followed in the collection of data. A basic problem of the study was maintaining anonymity of the institutions involved, while obtaining maximum participation from the physical education directors. Therefore,

one of the stipulations necessary in the study was that all respondents would remain anonymous. By eliciting responses in this manner, it was believed that the sample would represent more reliability regarding the true attitudes of those responding.

The raw data obtained from an application of the Laporte and Bookwalter score-cards is numerically arranged. That is to say, that numerical values are assigned to both standards of the score-cards (Appendix A and B). In order that a physical education department may receive the total possible points on the Bookwalter score-card, the sub-areas are totaled within each major area, then the ten major areas of the score-card are combined to yield the score-card's possible total points. To obtain the total possible points using the Laporte score-card the major areas are combined to yield the total for a physical education program.

Customarily, data obtained through the application of both the Laporte and Bookwalter score-cards is reported in percent attainment. Percent attainment is obtained by dividing the total possible points for a major area into the total points earned for that area. This method applies to both the Laporte and Bookwalter score-cards. Furthermore, the obtained data from the use of both score-cards may be used to rank the population, according to the total possible points earned. Also, data obtained from the score-cards may be compared by ranking the population on

each score-card separately, and correlating the ranked population. Data may be compared by observing the obtained results of the major areas of both score-cards, as well as by observing the obtained percent attainment from each major area. Also, data may be compared using the Laporte and Bookwalter score-cards by obtaining and observing the mean percent of the individual separately, of the study sample, and ranking each individual, according to the obtained mean percent within the population. Moreover, data from the instruments may be compared by ranking the total possible points earned by each subject within both score-cards.

Selection of the Two Instruments

The initial step in the selection and adoption of the two instruments involved a comprehensive survey of available score-cards that were used in the evaluation of physical education programs. This involved a reasonably complete survey of the existing literature and related research pertinent to this study. Furthermore, it necessitated a thorough investigation of the available score-cards that were dissimilar in structure but which entailed the major as well as the minor aspects of a physical education program. Based upon the information obtained from this comprehensive review of available score-cards, it was decided that the Laporte and

Bookwalter score-cards were most applicable to the study of this kind. Furthermore, both score-cards had been used separately in evaluation studies of physical education programs. But there has been no examination of the obtained results as to the combined ranking of subjects of the population and the observation of one-subject scoring, nor a study of whether the two instruments were measuring the same thing in the overall evaluation of physical education programs.

Procedures Used in the Collection of Data

The preliminary step in this process was an application of the instrument to the Physical Education Department at the University of Oklahoma. This included a visitation-interview with the Director of Physical Education whereby the standards of both score-cards were examined thoroughly by the investigator with the cooperation of the director. The standards were then applied to the major aspects of the physical education program of the University. Further interviews were conducted with the directors of student health services, placement for graduates, library, student services as well as a comprehensive investigation of the availability of books and periodicals in the university library, according to the standards of the two score-cards. The purpose of the pilot application was to determine the most efficient method of

administering the score-cards and to prevent misunderstanding of questions and procedures on the part of those being interviewed.

The initial step of the data-collecting process involved arranging for on-site interviews at each of the sample colleges. A letter was sent to each of the directors of physical education programs requesting their cooperation in the study. Three weeks after the initial mailing, all the directors of physical education programs had responded affirmatively indicating a willingness to give a personal interview.

The second step involved conducting an interview with each of the directors of physical education on their campuses. This made possible a personal visit to each campus by the investigator during which time he was able to apply the two instruments to their respective programs. The time in which interview with the directors was concluded averaged from one and a half to three hours. The rest of the visitation was spent on the application of the instruments, which customarily occupied from a day and a half to two days depending upon the availability of the personnel who were necessarily involved in the study.

The final step of the data-gathering process involved an examination of the library, health services, physical education areas, equipment and facilities, and service programs in the physical education department.

An observation of these areas aided in the reliability of the responses of the physical education directors of the population studied. In other words, the examination determined whether the outdoor areas, specifically the softball areas, tennis areas, shower and locker areas, and classroom areas met the requirements of both instruments.

The collected data were then tabulated, treated statistically, and then presented in data tables for clarity. This was the final effort by the investigator in this phase of the study.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The purpose of this chapter is to provide an analysis and interpretation of the data and a comparison of the results of the treatments of the data obtained from two evaluative physical education instruments.

The study further aims to examine the relationships between the two instruments in ascertaining the relative overall status of the selected physical education programs and to suggest improvement for certain areas of these programs. The descriptions of the treatments of the data were presented around data tables. Two instruments, (1) SCORE-CARD FOR EVALUATING UNDERGRADUATE PROFESSIONAL PREPARATION PROGRAMS IN PHYSICAL EDUCATION, and (2) THE LAPORTE SCORE-CARD NO. II, were used to secure the data.

A basic problem of the study was maintaining anonymity for those institutions involved, while at the same time obtaining maximum participation of the physical education directors. Therefore, one of the stipulations necessary in the study was that all respondents would

remain anonymous. In keeping with this stipulation all of the institutions which made up the population were assigned a code letter. The code letters that were assigned ranged from "A" through "K" of the alphabet. After the institutions were assigned a code letter, they were then ranked on both the Laporte and Bookwalter score-cards.

Discussion of the data was approached through the consideration of each of the questions below which helped to structure the study. Data pertinent to each question were presented in the appropriate table or discussed at length relative to that question.

1. Is there a significant relationship between the Laporte and Bookwalter Score-cards used in the evaluation of physical education programs; that is, do institutions that score high on one instrument also score high on the other instrument?

The Spearman Rank Coefficient Correlation was used to test for similarities of the Bookwalter and the Laporte Score-cards. The order of rank of the eleven institutions' physical education programs on the two score-cards can be seen in Table I.

Between the Laporte and Bookwalter Score-cards, the Spearman Rank Correlation obtained was $+.82$ and is significant at a $.01$ level. In order to further the statistical significance of this obtained Spearman Correlation Coefficient, a t -test was computed to determine the chance of

TABLE 1

THE RELATIONSHIP BETWEEN THE LAPORTE SCORE-CARD
AND THE BOOKWALTER SCORE-CARD

Ranking of Institutions on the Laporte and Bookwalter Score-Cards			
Institutions	Rank on Laporte Score-Card	Rank on Bookwalter Score-Card	Rank of the Combined Totals of the Laporte and Bookwalter Score-Cards
A	4	1	1
B	1	2	2
C	2	3	3
D	3	4	4
E	7	5	6
F	5	6	5
G	10	7	7
H	9	8	10
I	6	9	9
J	8	10	8
K	11	11	11

^aSpearman Rank Order Correlation $r_s = +.82$
^bSignificant at .01 level of significance

obtaining an r of $+.82$ in the population. Further analysis using the student-t yielded a $t=5.80$ which indicated that the above correlation is significant at the .001 level of significance. Thus the independent evaluations of the institutions by the two score-cards were significantly alike. Therefore, the Laporte and Bookwalter score-cards are quite similar in terms of the overall results obtained

in the evaluation of these selected physical education programs. Also, the finding of a highly significant relationship between results obtained from the Laporte and Bookwalter lends concurrent validity to both score-cards, since any assessment instrument should correlate with any other instrument designed to measure the same thing. Thus given a constant administration of each, the Bookwalter and Laporte Score-Cards generally produce similar assessments of physical education programs.

Furthermore, the results of the overall evaluations of the institutions' physical education programs were measured operationally by combining the total Laporte score from each school with its total Bookwalter score. These are correlated with the results obtained by the individual score-cards using the Spearman Rank Correlation Coefficient. These correlations were computed as part of the investigation of the relationship between the two assessment instruments. Anastasi³⁷ notes that the correlation of individual assessment instruments, the Bookwalter plus the Laporte in the present study, provides an overall or global evaluative instrument. Furthermore, that individual assessment instruments should correlate positively with the global evaluation if the individual instrument is measuring similar aspects. The results in

³⁷Anastasi, op. cit., p. 3.

both cases were statistically significant and positive in direction. The rankings of the institutions using the Laporte totals correlated $+.82$ with the overall evaluation. A t -test yielded a t of 5.80 which is significant at the $.001$ level of significance.

The Spearman Rank Correlation Coefficient obtained between the results of the Bookwalter correlated $+.98$ with the overall combined score from both score-cards and is significant at $.001$ level of significance ($t = 20.78$). Thus, the results obtained by using the Laporte and Bookwalter are highly similar, comparable, and the relationship is reliable. It should be noted that the somewhat higher correlation between the Bookwalter and the overall evaluation total (Bookwalter and Laporte) could be expected because the Bookwalter raw scores are larger than the Laporte scores simply because of different possible point totals and thus, the higher correlation here is not conceptually meaningful.

2. What is the overall status of the undergraduate professional preparation programs in the selected state-supported colleges and universities?

In responding to the question concerning the overall status of physical education programs in these selected colleges and universities, it is apparent in Table 2 where the percentage scores of the Bookwalter Score-card are presented, that there are wide differences among the

physical education programs of these institutions and within the individual institution themselves. The results revealed that seven of the institutions scored over fifty percent and four scored less than fifty percent of the possible number of points on the Bookwalter score-card.

TABLE 2

MEAN, MEDIAN, AND STANDARD DEVIATION OF THE PERCENTAGE SCORES OF THE MAJOR AREAS FOR THE SELECTED INSTITUTIONS NOTED BY THE BOOKWALTER SCORE-CARD

Institutions	Mean	Median	Standard Deviation
A	65.9	76.4	8.7
B	79.3	66.6	11.7
C	69.3	64.5	22.8
D	66.2	68.2	29.7
E	52.6	68.2	22.1
F	61.6	64.2	31.0
G	38.3	71.3	23.9
H	45.5	52.0	25.2
I	56.3	51.4	21.5
J	42.9	49.4	26.6
K	33.2	53.3	19.7

As shown in Table 2 the range in the status of physical education programs varied greatly, according to the standards on the Bookwalter score-card. For example, institution "B" has a mean percentage score of 79.3 of the possible points on the Bookwalter score-card while

institution "K" obtained only 33.2 on the same score-card. This indicates that institution "K" obtained only an average of 33.2 percent of the possible points in any one area of the ten major areas. Institutions "G" and "K" obtained only 38.3 and 33.2 percent of the total possible points in any one area. These indicated the lowest quality of physical education programs among the institutions in this study sample. Also, as noted in Table 2, institutions "H" and "J" have similar physical education programs. Institution "H" obtained 45.4 percent of the total possible points in any one area, while "J" received 42.9 percent of the total possible points in any one area. It is further noted by Table 2 that these two institutions' physical education programs are very low in quality when compared to institutions "A", "B", "C", and "D" of this sample population.

Institution "B" obtained a mean percentage score of 79.3 which indicated having the best physical education program of all the institutions studied. Institution "E"'s physical education program compared favorably with institution "I", in that institution "E" obtained a mean score of 52.6, or 52.6 percent, of the total possible points in any one area, while institution "I" obtained a mean score of 56.3, or 56.3 percent, of the total possible points in any one area.

The median and standard deviation of the study verified the wide differences among institutions of the study sample as noted by Table 2. For example, the difference of the medians for institutions have a range from 76.4 to 53.3 of the total points in any area. In addition, the standard deviation also indicated the heterogeneity of the institutions included in this population. That is to say, that in Table 2 the standard deviation for the institutions obtained a range standard deviation of 8.7 to 19.7, thus revealing the scattering or differences among physical education programs.

While there are also differences among institutions in terms of the amount of variability within the ten ratings on the major areas, most of the standard deviations are fairly high, reflecting a similarity among the institutions in that the institutions showed fairly high intra-school variability. In other words, there were wide differences among the ten major areas for all institutions.

This wide range of mean percentage scores indicates that the present sample contained schools whose physical education program differ greatly, ranging from relatively high quality to low and very low quality. The same finding is confirmed in Table 3 in which the results using the Laporte score-card are depicted.

An examination of Table 3 of mean percentage scores noted by the Laporte score-card revealed wide differences in the quality of physical education programs. For

TABLE 3

MEAN, MEDIAN, AND STANDARD DEVIATION OF THE PERCENTAGE
SCORES OF THE MAJOR AREAS FOR THE SELECTED INSTITUTIONS
NOTED BY THE LAPORTE SCORE-CARD

Institutions	Mean	Median	Standard Deviation
A	65.9	70.0	12.3
B	79.3	80.0	7.3
C	67.4	76.6	7.3
D	66.3	69.9	10.7
E	52.6	59.9	10.5
F	61.6	61.6	11.7
G	38.3	39.4	21.2
H	43.0	41.6	11.9
I	45.5	49.0	12.0
J	56.3	47.1	17.4
K	33.2	28.3	15.7

example, in Table 3, institution "K" obtained a mean percentage score of 33.2 or 33.2 percent, while institution "B" obtained a mean percentage score of 79.3 or 79.3 percent of the total possible points in any area. Thus, the quality of the physical education program in institution "B". The range of mean scores for the physical education programs was 33.2 to 79.3. The lower the mean percentage score, the poorer the quality of the physical education program. Further analysis of Table 3 indicated that there were institutions in this study sample with similar quality

of physical education programs. Institution "C"'s physical education program is similar to institution "A" in that, institution "C" obtained a score of 67.4 or 67.4 percent of the total possible points in any one area, while institution "A" received a score of 65.9 or 65.9 percent of the total possible points in any one area. Institutions "H" and "I" also had similar physical education programs. As indicated in Table 3, institution "H" obtained a percentage score of 43, while institution "I" obtained a mean percentage score of 45.5. Thus institution "H" obtained 43 percent of the total possible points in any one area, and at the same time, institution "I" obtained 45.5 percent of the total possible points in any one area. A mean percentage score of 33.2 and 38.3 of institutions "K" and "G" indicated the similarity of these two institutions' physical education programs. Also, the physical education programs of institutions "F", "C", and "A" are quite similar in that institution "F" received a score of 61.6; institution "C" obtained a score of 67.4, and institution "A" obtained a percentage mean score of 65.9. The closeness of the scores obtained by institutions "F", "C", and "A" revealed the similarity in quality of their respective physical education programs to each other. Furthermore, it can be seen in Table 3 that institutions "J" and "E" had similar physical education programs. Institution "J" obtained a score of 56.3 or 56.3 percent of the score in any one area, while institution "E" received a mean

percentage score of 52.6 or 52.6 percent of the total possible points in one area. Thus the quality of these two physical education programs of institutions "J" and "E" are quite similar.

The median and standard deviation of the ten major areas, as noted by the Laporte Score-card, of the study sample also indicated the differences among the quality of physical education programs of the institutions in the population. As shown in Table 3, the institutions had a range in the standard deviation of 7.3 to 21.2 of the percentage scores. The median had a range of 28.3 to 70, thus indicating the dissimilarity of program quality.

Table 4 represents the mean, median, and standard deviation major areas of the institutions as noted by the Laporte score-card. The standard deviations presented in Table 4 indicated a wide difference among physical education programs of the eleven institutions within a given area. For example, in Table 4 the area labeled Program of Activities had a standard deviation of .164 which indicated the homogeneity of the physical education programs of the eleven institutions within this area. A standard deviation of 7.67 in the Locker and Shower areas indicated the dissimilarity of the eleven institutions' physical education programs in this major area. Thus, the higher the obtained standard deviations, the more different the institutions' physical education from each other in

TABLE 4

Administration of Intramural & Athletics	23.0	24.0	4.68	30	77	
Organization and Administration of Class Programs	23.6	23.5	3.91	30	79	
Modified-Individual (Corrective) Activities	14.0	13.0	1.68	30	47	
Medical Examination & Health Service	19.5	21.0	1.99	30	65	
Supplies and Equipment	15.8	16.5	5.31	30	53	
Swimming Pool	11.8	0	4.68	30	39	
Locker and Shower Areas	13.9	11.5	7.67	30	46	
Indoor Areas	15.9	14.5	.685	30	53	
Outdoor Areas	16.7	16.5	1.66	30	56	
Program of Activities	17.9	20.0	.164	30	60	
	Mean	Median	Standard Deviation	Total Possible Points Per Area	Mean Percent of Possible Total Points	Number = 11

terms of a given area. The lower the obtained standard deviation the more similar the physical education programs. A standard deviation of 5.31 in the Supplies and Equipment area indicated wide differences in the physical education programs in this area. Whereas, a standard deviation of .685 indicated the likeness of these physical education programs in Indoor areas. It was also indicated in Table 4, that Administration of Intramural and Intercollegiate Athletics, and Swimming Pool were identical with a standard deviation of 4.68. Thus, these areas of physical education programs were similar for the eleven institutions. The lowest standard deviation for the study was found in areas of: Program of Activities, Outdoor areas, Modified Individual (Corrective) Activities, and in the area of Medical Examination and Health Services. It was 1.64, 1.66, 1.68, and 1.99 respectively. The standard deviation indicated the similarity of programs in these institutions for areas mentioned.

The areas of the institutions that need improvement, as indicated by the mean percent of the possible points total of the Laporte score-card are also presented in Table 4. Organization and administration of class programs obtained a mean of 79 percent of the total possible points, which is still relatively low when 79 percent is compared to 100 percent. However, 79 percent was the highest percentage of the total possible points within any of the

ten areas studied. Thus, these eleven institutions should concentrate their immediate efforts in other weaker areas of their individual physical education programs. However, efforts should be made by the various institutions to further improve the area of Organization and Administration. A score of 39 percent in the Swimming Pool area, and a percent score of 46 in the Locker and Shower area indicated great weaknesses in these two areas. Furthermore, a score of 53 percent by both Indoor Areas and Supplies and Equipment, indicated much needed improvement in these two areas. Program of Activities and Medical Examination and Health Services obtained scores of 60 and 65 percent respectively, which also indicated the need for improvement. In short, two of the ten areas of the eleven institutions scored 70 percent or better of the total mean percent possible points; two areas score 60 percent or more, three areas score 50 percent or better; and two areas scored 40 and less. As shown in Table 4, all of the ten areas need major improvement as indicated by the mean percentage of total possible points obtained by the eleven institutions.

Table 5 is similar to Table 4, except that the results of the Bookwalter score-card are presented. From Table 5 it may be seen that the eleven institutions did differ within a given area. Of the ten standard deviations, the range was 5.23 to 23.2 among areas. The lowest standard deviation was 5.23, which indicated the similarity

TABLE 5

	Outdoor Facilities	44.2	45.5	20.2	90	49	
	Indoor Facilities	54.2	55.5	23.2	110	49	
	Supplies & Equipment	39.0	40.5	18.5	80	49	
	Library - Audio-Visual	54.4	59.0	16.2	90	61	
	Student Services	77.9	76.0	11.8	120	65	
	Service Program & Extended Curriculum	60.2	60.5	11.9	90	67	
	The Teaching Act	64.0	65.0	3.89	90	67	
	Curriculum Policies	90.8	94.0	12.9	130	70	
	Staff Standards	72.5	71.0	14.8	120	60	
	General Institutional and Departmental Practices	56.3	54.5	5.23	90	70	
Mean							
Median							
Standard Deviation							
Total Possible Points Per Area							
Mean Percent of Possible Total Points							
Number = 11							

of the eleven physical education programs within the General Institutional and Departmental Practices area, whereas a standard deviation of 23.2 indicated the wide differences among the physical education programs in Indoor Facilities.

Table 5 also indicates that the eleven institutions' physical education programs were similar in the areas of: Student Services and Staff Standards. This similarity in the two areas was verified by the fact that the two areas received standard deviations of 11.8 and 14.8 respectively. However, the physical education programs in the areas of Student Services were more similar than the area of Staff Standards. Of the ten areas on the Bookwalter score-card, the Teaching Act had the lowest standard deviation. The standard deviation for the areas was 3.89, which indicated the similarity of the physical education programs in this area. Other significant differences among the institutions as to institutions programs were found in areas of: Supplies and Equipment, Library--Audio-Visual, Indoor Facilities, Outdoor Facilities, and Curriculum Policies. The wide differences were indicated by standard deviations of: 18.5, 16.2, 23.2, 20.2, and 12.9, respectively.

From Table 5, it may be seen that improvement of all the areas of the institutions is needed, as noted by the mean percent of possible total points. A range from

49 to 71 percent in mean percent possible total points was obtained by the eleven institutions, thereby indicating much needed improvement. The Teaching Act scored the highest of the ten areas listed in the Bookwalter score-card. Table 5 discloses that among the ten major headings, Indoor and Outdoor Facilities scored identical percent scores, which was 49 percent, respectively. General Institutional and Departmental Practices and Curriculum also scored identical percent scores, 70 percent. This also indicates the need for improvement in these areas.

From the ten areas shown in Table 5, three areas scored over 70 percent or better of the total possible points, four scored 60 percent or better, and three areas scored 49 percent. There is an immediate awareness for program improvement in these institutions as a result of the presented data.

3. How do undergraduate professional preparation as measured by the Bookwalter and Laporte score-cards compare with each other at the institutions studied?

By comparing the major areas, it was possible to determine which areas were significantly different from each other. Thus, it could then be said which areas revealed significantly higher scores and which areas revealed significantly lower scores. It was felt that tests of statistical significance provided an advantage over mere inspection in answering the question of which areas are in greater need of improvement.

Kruskal-Wallis³⁸ oneway analysis of variance of the ten major areas was employed. The Kruskal-Wallis one-way analysis was utilized because the data produced by the Bookwalter and the Laporte is ordinal in nature and the Kruskal-Wallis test provides an excellent test of significance when one is comparing more than two samples of areas as in this study.

In case of both score-cards, the overall analysis revealed that significant differences existed among the ten major areas. It was revealed that the observed value of "H" was 69.78, which was significant at the .001 level of significance for the Laporte score-card. And the observed value for "H" on the Bookwalter score-card was 27.32, which was significant at the .001 level of significance.

In order to determine more precisely where these differences existed, the Mann-Whitney U Test³⁹ was employed. The Kruskal-Wallis test was used to determine whether there were any differences among the ten major areas, but it does not demonstrate precisely where these differences are; merely that there are statistically significant differences among the ten areas. In other words, only the important areas of the two score-cards were compared

³⁸Siegel, op. cit., p. 184.

³⁹Ibid., p. 116.

separately. Thus, one could identify precisely where the weaknesses were in the physical education programs by observing the results of the compared areas of the Mann-Whitney U Test.

Rather than make every possible comparison among the ten areas, only the logical and most important possible comparisons of areas were conducted. That is, the nine logical comparisons were made between the program areas; thus, for example, Swimming Pool (sum of rank = 695) was compared to Outdoor Areas (sum of rank = 644.5) and found to be significantly higher at the .002 level of significance ($U = 40$). And Swimming Pool was compared to Modified Individual (Corrective) activities (sum of rank = 595) and this yielded a significant ($U = 35$). So it can be concluded that Swimming Pool is significantly higher than Modified Individual (Corrective) activities even though no direct statistical test comparing Swimming Pool and Modified Individual (Corrective) activities was made. The latter judgment can be made on the known relative standings of the ten areas.

By observing the results of the compared areas from the Bookwalter score-card, and the application of the Mann-Whitney U Test, one could identify precisely where the weaknesses were of the physical education programs. An examination of the data in Table 6 disclosed that of the two compared areas: Indoor Facilities and Service Program

TABLE 6
MANN-WHITNEY U TEST OF COMPARED AREAS OF THE BOOKWALTER
SCORE-CARD

Areas	Sum of Rank	Areas	Sum of Rank	U	p
Service Program and Extended Curriculum	90	Indoor Facilities	162.5	24.5	<.002
Library Facilities	139	Service Program and Extended Curriculum	110.0	48.0	<.002
Service Program and Extended Curriculum	109	Outdoor Facilities	157.0	30.0	<.002
Student Services	146.5	General Institutional & Departmental Practices	106.5	40.5	<.002
Service Program and Extended Curriculum	88	Supplies and Equipment	165.0	22.0	<.002
Library--Audio-Visual	117	Outdoor Facilities	133.0	54.0	<.002
Curriculum Policies	113	Library--Audio-Visual	140.0	47.0	<.002
General Institutional and Departmental Practices	123	Curriculum Policies	130.0	57.0	<.002
General Institutional and Departmental Practices	130	The Teaching Act	124.0	57.0	<.002
Service Program and Extended Curriculum	133.5	The Teaching Act	115.5	53.5	<.002

TABLE 6--Continued

Areas	Sum of Rank	Areas	Sum of Rank	U	p
General Institutional and Departmental Practices	93.5	Staff Standards	159.5	27.5	<.002
Service Program and Extended Curriculum	126	Curriculum Policies	127.0	60.0	<.002
Student Services	111.5	Staff Standards	141.5	45.5	<.002
Staff Standards	125.5	Outdoor Facilities	130.0	57.0	<.002
Indoor Facilities	146.5	Outdoor Facilities	106.5	40.5	<.002

Mann-Whitney U required for significance (two-tailed) at the .002 level: $U = 10$

and Extended Curriculum, Indoor Facilities was significantly higher with a rating--of 162.5--than Service Program and Extended Curriculum with a rating of 90. Thus, Indoor Facilities is more significantly developed than the area Service Program and Extended Curriculum in these eleven institutions' physical education programs. Also, Library Facilities with a rating of 139 was more developed than Service Programs and extended curriculum with a rating of 110. It was also revealed in Table 6 that Outdoor Facilities with a rating of 157 was more developed, within the eleven institutions' physical education programs, than Service Program and Extended Curriculum, with a rating of 109. Student Services with a rating of 146.5 was found to be more advanced than General Institutional and Departmental Practices with a scored rank of 106.5. Supplies and Equipment, with a rating of 165, was more advanced than Service Program and Extended Curriculum with a scored rating of 88 for the eleven institutions' physical education programs. Outdoor Facilities with a rating of 133 was more advanced than Library--Audio-Visual with a rating of 117. When the area of Library--Audio-Visual was compared with Curriculum Policies, it was found that Library--Audio-Visual was significantly higher than Curriculum Policies. Table 6 also reveals that Curriculum Policies is more developed than General Institutional and Departmental Practices which scored a rating of 123. However,

General Institutional and Departmental Practices were found to be more developed than the Teaching Act of the eleven institutions' physical education programs, with a rating of 130. The Teaching Act area scored a rating of 124. Table 6 also revealed that Service Program and Extended Curriculum, with a score rating of 133.5, was more advanced than the Teaching Act area of the institutions with a score of 115.5. Staff Standards with a rating of 159.5 was more advanced than General Institutional and Departmental Practices, with a scored ranking of 93.5. Similarities of ratings were found in areas: Curriculum Policies and Services Program and Extended Curriculum. A rating of 127 by Curriculum Policies and a rating of 126 by Service Program and Extended Curriculum did reveal the similarities of the two areas. Also, Staff Standards was found to be more advanced than Student Service. The scored rating of the two areas is 141.5 and 111.5 respectively. It can be learned from Table 6 that Outdoor Facilities, with a scored rating of 130, was somewhat similar to Staff Standards with a score of 125.5. Although Outdoor Facilities area was more advanced than Staff Standards in the eleven institutions of higher learning, Indoor Facilities with a score of 146.5 was found to be more advanced than Outdoor Facilities with a rating of 106.5. Thus, the precise differences were identified among the compared areas of the eleven institutions as a result of treatment of data by the Mann-Whitney U Test.

Table 7 also provides data concerning the precise differences among the selected institutions' physical education programs, and identifies where the weaknesses are when the areas are compared, as noted by the Mann-Whitney U Test on the Laporte Score-card. A breakdown of data in Table 7 reveals that Modified Individual (Corrective) Activities was more developed than Outdoor Areas. A scored rank of 127.5 by the Modified Individual (Corrective) Activities indicated a higher rank than Outdoor Areas of a rank of 118.5. There was also similarity between areas of Organization and Administration of Class Programs and Administration of Intramural and Intercollegiate Athletics. A score of 128 and 125, respectively, for the two areas indicated the similarities of Organization and Administration of Class Programs and Organizational and Administration of Intramural and Intercollegiate Athletics.

Program of Activities with a rating of 135 was more developed than Modified Individual (Corrective) Activities with a rating of 118. Medical Examination and Health Services was compared to Administration of Intramural and Intercollegiate Athletics. It was revealed that the eleven institutions' physical education programs were more developed in the area of Medical Examination, with a score of 154.5, than Administration of Intramural and Inter-Collegiate Athletics, which scored a rating of 98.5. Also, Program of Activities, with a scored rating of 155.5, was

TABLE 7

MANN-WHITNEY U TEST OF COMPARED AREAS OF THE LAPORTE
SCORE-CARD

Areas	Sum of Rank	Areas	Sum of Rank	U	p
Outdoor Areas	118.5	Modified Individual Corrective Activities	127.5	59.5	<.002
Administration of Intramural & Inter- Collegiate Athletics	125	Organization and Administration of Class Program	128.0	49.0	<.002
Program of Activities	135	Modified-Individual (Corrective) Activity	118.0	52.0	<.002
Medical Examination and Health Service	154.5	Administration of Intramural and Inter- Collegiate Athletics	98.5	32.5	<.002
Organization and Admini- stration of Class Program	97.5	Program of Activities	155.5	31.5	<.002
Program of Activities	153.5	Administration of Intramural and Inter- Collegiate Athletics	99.5	33.5	<.002
Program of Activities	99	Locker and Shower Areas	85.5	33.5	<.002
Modified Individual (Corrective) Activities	127	Locker and Shower Areas	126.0	61.0	<.002
Locker and Shower Areas	135	Indoor Areas	100.0	60.0	<.002

TABLE 7--Continued

Areas	Sum of Rank	Areas	Sum of Rank	U	p
Indoor Areas	126	Supplies and Equipment	127.0	60.0	<.002
Supplies and Equipment	146	Program of Activities	108.0	41.0	<.002
Program of Activity	99	Swimming Pool	154.0	33.0	<.002

Mann-Whitney U required for significance (two-tailed) at the .002 level: $U = 10$

significantly higher than Organization and Administration of Class Programs with a scored rating of 99.5. Thus, Program of Activities is more developed than Organization and Administration of Class Program. When the area Program of Activities with a rating of 153.5 was compared to area Administration of Intramural and Interschool Athletics with a rating of 99.5, Program of Activities was found to be more developed than Administration of Intramural Athletics. It can be learned from Table 7 that Program of Activities, with a scored rating of 99, was more advanced than Locker and Shower area with a scored rank of 85.5. Although Modified Individual (Corrective) Activities outscored Locker and Shower areas by only one point, one can say that the Modified Individual (Corrective) Activities and Locker and Shower are similar. Furthermore, Locker and Shower area was more advanced in the eleven institutions when it was compared to Indoor Areas. Scores of 135 and 100 respectively, indicated that Locker and Shower Areas was significantly higher than Indoor Areas and was more developed.

Table 7 also reveals that Supplies and Equipment with a rating of 127, was slightly more advanced than Indoor Areas with a score of 126, but somewhat similar in their rating. Also, Supplies and Equipment rating was significantly higher with a score of 146 than Program of Activities with a rating of 108.5 of the eleven institutions'

physical education programs. A rating score of 154 by Swimming Pool and a rating of 99 for Program of Activities indicated the degree of development that Swimming Pool area had over Program of Activities.

4. What recommendations can be made to these institutions to aid in strengthening the weak areas of their programs in physical education?

In reacting to this question concerning the improvement of the weak areas the following suggestions are important after carefully analyzing the data presented in this chapter. The suggestions offered for the physical education programs of the eleven institutions used in this study are as follows:

1. A self-evaluation of the total physical education programs of the various institutions should be made annually, involving student and staff members.

2. In order that the intramural programs may be improved it is recommended that a full time director of intramurals be hired.

3. Entering students should be tested for motor ability as well as for physical fitness.

4. The staff of the various physical education departments in said institutions should be increased so that the student-teacher ratio would not exceed thirty-five students per staff member.

5. Swimming pools should be provided so that physical education majors would experience water and pool safety.

6. The physical education staff should become more active in research and publishing articles related to physical education.

7. The director of physical education should have an earned doctorate in that discipline.

8. Efforts should be made to recruit more doctorates in each of the departments. Also, the various institutions should provide leaves for staff members to study for terminal degrees.

9. An in-service program for each department should be a part of their in-service improvement program for staff members.

10. The foundation science curriculum could be improved by the addition of courses in physiology, anatomy, physiology of exercise, and kinesiology.

11. The general education curriculum could be improved by the addition of semester hours in social science, humanities, natural science and mathematics, and written and oral communication.

12. The required semester hours in special professional techniques curriculum should be increased.

13. Immediate effort should be directed toward the improvement of recreational and class facilities for the physically handicapped.

14. Locker and shower facilities, as well as towel services for the service classes should be improved.

15. A full-time physician should be available at all athletic events.

16. A full-time professionally-trained person should be provided for all athletic events by the institutions.

17. Outdoor areas and indoor areas that are used for service classes, and professional-techniques classes should be improved.

18. Athletic areas that are well lighted should be made available for recreational or intramural programs for late afternoon and evening participation for student and faculties.

19. Students participating in intramural and varsity sports should pass physical examination before actively participating in such sports.

20. The library at the various institutions should have 200,000 or more volumes available for the enrolled students.

21. The audio-visual instructional materials should be increased as well as updated for staff members, students and directors in the physical education area.

22. Supplies should be provided for maximum participation by each student. Specifically, archery, bows, arrows, quivers, badminton, softball, bats, and handballs should be readily accessible.

23. A total self-evaluation involving the entire staff is highly recommended.

24. Current periodicals and books should be offered by the various libraries.

Summary

It was revealed in this investigation that the Bookwalter and the Laporte score-cards were similar in terms of the overall results obtained from the samples studied. Thus, the two mentioned physical education evaluative instruments were related in general, and are assessing physical education programs in like manner. The overall evaluation of the eleven institutions' physical education programs verified this relationship of the instruments. The combined totals of both score-cards correlated positively with each score-card separately of the eleven institutions' physical education programs. The Laporte score-card totals correlation was $+0.82$ and the Bookwalter score-card totals correlation was a $+0.98$. Both score-cards were significant at the $.001$ level of significance.

It was shown in the interpretation of the data that differences did exist among the eleven institutions' physical education programs, and within physical education programs. The mean percentage score ranged from 33.2 to 79.3, thus indicating the differences among the physical

education programs. Seven of the institutions of the study sample scored over fifty percent in program quality, and four institutions scored less than fifty percent in program quality.

The standard deviation indicated the variability of the institutions within a specific area. The lower the standard deviation, the more homogeneous the institutions were in that specific area. The higher the standard deviation was in a specific area the more unlike the physical education programs were in that area. The range of standard deviation was .164 to 7.67 for the Laporte score and from 3.89 to 23.2 for the Bookwalter score-cards.

The identification of exact weaknesses of the eleven physical education programs was revealed through the Mann-Whitney U Test of Significance. It was revealed that generally weaknesses were found in most of the compared areas. However, the compared major areas of the Bookwalter score-card disclosed that areas classified as general service areas were more developed than areas categorized as general facilities and equipment or organization and administration. The Laporte Score-card also revealed that service areas were more developed in overall evaluation than general facilities and equipment, then followed by organization and administration.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purposes of this chapter are to review the purposes of the investigation; to summarize the findings of the study; and to make conclusions and recommendations based upon the analysis of the data secured in the study.

The problem of the investigation was that of determining the relationship of two physical education evaluative instruments; in other words, to find whether the two evaluative instruments were assessing physical education programs in a like or similar manner. The selected instruments were the Bookwalter and Laporte score-cards. Additional purposes of the investigation were those of discovering the status of selected physical education programs, according to the standards of these two evaluative instruments. Specifically, the similarity of program quality, needs, strengths, and weaknesses of physical education program areas as indicated by the two score-cards.

The procedure employed within the study consisted of the following steps: (1) The preliminary step was (a) the identification, selection, and adoption of the instruments for the investigation; (b) the application of the two instruments to the Physical Education program of the University of Oklahoma in order to gain experience and application techniques; (2) The actual steps were (a) securing the permission of the eleven institutions for participation in the study; (b) visiting each institution and applying the two instruments to their respective physical education programs; (c) the scheduling of visitation-interviews with each of the physical education directors and other essential personnel included in the study; and (d) the analysis, presentation, and interpretation of data relative to the study.

The summary of findings are based upon the data collected from the study sample: (1) eleven state-supported Negro colleges and universities in seven Southern and Southwestern states, and (2) from the application of the Bookwalter and Laporte score-cards to these eleven institutions' physical education programs.

Major Findings

The following are major findings of the investigation:

1. The Bookwalter and Laporte score-cards are similar in terms of overall results obtained in the

evaluation of these selected physical education programs. Also, the Bookwalter and Laporte score-cards are generally assessing physical education programs in a like manner.

2. The overall evaluations of the eleven institutions' physical education programs were statistically significant and positive in direction, when the combined results of the Laporte and Bookwalter score-cards were correlated with the totals of each score-card separately.

3. There were wide differences found among the status of physical education programs of these eleven institutions and within individual aspects of physical education programs within the institutions.

The following are findings as to the similarities or dissimilarities of physical education programs of the eleven institutions within major headings, as noted by the Bookwalter score-card.

1. The eleven institutions' physical education programs were similar in their programs in the area of general institutional and departmental practices.

2. The eleven institutions' physical education programs were similar in the teaching act.

3. There were wide differences found among the eleven institutions in areas of: Supplies and Equipment; Library--Audio-Visual materials; Indoor Facilities, Outdoor Facilities, and Curriculum Policies.

4. The programs were similar, however, in areas of: Indoor Areas; Administration of Intramural and Inter-Collegiate Athletics; Program of Activities, Outdoor Areas; Modified Individual (Corrective) Activities; and Medical Examination and Health Services.

5. The weakest area of these selected institutions was in the area of Swimming Pool.

Conclusions

The following conclusions are based on the data presented in Chapter IV. They are based on the evaluation of the data obtained in this investigation relative to the relationship of the Bookwalter and Laporte score-cards, and the data obtained in the application of the two instruments to eleven selected state-supported institutions of higher learning.

1. The Bookwalter and Laporte score-cards were adequately assessing physical education programs in a similar manner, in terms of the overall obtained results and the evaluation of physical education programs.

2. There are found wide differences in the quality of physical education programs in the eleven institutions.

3. That only seven of the institutions of the study sample were doing adequate jobs in professional preparation of their physical education majors. Four

institutions were providing below average professional preparation for physical education majors.

Recommendations

Findings and conclusions of this study justify the following recommendations:

1. Since this sample was limited to eleven institutions of higher learning, it is recommended that the relationship of the Bookwalter and Laporte score-cards be broadened to include a wider sample of institutions of higher learning.

2. The findings of this study were based on data obtained from eleven predominantly Negro state-supported institutions of higher learning. It is suggested that a study be made whereby the two instruments would be applied to all predominantly Negro state-supported institutions of higher learning.

3. Further study should be conducted whereby all physical education programs in predominantly Negro private colleges would be compared to the standards of the two score-cards.

4. Additional study is suggested relative to the status of physical education in predominantly Negro institutions of higher learning, and the status of predominantly white institutions of higher learning physical education programs of similar sizes by the use of the standards from the two evaluative instruments.

SELECTED BIBLIOGRAPHY

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Books

- Adams, Georgia S. Measurement and Evaluation in Educational Psychology and Guidance. New York: Holt, Rinehart and Winston, 1965.
- American Association for Health Education, and Recreation, Evaluation Standards and Guide in Health Education, Physical Education and Recreation. The Association, Washington, D. C., 1959.
- Anastasia, Ann. Psychological Testing. New York: Macmillan, 1961.
- Barrow, Harold and McGee, Rosemary. A Practical Approach to Measurement in Physical Education. Philadelphia: Lea and Febiger, 1964.
- Bookwalter, Karl and Dollgener, Robert. A Score Card for Evaluating Undergraduate Professional Preparation Programs in Physical Education. Bloomington: 1965.
- Catell, R. B. Personality and Motivation Structure and Measurement. New York: World Book Company, 1957.
- Irwin, Leslie W. The Curriculum in Health and Physical Education. Dubuque: William C. Brown Company, Publishers, 1960.
- Kelley, Fred J. Improving Colleges Instruction. American Council on Education: Washington, D.C., 1951.
- Kerlinger, Fred N. Foundation of Behavioral Research. New York: Rinehart and Winston, 1965.
- Laporte, William and Copper, John M. The Physical Education Curriculum. Los Angeles: 1955.

- McGrath, Earl J. The Predominantly Negro Colleges and Universities in Transition. New York: Columbia University: Bureau of Publications, 1965.
- Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, Inc., 1956.
- Scott, Gladys M. Research Methods in Health, Physical Education and Recreation. American Association for Health, Physical Education: Washington, D.C., 1959.
- Scott, Harry A., and Westkaemper, Richard B. From Program to Facilities in Physical Education. New York: Harper and Brothers, 1954.
- Snyder, Raymond A., and Scott, Harry A. Professional Preparation in Health, Physical Education, and Recreation. New York: McGraw-Hill Book Company, Inc., 1954.
- Turabian, Kate L. A Manual for Writers of Term Papers, Theses and Dissertations. Chicago: The University Press, 1960.
- Weingbery, George H., and Schumaker, John A. Statistics: An Intuitive Approach. Belmont: Wadsworth Publishing Company, 1963.

Periodicals

- Cornely, Paul B. "The Status of Student Health Programs in Negro Colleges 1938-39," The Research Quarterly, XII (March, 1941), pp. 12-21.
- Ellis, A. W. "The Status of Health and Physical Education for Women in Negro Colleges and Universities," The Research Quarterly, X (March, 1939), pp. 135-141.
- Munford, Arnett W. "The Present Status of Health and Physical Education Programs in Negro Senior Colleges," The Research Quarterly, X (March, 1948), pp. 190-197.
- Dollgener, Robert. "Evaluation of Undergraduate Professional Preparation Programs in Physical Education," Sixty-Seven Proceedings, National College Physical Education Association for Men (Washington, D.C.: 1964).

Neilson, N. P. "National Study of Professional Education in Health and Physical Education," The Research Quarterly, VI (December, 1935).

Nordly, Carl L. "The Evaluation and Accreditation of Institutions Engaged in Professional Preparation in Health Education, Physical Education, and Recreation," Fifty-Fifth Annual Proceedings, Colleges Physical Education Association, LV (1952).

West, Earl H. "Summary of Research During 1964 to the Negro and Negro Education," Journal of Negro Education, XXXV (Winter, 1966).

Unpublished Materials

Allsen, Phillip E. "An Evaluation of the Physical Education Programs for Men in Selected Junior Colleges." Unpublished Doctoral Dissertation, Utah University, 1965.

Baker, William B. "An Evaluation of Undergraduate Professional Preparation in Physical Education for Men in Seven State-Supported Institutions of Higher Learning in Arkansas." Unpublished Doctoral Dissertation, University of Arkansas, 1962.

Brown, William Crews, "An Evaluation of the Present Status of Health Services in Negro Land-Grant Colleges." Unpublished Doctoral Dissertation, New York University, 1964.

Buck, Richard. "The Evaluation of Undergraduate Professional Preparation Programs in Colleges and Universities in Oklahoma." Unpublished Doctoral Dissertation, University of Arkansas, 1967.

Fant, Helen Elizabeth, "An Investigation of Certain Aspects of Physical Education in Selected Universities in the United States." Unpublished Doctoral Dissertation, Louisiana State University, 1964.

Puckett, John R. "An Evaluation of Certain Areas of Physical Education Service Programs of Selected White and Negro Colleges and Universities." Unpublished Doctoral Dissertation, University of Tennessee, 1959.

Sauter, W. R. "The Status of Undergraduate Professional Preparation for Physical Education in Selected Colleges and Universities." Unpublished Doctoral Dissertation, University of Indiana, 1957.

Towens, Ross E. "A Study of Professional Education in Physical Education in Selected Negro Colleges." Unpublished Doctoral Dissertation, University of Indiana, 1950.

APPENDIX A

LAPORTE SCORE CARD

I. Program of Activities

Possible Score = 30. Actual Score = ____.

1. Content of core and elective program is distributed over gymnastics, rhythms, aquatics, individual sports (including defense activities), and team sports. (Not less than 6% of time to each of the five types = 1; not less than 9% = 2; not less than 12% = 3.)

Score _____

2. Program calls for systematic class instruction fundamentals on the "block" or "unit of work" basis (continuous daily instruction in an activity for from three to six weeks), (Definitely, but unsystematic instruction = 1; systematic instruction in other than block program = 2; systematic block instruction = 3.)

Score _____

3. Daily participation in physical and/or health education class instruction periods of from 45 to 60 minutes is required of all students. (Two days a week = 1; four days = 2; five days = 3.)

Score _____

4. Participation in intramural sports in addition to class instruction is available for all students (Fair program = 1; good = 2; excellent = 3.)

Score _____

5. Detailed yearly program (course of study, including special objectives) for each grade level is on file in the Dean's Office and activity schedules are posted on gymnasium office bulletin boards. (Fair program = 1; good = 2; excellent = 3.)

Score _____

6. A course of study committee (men and women) gives consideration at least annually to needed revision in the program. (Fairly active = 1; active = 2; very active = 3.)

Score _____

7. Provision is made for adequate maintenance and sanitation of school grounds, plant, and classrooms. (Fair = 1; good = 2; excellent = 3.)

Score _____

8. A modern health instruction program is maintained under expert leadership in physical education, in home economics, or in general science, or is correlated through several departments. (Separate courses in one department = 1; fairly well correlated = 2; completely correlated, with coordinating director = 3.)

Score _____

9. A comprehensive safety program is maintained, emphasizing safety habits and standards, safety codes, and safety standards, in all departments. (Fair program = 1; good = 2; excellent = 3.)

Score _____

10. Definite efforts are made to encourage faculty recreation activity and to improve the health status of teachers. (Fair = 1; good = 2; excellent = 3.)

Score _____

II. Outdoor Areas

Possible Score = 30. Actual Score = ____.

1. Total available unobstructed field and court playing space for school and community use varies from four to fifteen or more acres according to the size of the school. (Fair = 1; good = 2; excellent = 3.)

Score _____

(Minimum of four acres - an area equal to one small soccer field, seven tennis courts, and one hard baseball field - and one additional acre for each added unit of five hundred students (boys and girls) = 1; minimum of six acres and one additional acre for each additional unit of three hundred students = 3.)

Score _____

2. Sufficient playing fields are marked off and equipped (for multiple use in field hockey, field ball, soccer, softball, speedball, touch football, etc.) to accommodate all outside peak load classes (both boys and girls). (Fair facilities = 1; good facilities = 2; excellent facilities = 3.)

Score _____

3. Court areas (for separate or multiple use in archery, badminton, handball, horseshoes, paddle tennis, tennis, etc.) are marked off and equipped to accommodate both boys' and girls' classes in all court activities offered. (Fair facilities = 1; good facilities = 2; excellent facilities = 3.)

Score _____

4. Fields and court are surfaced with materials that are resilient, non-slippery, firm as possible, and have suitable slope for good drainage in rainy weather. At least 20% of area should have paved multiple court use, with blacktop (bitumal or asphaltic concrete). (Hard packed clay on decomposed granite, plus 20% blacktop = 1; calcium chloride, plus 20% blacktop = 2; good turf, plus some dirt area, plus 20% blacktop = 3.)

Score _____

5. Jumping pits and field apparatus are protected by sawdust, sand, or dirt kept soft. (Dirt kept soft = 1; sand = 2; sawdust = 3.)

Score _____

6. Field, court, diamond areas are kept clean and well marked; are without hazardous obstructions; and are laid out to provide maximum relief from sun glare. (Fair condition = 1; good = 2; excellent = 3.)

Score _____

7. Maintenance work on fields and courts is done by workmen other than instructors or students. (Partly by others = 1; mostly = 2; entirely = 3.)

Score _____

8. All play areas are fenced off from streets with subdivision fences where necessary for safety and control. (Partly fenced = 1; all fenced, with subdivisions = 3.)

Score _____

9. Play areas are bordered by attractive trees, shrubbery, and vines; and in warm climate are equipped with tables and seats. (Fair lighting = 1; good = 2; excellent = 3.)

Score _____

10. Play areas are well lighted for night use for community recreation. (Fair lighting = 1; good = 2; excellent = 3.)

Score _____

III. Indoor Areas

Possible Score = 30. Actual Score = ____.

1. One or more gymnasium areas sufficient for boys' and girls' inside class activities (according to size of school) (for use of apparatus, boxing, corrective, fencing, gymnastics, rhythm, tumbling, and wrestling) are appropriately equipped, and properly heated, lighted and ventilated. (Standards approximately met = 1-2; fully met = 3.)

Score _____

2. Gymnasium floors are of hardwood, lines are properly painted; walls are smooth

and clear, painting is a light natural color; radiators and drinking fountains are recessed; ceiling height is between eighteen and twenty-two feet. (Standards approximately met = 1-2; entirely met = 3.)

Score _____

3. Additional classrooms, appropriately equipped for theory instruction and health education classes, are provided in the building or conveniently adjacent. (One room = 2; two or more rooms = 3.)

Score _____

4. Special rooms for co-educational social activities are appropriately furnished. (Classroom or gymnasium partly furnished = 1; well-furnished separate room = 3.)

Score _____

5. A rest room for boys (equipped with cots, pads, blankets, and sheets), adequate to handling peak load of building, is provided for use in injury or illness, or rest periods. (One cot for 100 boys in peak loads = 1; 1 cot for 75 boys = 2; one cot for 50 boys = 3.)

Score _____

6. A rest room for girls, equipped with cots adequate to handling peak load use of building, is provided for use in injury or illness, or for rest periods. (One cot in peak load for 50 girls = 1; one cot for 30 girls = 2; one cot for 20 girls = 3.)

Score _____

7. Rest room each for men and women faculty members are provided with appropriate dressing rooms and showers. (Satisfactory facilities for women only = 2; for both men and women = 3.)

Score _____

8. An equipment office is provided in both boys' and girls' locker rooms, properly arranged for issuing towels, suits, and supplies for indoor and outdoor use. (Satisfactory office for one only (boys or girls) = 1-2; satisfactory for both = 3.)
Score _____
9. Properly equipped instructor's offices (separate for men and women), with suitable facilities for medical examination, are available, in good locations for adequate supervision of student activity area = 3.
Score _____
10. The combined inside facilities including classrooms, gymnasium and special rooms, are adequate to handle all classes (boys and girls) inside, during bad weather. (Approximately = 1-2; entirely = 3.)
Score _____

IV. Locker and Shower Areas

Possible Score = 30. Actual Score = ____.

1. Locker rooms (sunny and well-ventilated) provide free floor space, exclusive of lockers, adequate to care for peak load of use. (Peak load equals to largest number of students dressing in any one class period.) (Eight square feet per pupil = 1; ten square feet = 2; twelve square feet = 3.)
Score _____
2. Individual locker facilities are provided for all students. (Box lockers are narrow vertical lockers = 1; combination box and dressing lockers = 2; half length, standard size lockers or self-service basket system, combined with full-length dressing lockers for peak load = 3.)
Score _____

3. Adequate lock protection is provided for lockers or baskets. (Key locks = 1; permanent combination locks = 2; high grade combination padlock = 3.)
Score _____
4. Continuous supervision by either equipment clerks or instructors is provided for locker areas while in use by students. (Fair supervision = 1; good = 2; fully met = 3.)
Score _____
5. Boys' dressing areas are of the aisle type, with fixed benches in the aisles; girls' areas offer choice of close booth or open aisle. (Standards approximately met = 2; fully met = 3.)
Score _____
6. Boys' shower rooms are of the "gang" type with adequate drying room capacity; girls' areas offer choice of "gang" type or closed type. (Standard approximately met = 2; fully met = 3.)
Score _____
7. Shower room provides eight to twelve square feet of floor space per shower head, and sufficient showers to take care of peak load adequately. (Five students per shower at peak load = 1; four per shower = 2; three per shower = 3.)
Score _____
8. Hot water is thermostatically controlled to prevent scalding; shower heads are at the neck height; liquid soap dispensers are provided in all shower areas. (Standard approximately met = 2; fully met = 3.)
Score _____
9. Adequate toilet facilities are available in separate areas immediately adjoining locker and shower rooms (accessible directly to the playground); and contain adequate bowls, urinals,

wash-basins (conforming to established standards for the peak load); hot and cold water, liquid soap dispensers, drinking fountains, mirrors, wastebaskets, and paper towels or drying machines. (Fair facilities = 1; good = 2; excellent = 3.)

Score _____

10. Floors are washed daily with anti-septic solution; and antiseptic footbaths are provided for optional use, to aid in control of footworm. (Standards approximately met = 2; fully met = 3.)

Score _____

V. Swimming Pool

Possible Score = 30. Actual score = ____.

1. Adequate swimming facilities are available for all students (both boys and girls). (Off-campus facilities, closely adjoining = 1; small pool (less than 1250 square feet) on school grounds = 2; large pool (over 1250 square feet) on the school grounds = 3.)

Score _____

2. Pool construction provides proper acoustics; suitable scum gutters, nonslip decks; white tile or other light finish on sides and bottom; underwater lighting if pool is used at night; bottom of pool clearly visible at all times of operation. (Standards approximately met = 1-2; fully met = 3.)

Score _____

3. Pool is equipped with adequate machinery for heating, filtering and sterilizing water, and for maintaining it in conformity with established health standards. (Fair equipment = 1; good = 2; excellent = 3.)

Score _____

4. Standard tests are made daily for air temperature, water temperature, water acidity, and residual chlorine content and, at least weekly, for bacterial content of water. (Score = 3.)
Score _____
5. Pool is equipped with standard safety devices and is protected by control doors which are kept locked at all times except when life guard or instructor is on duty. (Score = 3.)
Score _____
6. Swimmers are required to enter the pool through a water foot bath, opening from shower rooms; to visit toilet and take a supervised soap shower bath before entering; and are not permitted in pool with colds or skin infections. (Standards approximately met = 2; fully met = 3.)
Score _____
7. Spectators in street shoes are not permitted on pool decks but are provided with appropriate gallery space. (Score = 3.)
Score _____
8. Use of pool facilities is distributed equally between men and women students. (Approximately met = 3.)
Score _____
9. All life guard and swimming instructors are required to hold Senior Red Cross Life Saving Certificate or Examiner's Certificate. (Score = 3.)
Score _____
10. Pool is available for community recreational use when not required for school purposes, particularly during summer months. (Score = 3.)
Score _____

VI. Supplies and Equipment

Possible Score = 30. Actual Score = ____.

1. Adequate supply of balls (in good condition) and similar equipment is available for classes in instruction in all team activities offered. (One ball or other items, for every ten members of average size class = 1; one for every eight members = 2; one for every six members = 3.)

Score _____

2. Class sets of supplies for individual or dual sports are provided for all classes instruction in all activities offered (archery, badminton, handball, golf, horseshoe, table tennis, squash, tennis, etc.). (Individual supplies for each member of peak load classes = 3.)

Score _____

3. All class supplies are kept repaired and in good condition (balls clean and in good condition and kept well inflated, bats taped) both for efficiency and safety. (Fair condition = 1; good = 2; excellent = 3.)

Score _____

4. All students wear appropriate uniforms in activity classes. (Uniforms furnished by themselves = 1; provided by school and fee charged = 2; provided by school without charge = 3.)

Score _____

5. Towels and swimming suits or trunks (where needed) are made available. (Furnished by student = 1; by school with fee = 2; by school without charge = 3.)

Score _____

6. Swimming suits and towels are laundered daily and weekly. (By students at home = 1; by school with fee = 2; by school without charge = 3.)

Score _____

7. Adequate first-aid supplies are available at all times in a first-aid room, or in instructors' offices and equipment offices. (Fair supplies = 1; good = 2; excellent = 3.)

Score _____

8. Adequate equipment clerks (other than instructors) are provided at all times and activity hours to handle equipment and supplies (including towel dispensing). (Volunteer student help, not for physical education credit = 1; paid student = 2; full time clerk = 3.)

Score _____

9. Piano and pianist or phonograph, and other necessary musical accompaniment equipment are furnished for dancing classes. (Fair equipment = 1; good = 2; excellent = 3.)

Score _____

10. Activity supplies are available for community recreation use outside of school hours. (Score = 3.)

Score _____

VII. Medical Examinations and Health Services

Possible Score = 30. Actual Score = ____.

1. Medical examinations, advisory, and emergency service is provided by school physicians with cooperative arrangements for handling handicapped and problem cases in school or public clinics or by private medical practitioners. (Adequate volunteer services by community physicians = 2; part-time paid school physician, or (in schools of 2,000 or more) one or more full-time physicians = 3.)

Score _____

2. Trained school nurse services are provided for both school and home visitation purposes, by either part-time or full-time nurses according to size of school. (Fair services =

1; good services = 2; excellent services = 3.)

Score _____

3. A comprehensive examination by the school physician (assisted by physical education instructors) is required of every student at least once in each school level, and includes at least careful check for orthopedic and postural defects, vision, hearing, nose, mouth, and throat, teeth, heart, lungs, nutrition, skin, nervous condition, and possible hernia. (Once in school level = 2; two or more times in school level = 3.)

Score _____

4. No student is permitted to participate in strenuous class or athletic activity without a satisfactory medical examination. (Score = 3.)

Score _____

5. A permanent, continuous, progressive health record is maintained and passed on for each student and is used as a basis for advice and follow-up health service. (Fair = 1; good = 2; excellent = 3.)

Score _____

6. On basis of medical examination students are classified into three divisions, or equivalent = A, average normal for unlimited participation; B, subnormal, with temporary or permanent limitation to restricted activity; C, offered individual or corrective treatment, supplementing normal program. (Fair = 1; good = 2; excellent = 3.)

Score _____

7. Assignment to rest, restricted, or limited individual activity (for other than temporary illness) is approved by the school physician, in consultation with the physical education department. (Score = 3.)

Score _____

8. Students returning after influenza or other serious illness are inspected by the school physician or nurse and assigned to a modified program until their condition justifies resumption of normal activity; students sent home in case of illness or accident are accompanied by an adult. (Standards approximately met = 1-2; fully met = 3.)

Score _____

9. A health examination is made by the school physician of all teachers applying; followed by a periodic examination every three years thereafter; and a careful inspection of all teachers returning to duty after illness of two or more weeks. (Standards approximately met = 1-2; fully met = 3.)

Score _____

10. Non-medical teachers or school officers are never permitted to diagnose or treat health disorders; but a close cooperation is maintained between physical education teachers and the school physician. (Score = 3.)

Score _____

VIII. Modified-Individual (Corrective) Activities

Possible Score = 30. Actual Score = ____.

1. Adequate modified and individual activity classes with limited enrollment, are provided for students incapacitated for normal participation or needing special postural or orthopedic correction (classes B and C). (Maximum of 30 students per instructor = 1; 25 students per instructor = 2; 20 students per instructor = 3.)

Score _____

2. All modified and individual activity cases are properly classified and grouped within classes for effective instruction and guidance, according to their condition. (Fair = 1; good = 2; excellent = 3.)

Score _____

3. Extreme types of restricted cases are assigned to periodic rest periods, in addition to the modified activity, with appropriate reductions in academic program as needed. (Fair = 1; good = 2; excellent = 3.)
Score _____
4. Adequate facilities are provided for suitable games for modified cases (table tennis, deck tennis, horseshoes, croquet, archery, shuffle board, etc.) (Fair facilities = 1; good = 2; excellent = 3.)
Score _____
5. Adequate facilities for handling activity cases are available either within the school or in a central corrective center, accessible to several schools (or the equivalent). (Fair facilities = 1; good = 2; excellent = 3.)
Score _____
6. All teachers assigned to handle individual activity (corrective) classes have had technical training in corrective and therapeutic work. (Fair training = 1; good = 2; excellent = 3.)
Score _____
7. In individual activity cases, students are encouraged to participate also in modified class activities for which they are fitted, and are returned to normal activity as soon as their condition permits. (Fair = 1; good = 2; excellent = 3.)
Score _____
8. All individual activity cases are encouraged to participate also in modified class activities for which they are fitted, and are returned to normal activity as soon as their condition permits. (Fair = 1; good = 2; excellent = 3.)
Score _____

9. Whenever possible, interesting activities of the sports, gymnastic, aquatic, or rhythmic types are used in place of corrective drills to secure postural and corrective results. (Fair results = 1; good = 2; excellent = 3.)

Score _____

10. Normal students, who are temporarily incapacitated for strenuous activity because of accident, operation, or illness, are assigned to modified activity under supervision (either in their regular period or in a special class), until school physicians or nurses approve their return to regular class work. (Score = 3.)

Score _____

IX. Organization and Administration of Class Program

Possible Score = 30. Actual Score = ____.

1. All persons coaching teams or handling physical education classes, or community recreation activities under school supervision are properly certified to teach in the state and have had extensive training and/or experience in physical education. (All certified and experienced = 2; all with a major or minor = 3.)

Score _____

2. Teachers are active in professional organizations such as the American Association for Health, Physical Education and Recreation, attend professional meetings, subscribe to professional magazines and maintain a good supply of late professional books in the library. (Fairly active = 1; active = 2; very active = 3.)

Score _____

3. Instructors stress coordinated teaching; combining with performance fundamentals the necessary rules, team strategy, social and ethical standards, health and safety factors, and attempt to adapt programs to outside recreational needs and

interests. (Fair = 1; good = 2;
excellent = 3.)

Score _____

4. Frequent opportunity is provided for co-educational activity, either in class instruction or in recreational participation. (Mild encouragement = 1; coeducational elective class individual sports = 2; coeducational elective class instruction = 3.)

Score _____

5. Instructional classes for normal students are limited in class size for effective instructional purposes. (Maximum of 45 students per instructor = 1; 40 students per instructor = 2; 35 students per instructor = 3.)

Score _____

6. Teachers' class assignments (including after-school responsibilities such as team coaching and playground direction unless these involve additional salary) are sufficiently limited for instruction. (Maximum load six hours per day = 3.)

Score _____

7. Testing for final grades in activity classes is distributed over (1) performance skills, (2) knowledge of rules and strategy, (3) social attitude (citizenship); (4) posture and body mechanics (or equivalent). (Fair tests = 1; good = 2; excellent = 3.)

Score _____

8. Students are not permitted to substitute clerical work, janitor work, towel dispensing, or piano playing, etc., in place of physical education class activity. (Score = 3.)

Score _____

9. Healthful living (health education instruction) is offered in concentrated instruction periods in approximate departments, in addition to coordinated health counseling in

other departments. Classes met in quiet, comfortable classrooms, not in locker rooms or on bleachers. (Equivalent of at least two hours per week for one semester in each level = 1; equivalent of five hours per week for two semesters in each level = 2; equivalent of five hours per week for two semesters in each level = 3.) (If substituted for an activity class = 0).

Score _____

10. Assignment to activity classes is based on age, physical condition, skill development, need, and interest. (Assigned at random according to grade level = 1; by grades and medical diagnosis = 2; medical diagnosis, degree of development and skill, need and interest = 3.)

Score _____

X. Administration of Intramural and Incollegiate Athletics

Possible Score = 30. Actual Score = ____.

1. Both intramural and intercollegiate sports programs (for boys and girls) are budgeted and financed from school budget and ticket sales. (Partly financed = 1-2; fully financed = 3.)
2. Students are classified for competitive purposes according to conference standards and medical examination. (Fair classification = 1; good = 2; excellent = 3.)
3. Instruction, coaching, and officiating of athletics is handled by women instructors for women, and by men instructors for men, with close cooperation between the two in co-educational activities and joint sport days; use of athletic facilities is equitably divided between men and women. (Standard approximately met = 2; fully met = 3.)

Score _____

Score _____

Score _____

4. Well-organized (play) days are staged periodically under trained and experienced leadership with emphasis on carry-over types of sports. (Sports for women and men separately = 2; both separately and joint sports days for men and women = 3.)
Score _____
5. Noon-hours activities (where time is available beyond adequate periods for unhurried eating) are carefully supervised and limited to modified sports of physiologically defensible types. (Fair organization and supervision = 1; good = 2; excellent = 3. If no time available, score 1.)
Score _____
6. Intercollegiate competition for men is restricted to standards of the conference, NCAA, and NAIA. (Standards approximately met = 2; fully met = 3.)
Score _____
7. Students are eligible for intercollegiate competition in accordance to conference, NCAA, and NAIA standards, for not more than four years in any one sport. Standards approximately met = 2; fully met = 3.)
Score _____
8. Intercollegiate athletics policies are determined by school administrators and physical educators or by regularly constituted school athletic leagues; and game officials are selected from experienced school people as possible. (Mostly = 2; entirely = 3.)
Score _____
9. Schools provide necessary traffic and safety protection to and from and during intercollegiate contests; and maintain a school physician in attendance at all major athletic contests. (Standards approximately met = 2; fully met = 3.)
Score _____

10. Preliminary practice periods are in compliance with standards of local conference as well as the standards of NCAA and NAIA, in regulating major and minor sports. (Standards approximately met = 2; fully met = 3.)

Score _____

APPENDIX B

PLEASE NOTE:

Appendix B: "A Score Card For
Evaluating Undergraduate Professional Programs", © 1965,
pages 95-149, not microfilmed
at request of author. Available
for consultation at University
of Oklahoma Library.
UNIVERSITY MICROFILMS.

BIBLIOGRAPHY

EVALUATION OF HIGHER EDUCATION IN PHYSICAL EDUCATION

1. American Association for Health, Physical Education, and Recreation, Evaluation Standards and Guide in Health Education, Physical Education, and Recreation Education, The Association, Washington, D. C., 1959, 32 pp.
2. American Association of Colleges of Teacher Education, Evaluation Schedules in Physical Education and Health Education, The Association, Oneonta, N. Y., 1951 (Circa), Not paged.
3. Association of College and Research Libraries, College and University Library Accreditation Standards, 1957, The Association, Chicago, 1958, 46 pp.
4. Participants in National Conference, Equipment and Supplies for Athletics, Physical Education, and Recreation, Athletic Institute, Merchandise Mart, Chicago, and American Association for Health, Physical Education, and Recreation, Washington, D. C., 1960, 97 pp.
5. Participants in National Facilities Conference, Planning Facilities for Health, Physical Education, and Recreation, Athletic Institute, Merchandise Mart, Chicago, 1956, 154 pp.
6. Buice, Mary, A Scale for Evaluating the Undergraduate Professional Program in Physical Education, University of Texas, Austin, 1951 (Circa), 42 pp.
7. Errington, Joseph, An Evaluation of Undergraduate Professional Preparation in Physical Education for Men in Canada, Doctoral Dissertation, School of Health, Physical Education, and Recreation, Indiana University, Bloomington, 1958, 181 pp.

8. Gabrielson, M. Alexander, and Miles, Caswell, M., Sports and Recreation Facilities: for School and Community, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1958, 370 pp.
9. Gingerich, Roman, An Evaluation of the Physical Education Service Programs for Men in the Church Related Senior Colleges and Universities of Indiana, Doctoral Dissertation, School of Health, Physical Education, and Recreation, Indiana University, Bloomington, 1958, 207 pp.
10. Kelley, Fred J., Improving College Instruction, American Council on Education, Washington, D. C., 1951, 195 pp.
11. Kerr, Robert Wallace, The Status of Undergraduate Professional Preparation in Physical Education for Men in New England Colleges and Universities, Doctoral Dissertation, School of Health, Physical Education, and Recreation, Indiana University, Bloomington, 1955, 477 pp.
12. Kirchner, George Frederick, An Evaluation of the Physical Education Service Programs for Men in the Senior Colleges and Universities of North Carolina With Respect to Specific Elements, Doctoral Dissertation, School of Health, Physical Education, and Recreation, Indiana University, Bloomington, 1953, 502 pp.
13. Kirk, Robert Henry, An Instrument for Evaluating College and University Health Service Programs, Doctoral Dissertation, School of Health, Physical Education, and Recreation, Indiana University, Bloomington, 1960, 145 pp.
14. LaPorte, Wm. Ralph, Chairman, Tentative Standards for Self-Evaluation by Teacher Education Institutions Offering a Major in Physical Education, Committee on Curriculum Research, College Physical Education Association, Minn., 7 pp., No date.
15. National Committee on Teacher Education and Professional Standards, New Horizons for the Teaching Profession, NEA, Washington, D. C., 1961, 247 pp.
16. National Conference, Undergraduate Professional Preparation in Physical Education, Health Education, and Recreation, Athletic Institute, Merchandise Mart, Chicago, 40 pp.

17. National Council for Accreditation of Teacher Education, Standards for Accreditation of Institutions and Programs for Teacher Education, The Council, 17th and Pennsylvania Ave., N. W., Washington, D. C., Mim., 10 pp.
18. North Central Association Committee on the Preparation of High School Teachers in Colleges of Liberal Arts, Better Colleges--Better Teachers, MacMillan Co., New York City, 1944, 167 pp.
19. Oregon Association for Health, Physical Education, and Recreation, Vernon Sprague, Editor, Teacher Education Standards in Physical Education, University of Oregon, Eugene, 1952 (Circa), Mim., 123 pp.
20. Sauter, Waldo, An Evaluation of the Undergraduate Professional Preparation in Physical Education for Men in Selected Colleges and Universities in Indiana, Doctoral Dissertation, School of Health, Physical Education, and Recreation, Indiana University, Bloomington, 1957, 234 pp.
21. Scott, Harry A., and Westkaemper, Richard B., From Program to Facilities in Physical Education, Harper and Brothers, New York, 1953, 483 pp.
22. Snyder, Raymond Albert, and Scott, Harry Alexander, Professional Preparation in Health, Physical Education, and Recreation, McGraw-Hill Book Company, Inc., New York, 1954, 421 pp.
23. Townes, Ross, A Study of Professional Education in Physical Education in Selected Negro Colleges, Doctoral Dissertation, School of Health, Physical Education, and Recreation, Indiana University, Bloomington, 1950, 147 pp.
24. Washington Conference Report, Intramural Sports for College Men and Women, American Association for Health, Physical Education, and Recreation, Washington, D. C., 1955, 44 pp.
25. Washington Conference Report, Physical Education for College Men and Women, American Association for Health, Physical Education, and Recreation, Washington, D. C., 1958, 34 pp.
26. Professional Preparation Conference, Professional Preparation in Health, Education, Physical Education, Recreation Education, American Association for Health, Physical Education, and Recreation, Washington, D. C., 1952, 159 pp.

27. Dollgener, Robert J., An Appraisal of a Selected Score Card for Evaluating Undergraduate Professional Physical Education Programs in Indiana, Doctoral Dissertation, School of Health, Physical Education, and Recreation, Indiana University, Bloomington, 1965, 304 pp.

APPENDIX C

503 Sooner Drive, Apt. D
Norman, Oklahoma 73069

December 21, 1967

Dear Sir:

I propose a study to test the relationship and effectiveness of two evaluative instruments that are currently being used in the evaluation of undergraduate professional preparation programs in Physical Education. The two evaluative instruments involved in the study are: the Bookwalter and Laporte Score-Cards. In order that a valid and objective treatment of the two instruments can be made, I would like to apply it to a homogeneous group of institutions of higher education. The institutions proposed are predominantly Negro state-supported colleges and universities in several Southern states. Also, the study will serve as partial fulfillment of my doctoral requirements at the University of Oklahoma.

Testing the relationship and effectiveness of the two instruments necessitates a personal visit and an interview. I should like to enlist your cooperation in this phase of the study. In reposting the results of the study the institutions involved will remain anonymous.

Enclosed is a self-addressed postal card on which you are asked to indicate your willingness to cooperate in this study. Please return the card by January 6, 1968.

Thank you kindly for your cooperation and prompt reply.

Sincerely,

Frank Purnell
Graduate Student

Dr. Herbert Hengst
Major Professor

APPENDIX D

APPENDIX D

TABLE OF RAW SCORES

RAW SCORES AS TO AREAS ON THE BOOKWALTER SCORE-CARD

Areas	Institutions										
	A	B	C	D	E	F	G	H	I	J	K
I. General Institutional and Departmental Practices	61	62	60	55	54	59	66	50	52	49	52
II. Staff Standards	84	80	102	71	71	67	82	65	62	39	72
III. Curriculum Policies	83	80	97	97	97	96	100	113	67	92	77
IV. The Teaching Act	81	69	54	71	73	80	64	66	49	48	49
V. Service Program and Extended Curriculum	58	70	71	71	71	71	63	55	42	62	42
VI. Student Services	99	77	76	75	75	88	86	57	76	28	86
VII. Library - Audio-Visual	69	60	58	64	65	73	69	45	30	41	39
VIII. Supplies and Equipment	37	60	40	40	40	51	36	36	42	48	42
IX. Indoor Facilities	81	63	71	76	76	35	0	41	30	48	16
X. Outdoor Facilities	73	59	53	46	41	22	66	44	50	41	41

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RAW SCORES AS TO AREAS ON THE LAPORTE SCORE-CARD

	Institutions										
	A	B	C	D	E	F	G	H	I	J	K
Program of Activities	20	22	21	20	24	22	16	14	13	18	6
Outdoor Areas	28	19	18	19	16	17	19	15	14	9	9
Indoor Areas	18	24	24	25	19	10	9	13	12	14	5
Locker and Shower Areas	21	20	21	26	17	10	4	9	10	13	2
Swimming Pool	0	29	30	30	0	0	0	0	0	19	22
Supplies and Equipment	21	21	21	17	16	20	10	9	8	20	11
Medical Examination and Health Services	27	23	23	23	19	23	14	16	15	23	8
Modified-Individual (Corrective) Activities	10	24	23	19	0	29	4	17	16	6	7
Organization and Administration of Class Programs	25	28	27	22	26	28	20	21	26	21	16
Administration of Intramural and Interscholar Athletics	28	28	27	25	21	26	19	24	24	17	14

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TOTAL POINTS ON INDIVIDUAL SCORE-CARDS

BOOKWALTER

Institutions

A	726
B	680
C	670
D	666
E	663
F	643
G	632
H	472
I	500
J	496
K	461

LAPORTE

Institutions

A	198
B	238
C	235
D	226
E	158
F	185
G	115
H	138
I	130
J	160
K	86

COMBINED SCORE ON EACH INSTITUTION ACCORDING TO
THE BOOKWALTER AND LAPORTE SCORE-CARDS

Institutions

A	924
B	918
C	905
D	892
E	821
F	828
G	747
H	610
I	638
J	656
K	547