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PERCEPTIONS OF THE NEED FOR A GRADUATE
PHYSICAL EDUCATION PROGRAM AT
THE FEDERAL UNIVERSITY OF VICOSA

presented by

Vera Lucia Simoes da Silva

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Education

A handwritten signature in dark ink, appearing to read "Bernard M. Meeley". Below the signature is a horizontal line.

Major professor

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PERCEPTIONS OF THE NEED FOR A GRADUATE PHYSICAL EDUCATION
PROGRAM AT THE FEDERAL UNIVERSITY OF VIÇOSA

By

Vera Lucia Simões da Silva

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Administration and Curriculum

1982

ABSTRACT

PERCEPTIONS OF THE NEED FOR A GRADUATE PHYSICAL EDUCATION PROGRAM AT THE FEDERAL UNIVERSITY OF VIÇOSA

By

Vera Lucia Simões da Silva

Physical education professional preparation in Brazil is primarily undergraduate. Presently only the master's degree programs are in existence. The present study was undertaken to determine the perceptions of groups knowledgeable concerning the Department of Physical Education, i.e., faculty, graduates, students, and university officials, relative to the need for a master's degree program at the Federal University of Viçosa. A survey was conducted of 129 individuals with 74 respondents across the four groups in which seven research questions were posed related to goals and objectives, areas and disciplines, attitudes, and recommended professional preparation. The attitudes of the respondents toward graduate physical education and the implementation of such a program were favorable. The main content areas identified were work physiology, coaching, and sports administration. It was considered that the program should contribute to expansion of specific knowledge, research, and teaching experience. The respondents believed that much of the equipment and facilities of the department would be appropriate for a graduate program. The graduate program was also seen as an important factor for career

opportunities and professional improvement. On the basis of this study and other relevant research, this investigator recommends that the Federal University of Viçosa should plan and implement a master's degree program in the Department of Physical Education. The investigator recommends, further, that a comprehensive job market survey be conducted before developing the model for the graduate program. The needs of the society should be evaluated further before realistic objectives can be formulated. Adequate professional preparation should be in accordance with the current needs of the relevant society.

This work is dedicated to:

Alice Hannickel Simões, my mother;

Constantino Simões da Silva Filho, my father (in memoriam); and

Daniel Simões da Silva, my uncle.

Through them I want to show my gratitude to all the people who, in one way or another, have contributed to my growth. Muito obrigada.

ACKNOWLEDGMENTS

I want to express here my appreciation to Dr. Howard Hickey, my advisor and major professor, who provided assistance and advice throughout this endeavor.

I also wish to thank Dr. Wayne Van Huss, member of my committee, who, with dedication, helped me during my graduate studies and during the final review of the research.

Dr. Richard Featherstone and Dr. Larry Lezotte, members of my committee, also made valuable contributions during the course of my studies.

The James C. Nall family made me feel at home during all the years I spent in the United States. I am thankful for their support and for that of other friends as well.

CAPES made it possible for me to have the rewarding experience of graduate study in the United States. The Universidade Federal de Viçosa gave me the time to conduct the study, and the Department of Physical Education gave me permission to leave my post to complete my studies. I am thankful to my colleagues at the Universidade, who took over my duties in my absence.

Finally, to the individuals who participated in this research, I extend my thanks.

Thank you very much. Muito obrigada.

TABLE OF CONTENTS

	Page
LIST OF TABLES	vi
 Chapter	
I. INTRODUCTION	1
Background of the Problem	1
Statement of the Problem	5
Need for the Study	5
Assumptions	7
Purpose of the Study	7
Overall Objective of the Study	8
Limitations of the Study	9
Design of the Study	10
Definition of Terms	11
Overview	12
II. REVIEW OF THE LITERATURE	14
Introduction	14
The Role of Graduate Programs in General	15
The Need for Graduate Programs in Brazil	18
Review of Brazilian Physical Education Graduate Programs	21
The Physical Education Programs in the State of Minas Gerais	24
The Physical Education Program at the Federal University of Viçosa	26
Objective of the Physical Education Program at Viçosa	27
Summary	27
III. DESIGN OF THE STUDY	29
Introduction	29
Pilot Study	29
Present Study	30
Description of the Population	30
The Instrument	31
Procedures	31
Statistical Analysis	34
Summary	34

	Page
IV. ANALYSIS OF DATA	36
Introduction	36
Demographic Characteristics	36
Data Gathered in Response to the Research Questions . .	38
Summary	61
V. SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND REFLECTIONS .	62
Summary	62
Introduction	62
Procedures for Gathering Data	63
Conclusions	63
Curriculum	64
Other Elements Needed for a Graduate Program	65
Attitudes Toward Physical Education	66
Admission, Evaluation, and Degree Requirements . . .	66
Perceptions of the Current Undergraduate Program at the Federal University of Viçosa	67
Recommendations	68
Reflections	69
APPENDICES	71
A. COVER LETTERS AND INSTRUCTION SHEET	72
B. ENGLISH VERSION OF QUESTIONNAIRES	78
BIBLIOGRAPHY	88

LIST OF TABLES

Table	Page
3.1. Overview of Areas Covered by Questionnaires Given to the Four Groups of Respondents	32
3.2. Number and Percentage of Questionnaires Returned From the Four Groups of Respondents	34
4.1. Distribution of Respondents According to Sex	37
4.2. Distribution of Respondents According to Age	37
4.3. Distribution of Respondents According to Current Educational Levels and Plans for Future Education	38
4.4. The Goals Regarded as Important in a Physical Education Graduate Program	39
4.5. Rank Order of Perceived Importance of Objectives of a Graduate Program in Physical Education	40
4.6. Responses From Faculty, Graduates, and Students Regarding the Professional Preparation of Physical Education Majors in the Present Program	41
4.7. Frequencies of the Areas of Professional Preparation Suggested for the Graduate Program by Administrators . .	41
4.8. Frequencies and Percentages of Responses to Whether a Graduate Program Would Enhance the Undergraduate Program	42
4.9. Multiple Responses From Faculty, Graduates, and Students Regarding Areas of Specialization	43
4.10. Rank Order of Importance of Program Functions Relative to the Faculty and Students	44
4.11. Rank Order of Importance of Equipment and Facilities for a Graduate Program	45
4.12. Responses Regarding Areas on Which the Program Should Be Based	45

	Page
4.13. Rank Order of Subject Content Areas That the Respondents Thought Should Be Included in the Physical Education Curriculum	47
4.14. Rank Order of Perceived Benefits of a Physical Education Program	48
4.15. Responses of Administrators and Students Regarding Their Perception of Physical Education	48
4.16. Frequencies and Percentages of Positive Responses Related to the Importance of the Graduate Program to Professional Development	49
4.17. Responses Regarding Perceptions of Criteria for Admission, Evaluation, and Graduation Requirements . . .	50
4.18. Frequencies and Percentages of the Perceptions of the Respondents Related to Materials Available at the University	52
4.19. Means of Perceptions of What Is Needed and What Can Be Used for a Graduate Program in Physical Education . .	53
4.20. Frequencies and Percentages of Responses Related to Materials Regularly Used at the University	55
4.21. Mean Ratings of Source Materials	57
4.22. Mean Ratings of the Department of Physical Education . . .	58
4.23. Rank Order of Changes Perceived as Needed in the Undergraduate Program	58
4.24. Frequencies and Percentages of Positive Responses Related to Research as an Essential Part of Career . . .	59
4.25. Rank Order of Perceived Benefits to Professional Activity From Research	59
4.26. Frequencies and Percentages of Negative Responses of the Groups Engaged in Research	59
4.27. Frequency and Percentage of Responses of Students Who Took Research Courses	60
4.28. Frequencies and Percentages of Responses Regarding Students' Teaching Experience	60

	Page
4.29. Multiple Responses Regarding How Administrators and Students Learned of the Physical Education Graduate Program	61

CHAPTER I

INTRODUCTION

Background of the Problem

Physical education and sports have been mandatory in Brazilian schools at the elementary-school level since 1851. However, this mandate has not been enforced because of poor financing, inadequate facilities, the lack of acceptance by those who saw sports or physical activity as noneducational, and the lack of qualified physical education teachers. At one time, elementary and secondary schools hired military personnel to teach because members of the military were available and they had received some training in physical education and sports. Military personnel can be hired as teachers at this time because their training still meets the minimum requirements established by the Ministry of Education and Culture for teachers in elementary and secondary schools.

Specialization in physical education was initiated in 1925 at the Naval Sports Centers. Fourteen years later, physical education for civilians was established (Costa, 1971). In 1969, the government made physical education mandatory for all academic levels: elementary, secondary, and college (Decree-Law 705, 1969, and Federal Law 5669, 1971). An expansion of physical education teacher-training programs at the undergraduate level resulted. Thirty-nine schools of physical education were established. The majority were located in São Paulo

and Rio Grande do Sul. The efforts of the new schools served to decrease the student-teacher ratio, but a shortage of qualified teachers still existed (MEC, 1971; Cavalcante, 1981).

Graduate education appeared in the Brazilian universities in the 1960s. The National Council for Graduate Studies (CNPq) was created by the Ministry of Education and Culture (MEC) to generate policies and regulations for graduate programs. Later, this council formulated the National Plan for Graduate Studies (PNPG) to provide for control of the variety of programs that were spreading throughout the country. The plan (PNPG) was approved in 1975. One of its major purposes was "to achieve a combination of training activities at the graduate level to be developed at the Institutions of Higher Education and Research" (MEC, 1976, p. 7). The plan also stated that training faculty, researchers, and high-level professionals should be the primary goal of graduate education (MEC, 1976).

Recent evidence has shown that the majority of graduate programs in education are at the master's degree level (Coordination for Training Higher Education Personnel [CAPES], 1976). In 1977, there were 17 graduate programs at the master's level, and eight others were being planned (Castro, 1977). Consideration was given to creating two graduate programs at the doctorate level. However, at that time, there was no mention of graduate programs in the field of physical education (MEC, 1975).

In late 1977, a graduate program in physical education was begun in São Paulo. It was the first program to be developed in Latin

America. At present there are two other graduate programs: in Rio de Janeiro and in Santa Maria, Rio Grande do Sul.

There are many courses of especialização that, because of their length (more than 360 hours of classwork), are considered to be at the graduate level. However, these are not degree courses. The universities that now offer graduate programs do not provide many options to the professionals in physical education. In Santa Maria, the main program is called Movement Science; in São Paulo, the main program is called Physical Movement Performance. In Rio, emphasis is on Work Physiology. Research is an important component of all of these courses. The objectives of these programs are the same: to qualify professionals in physical education for college teaching and to prepare researchers (University of São Paulo, 1977, 1980).

The Federal University of Viçosa, the school of primary interest in the present study, was founded in 1927 at the Superior School of Agriculture and Veterinary Medicine. In 1948, the name was changed to Rural University of the State of Minas Gerais. At that time, the University comprised the Faculties of Agriculture, Veterinary Medicine, and Home Economics. There were also research and extension services. In 1969, by governmental decree, it became the Federal University of Viçosa (Decree 64825, 1969) (UFV Catalog, 1982). Today the institution has more than 20 programs at the undergraduate level and 18 graduate programs--13 at the master's level and 5 at the doctoral level. The Federal University of Viçosa has been a pioneer in academic improvement. It was the first college in Brazil to implement a

graduate program in agriculture. The original well-defined objectives are still part of the university's goals. They are:

- to minister to, develop and perfect higher education, aiming at the formation and the development of professionals at the college level;
- to motivate, to promote, and to execute scientific research;
- to promote the development of the sciences, arts, and letters;
- to extend services to the community, by means of courses and special services, teaching activity, and the application of results.

The University is divided into 4 centers and 22 departmental units. The Department of Physical Education is part of the Center of Biological Sciences and Health. This department, called Physical Education Services, was created in 1972 to meet government requirements. Three years later, the School of Physical Education was created; it subsequently became a departmental unit. The main objective of the undergraduate program is to prepare physical education teachers for elementary and secondary schools.

Currently, in addition to the undergraduate program, the department offers services for the entire student body, teachers, and varsity teams. It also offers physical activities, sports, and recreation for the community, including families, clubs, and schools. There are 27 professors in the department. Six are currently in graduate programs in São Paulo and Santa Maria. Three are preparing to leave this year. Nine of the faculty have just returned from various parts of Brazil or from abroad where they received master's degrees (UFV Catalog, 1982).

The formation of a graduate program will permit the department to comply with the objectives of the National Plan for Graduate Studies. These include:

- the training of professors for university teaching to meet the quantitative expansion of learning and enhance its quality;
- to train researchers for scientific work, to meet program and regional needs of society;
- to prepare high-level professionals. (MEC, 1976)

There is great need for quality professional preparation in the field of physical education. A graduate program for the Federal University of Viçosa should bring new options to physical education professionals and should aid in meeting regional demands.

Statement of the Problem

To assess the need for expanding the physical education program of the University of Viçosa to the graduate level. To determine how this need was perceived by undergraduate physical education majors, departmental faculty, officials of the university, and by former undergraduates currently working in the field.

Need for the Study

The Department of Physical Education (DES) at the Federal University of Viçosa has had a program of licenciatura for undergraduate students since 1975. Although this program is meant primarily to certify teachers at the elementary and secondary levels, graduates from the program have been employed as professors by colleges, universities, and other institutions. This has occurred because there is a great demand for professors at the university level and because

there are few positions available in the elementary and secondary schools.

Elementary and secondary teachers may be certified on the basis of courses lasting from 15 to 30 days given by sports organizations and institutions. Once the licenciatura is obtained, other students may be taught in similar programs. Of the states in Brazil, Minas Gerais has the greatest number of teachers so certified by state educational secretaries (MEC, 1971).

College professors in Brazil are required by law to have graduate degrees. The lack of graduate programs in physical education (until 1977), however, has made this all but impossible. Therefore, the Federal University of Viçosa is considering implementing a physical education program at the master's level. Such a program would provide institutions of higher education with more adequately prepared professors and, it is hoped, fulfill the need for professional improvement of teachers.

To conform with the state and national practices, faculty members of the Department of Physical Education have been studying a change in the curriculum of the physical education program. A number of contradictions have existed in the undergraduate program, the central objective of which is to certify teachers for elementary and secondary schools. The main problem is that there are no jobs available in the elementary and secondary schools for those who graduate from the department. The Department of Physical Education is attempting to formulate new objectives that meet the immediate needs of the society. As a result of this study, a new curriculum will probably be

put in place that will offer students a variety of options, more specifically tailored to the job market in Minas Gerais and perhaps in Brazil as a whole.

Assumptions

If a graduate program in physical education is implemented, it is expected that the following goals could be attained:

1. A graduate program would enhance the quality and efficiency of the undergraduate program.
2. Faculty members would seek more professional improvement in research and training at the graduate level.
3. Literature in the area of physical education would be supplemented and improved and, as a result, would facilitate the exchange of ideas and research among professionals at all levels.
4. The quality of meetings, congresses, and symposia would be improved with the presentation of research papers.
5. The quality of professional training of prospective university teachers, coaches, and others would be improved.
6. The new program may serve as a model to other schools and departments in developing their physical education programs.
7. The knowledge, abilities, and skills required of college professors should be enhanced through a graduate program.

Purpose of the Study

The primary purpose of this research was to determine the perceptions and opinions of those individuals who had had experience with the physical education program at the Federal University of

Viçosa. This research was undertaken to provide data from faculty, students, graduates, and administrators in the Department of Physical Education and at the Federal University of Viçosa that could serve as the basis for building a model of a graduate level physical education program.

Overall Objective of the Study

The comprehensive objective of this research was to develop the guidelines for a model of a graduate program in physical education to be established at the Federal University of Viçosa. An educational model becomes more usable if it has components pertinent to the characteristics of the field it represents and of the institution for which it is constructed. Thus, in developing such a model, the researcher considered the following components:

1. The structure of graduate programs in Brazil as formulated by the National Plan for Graduate Studies under the Ministry of Education and Culture.
2. The interrelationship between the Department of Physical Education and other departments or disciplines at the Federal University of Viçosa.
3. The internal organization of the University of Viçosa.
4. The need for the program at the Federal University of Viçosa and attitudes toward its implementation.
5. The necessary components of the program, i.e., equipment, facilities, and other materials.
6. The goals and objectives the program should attain.

7. The areas and disciplines that should be included in a model of such a program.

The present researcher focused on components 4, 5, 6, and 7. A survey was conducted among past and present students of the current undergraduate physical education program, as well as faculty and university administrators. The following research questions were formulated:

1. What should be the goals and objectives of a graduate program in physical education at the Federal University of Viçosa?
2. What areas of physical education should constitute a model for such a graduate program?
3. Which disciplines should be included as requirements for a master's degree in physical education?
4. What are the attitudes of the faculty, the students, and the administrators toward physical education and toward future implementation of a graduate program?
5. What criteria should be adopted for acceptance into the program?
6. What criteria should be adopted for graduation?
7. How adequate are the facilities, equipment, and materials for implementation of a graduate program in physical education at the Federal University of Viçosa?

Limitations of the Study

A variety of limitations are inherent in a study of this nature:

1. The data were collected in Brazil at the Federal University of Viçosa. Parts of the questionnaire, however, were based on literature and research from the United States. There have not been many studies such as this one in Viçosa, so inherent cultural differences may have imposed some restrictions on the study.

2. The limited number of respondents.

3. The use of only one university.

4. The poor response rate by the graduates (28 out of 90).

5. The difficulty the sample had in responding to questionnaires of this type. Even though instructions were available, for a variety of reasons some of the respondents could not answer all of the questions.

Design of the Study

A survey of faculty members, administrators, Department of Physical Education officials, senior physical education majors, and physical education graduates of the Federal University of Viçosa was conducted. The questionnaires, which were constructed by the investigator, were based on a pilot study and on review of the literature. The intention was to gather data to establish the basis for a graduate program in physical education that would be in accordance with the real needs of the city and the state. The survey was also designed to determine the factors perceived as important in implementing the program.

The survey population was composed of four groups:

1. Faculty members of the Department of Physical Education,
2. Graduates from the Department of Physical Education program presently employed away from Viçosa,
3. Top administrators of the university and officials from the Department of Physical Education, and
4. Students in their senior year who were majoring in physical education.

The analysis of the data was done at the Computer Center of Michigan State University. The Statistical Package for the Social Sciences (Nie et al., 1975) was used to calculate means, frequencies, and percentages. Friedman Two-Way Analysis of Variance and the Spearman Rank Correlation were computed (Siegel, 1956).

Definition of Terms

The following abbreviations and terms are defined in the context in which they are used in this study.

CAPES: Coordination for Training Higher Education Personnel, an agency of the Ministry of Education and Culture.

CFE: Federal Education Council. An agency of the Ministry of Education and Culture responsible for regulating the general educational/legal procedures and the accreditation of university programs.

CNPG: National Council of Graduate Study.

DEF: Department of Physical Education and Sports, a division of the Ministry of Education and Culture, now referred to as SEED.

DES: Department of Physical Education at the Federal University of Viçosa.

Especialização: A graduate-level training program of not less than 360 hours of classwork. No degree is granted in an especialização program.

Licenciatura: A term used for a three- or four-year term at the undergraduate level.

MEC: Ministry of Education and Culture, a federal agency.

PNPG: National Plan for Graduate Studies. The graduate plan for the universities and colleges, which includes the objectives and directives of a graduate program. The PNPg has norms and policies and is revised every five years.

Vestibular--An entrance examination for students who want to enter the federal and state universities in Brazil.

Overview

In Chapter I, an introduction and statement of the problem have been presented. The second chapter of this study consists of a review of literature related to the following topics: the present concern of the Brazilian Ministry of Education and Culture about the creation of new graduate programs; the improvement of the ones that already exist; the role of graduate programs in general as viewed by American authors; the present need for graduate education in Brazil; Brazilian physical education graduate programs; the demand for college teachers in Brazil; programs at the undergraduate level in physical education in Minas Gerais; and a discussion of the Federal

University of Viçosa. The design of the study, the pilot study, a description of the population of the study, the questionnaires, the procedures, and the statistical analysis are described in Chapter III. In Chapter IV, the data analyses and the results are given. The summary, conclusions, and recommendations are presented in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

No effort to improve the schools in America is likely to succeed until substantial progress is made in improving the professional education of teachers and the valid knowledge base upon which it rests. (Howsan, 1976)

Introduction

Brazilian graduate programs have been following the American example as a point of reference in defining their own programs (Paixao, 1973). The need to create new programs and to improve existing ones is being considered by the Ministry of Education and Culture and by the universities (MEC-PNPG, 1976; Barreto, 1981).

The purpose of the present study was, therefore, to assess the need for a graduate program in physical education and to help to plan a model that will fulfill the needs of the Federal University of Viçosa and its students, the needs of the city of Viçosa, and of the state of Minas Gerais.

The literature search for this study covered the following topics: (1) the role of graduate programs in general, as based on American graduate education; (2) the need for graduate programs in Brazil; (3) a review of Brazilian physical education graduate programs; (4) the physical education programs in Minas Gerais; and (5) the physical education program at the Federal University of Viçosa.

The following materials served as sources for the review of the literature: university catalogues, mimeographed materials, articles and books published by the Ministry of Education and Culture Documentation and Publication Department. Other sources consisted of books and professional journals.

The Role of Graduate Programs in General

The objectives for any kind of educational program should be set to meet the needs of the population that will be involved with the program. These needs have to be revised as the population changes.

In the United States, graduate programs are still to be defined. In 1910, Calvin Thomas of Columbia University described the master's degree as partly a cultural degree, partly a research degree, but everywhere a teaching degree, mainly for secondary school. A debate existed even before that year whether the master's was a terminal degree or a steppingstone to the doctoral degree (Berelson, 1960; Snell, 1967). The primary objective of the doctoral degree in the early years was to give a cultural education and/or to retain in the country young men who had been going to Germany in pursuit of advanced study. Later it became the degree granted for scientific research as the interest in scientific discovery increased.

Starting from this European example, graduate education evolved into an American style, giving a new dimension to higher education. College teaching came to be recognized as a career for

which a student is specifically prepared, and the college curriculum became more sharply divided into various disciplines based on curricula similar to those in which the professors had done their graduate work.

The demand for persons with advanced degrees prompted a great expansion in graduate education. The creation of new fields of academic interest and of new departments of specialization in these fields within traditional colleges of arts and sciences contributed to this expansion.

After World War II, the research for defense and national security provided impetus to scientific study. The universities were then regarded as essential contributors to national security because they engaged in basic research and also pursued extensive programs of applied research, and they trained and educated young persons who would become the scientists of the future. Concurrently, the application of scientific knowledge was also developing in industry.

It was only in the 1960s that the necessity to prepare teachers for the increasing proportion of teenagers seeking college education was realized. The annual production of Ph.D.'s was not satisfying this need and the need of government and industry (Walters, 1965).

The development of the physical education graduate program, according to the American Association of Health, Physical Education, and Recreation conference in 1967, is difficult to trace because it emerged as part of the graduate offerings of schools and colleges of education. It also faced the same basic issues and problems that

have been the center of controversy in graduate education in the United States throughout its history. The emphasis on professional preparation rather than on advanced study and research was also viewed with disfavor by some authors, who criticized the status of physical education (Conant, 1961; Daniels, 1965). The debate about whether graduate work should be professional or academic in nature was also applied to the physical education graduate programs. According to the report of the National Conference on Graduate Study in Health, Physical Education, and Recreation, the purposes of graduate study are as follows: to add to the store of human knowledge through basic research; to extend the range of nonverbal expression (dance, games, sports, etc.) through encouragement of human invention and imagination; to prepare scientific research workers and humanistic scholars; to provide advanced study for practitioners (teachers, coaches, supervisors) at various levels of competency; and to develop leaders who have the ability to think and to gain understanding of aesthetic sensibility and moral responsibility (American Association for Health, Physical Education, and Recreation, 1967).

Carmichael (1961) suggested a plan for strengthening graduate programs in the United States. He criticized graduate programs, hoping that a new purpose for graduate education would become apparent. He also suggested certain steps that might be helpful in strengthening the program. He studied organization and curriculum methods and procedures of graduate education and listed a series of internal problems. Among these were recruiting for graduate study, the relationship of undergraduate and graduate education, a clearer definition of what

is expected of the student who is preparing for the qualifying examination, the amount of course work required beyond the master's degree, the foreign language examination, the need for developing a morale for college teaching as a profession, and the means of strengthening the program so that the student could expect his degree with the certainty that the medical student expects his degree if he does his part.

In 1972, Elton J. Gardner, Dean of Graduate Studies at Utah State University, urged that doctoral programs should be more sensitive to the external world and its fluctuations. He maintained that students should be scrutinized according to ability, personality, interest, and motivation for careers in teaching and/or research. Some should be encouraged to enter research, others should be prepared for teaching, and some, who might be acceptable in graduate schools on the basis of their written credentials, should be directed to other kinds of employment because of their personalities and motivation (Kent & Springer, 1972).

The Need for Graduate Programs in Brazil

As in the United States, Brazilian higher education is going through a phase of reevaluation (Senta, 1981). The movement toward graduate programs in general appeared in the country in the early 1960s. The role of undergraduate courses was to prepare teachers for secondary schools; however, no provision had been made for the preparation of the college teacher who teaches prospective teachers. Development of most of Brazilian university teachers had been only through

their own experiences in the field and through independent study. In 1965, the graduate program was approved by the Federal Council of Education (CFE) (Brazil, Congresso Nacional, 1965).

The master's and doctoral degrees were defined in 1966. Three years later, in 1969, in Federal Law 465 it was decreed as a condition of employment that all professors have a graduate degree six years after their appointment (Castro, 1977; Paixao, 1973; Brazil, Congresso Nacional, 1969).

With the beginning of graduate programs, the need for policies and regulations became apparent. The National Council for Graduate Studies was created by Federal Law 73411 on January 4, 1974. The Council then prepared the National Plan for Graduate Studies (PNPG). The strategies and analysis presented in the PNPG were to serve as references for the measures to be taken at all institutional levels of coordination, planning and execution, and adjustments of graduate-study activities for five years. The document stated objectives, general directives, and goals for expansion. It must be noted that the Brazilian universities are not autonomous institutions but must follow the regulations and policies for Brazilian education as presented by the Ministry of Education and Culture. What appears to be the most important objective is the training of qualified professors for college teaching to meet the quantitative expansion of learning and to promote the quality of higher education. The training of researchers for scientific work is another main objective.

One of the criteria for excellence of a department is related to graduate education and research if these two criteria are seen as

prime departmental priorities. It has been pointed out that in the university's or department's desire for prestige, scholarly aspirations may obscure the real need for the students and society. Thus the question is whether adequate resources are available to develop and support graduate work without weakening existing programs (Dressel, 1974).

Expansion of any institution should be a matter of careful study of needs and resources in a region rather than of institutional opportunities and political maneuvering. Professor Euro Brandão, former Minister of Education and Culture, stated that an important condition for increasing the scientific potential of the university is to improve progressively the faculty qualification through graduate education (Brandão, 1978). It seems this has been done, and CAPES, a federal agency for training Brazilian teachers, is responsible for the improvement of thousands of college teachers not only in Brazilian programs but in various countries around the world.

Until 1977, there was no precise study of the present situation of the graduate programs to ascertain the aims to be reached in short-, medium-, and long-range periods (Castro, 1977). However, today, with the great interest of the Ministry of Education and Culture in improving Brazil's education, there are three lines to be followed (Senta, 1981):

1. An effort of the university to improve teaching quality and the constant search for excellence of the means adequately to develop teaching and research activities;

2. To involve the university more actively in the socio-economic and cultural context and in the community;

3. To improve and renew the administrative scope of the university, not only in administrative changes but also in more accurate planning of the research, extension, and curricular activities of the university.

Review of Brazilian Physical Education Graduate Programs

Brazilian education went through a reform in the late 1960s and early 1970s, which called for a complete reorganization of the Brazilian university (Paixal, 1975). The orientation of the reform was toward the congregation of all (college) faculties into a university campus. However, the schools of physical education were being created as independent units across the country.

There has been only one study on the status of physical education and sports in Brazil to date: "Diagnostico de E.F./Desp. no Brazil" (Costa, 1971). It was a national diagnosis of data collection referring to levels and variables applied to p.e./sports, which was finished in 1971. The results of this analysis showed an increase in the number of physical education schools in the mid-1960s to the 1970s, an increased production of sports equipment and materials (135 percent), and an increase in the allocation of money for community sports and recreation for some urban areas. However, it was also shown that the new schools opened at that time did not meet the minimum operational requirements set by the MEC. Some difficulties regarding the curricula were also found. The schools were inadequately equipped for

sports medicine and research. There was no exchange of information among the institutions mentioned above. Although more materials were produced, their quality was not maintained.

The diagnosis also showed that the schools were not complying with the government mandate; thus many students of all levels were not having any physical activity in the schools. It was found that, in 1966, of the Brazilian people in general, only 0.6 percent participated in physical activities. This is one of the lowest percentages in the world (Costa, 1971; Cavalcante, 1981). Cavalcante, the Secretary for Physical Education and Sports of the Ministry of Education and Culture, confirmed in 1981 that the physical activities and sports had not reached many sectors of the Brazilian population. There is still a deficit of facilities, equipment, and related materials (i.e., books and journals) that are so necessary. Cavalcante stated that there is almost no physical education in the first four years of elementary school and that there is no physical education at the preschool level. There is also a shortage of qualified teachers, coaches, sports medicine personnel, and other specialists in the field (Cavalcante, 1981).

The pressure to train professionals better because of the increased demand of the colleges for physical education professors for the undergraduate courses prompted the universities to plan more graduate programs. The University of São Paulo was the first to implement a master's degree program in physical education. It was begun in 1977, and it was the first program of its kind in Latin America. The program was planned for physical education and sports medicine

doctors. Its objectives were to train professionals for college teaching and as researchers (University of São Paulo, 1977).

In 1979, the Council of Physical Education and Sports at the Federal University of Santa Maria, Rio Grande do Sul, approved the academic administrative norms project for a graduate program. The courses began in 1980 (UFSM, 1980). The Federal University of Rio de Janeiro started its own graduate program somewhat later.

To date, there are no published materials on how these programs are being developed or if any evaluation is taking place. Students in the programs have reported that there has been some discussion of curriculum modifications, which could be evidence that some evaluation is being made. The World Congress of Schools of Physical Education in Rio de Janeiro, in July 1981, had as its theme physical-education evaluation. As apparent from that Congress, studies of physical education evaluation in Brazil have not been developed. There is only one pioneer study in this area (UGF, Revisto Artur, 1981).

In a meeting that took place in Viçosa in September 1981 at the First Physical Education Week, there were several professors from the three physical education graduate programs in Brazil. The main theme for the week was the present situation of physical education in Brazil, a broad theme that had a variety of very important subthemes, one of which was the graduate programs across the country (UFV Informa, 1981). Dr. Jose Guilmar talked about his proposition for a new graduate program curriculum for the University of São Paulo. The discussions were at an early stage, and the curriculum was expected to be implemented in about two years. Professor

Jefferson Canfield from Santa Maria, Rio Grande do Sul, showed that Brazilian education officials and colleges were worried about the unsatisfactory profile of higher education in the country. He also pointed out that his university was proposing changes for physical-education programs. As in other institutions, Santa Maria was emphasizing research, which is the basic step of all objectives and goals at the center. Increasing the development of research in physical education is the main general objective. The specific objectives are as follows:

- to develop human resources for research by way of training programs;
- to give subsidies for the development of teaching and learning conditions; and
- to create conditions for the planning, execution, diffusion, and evaluation of scientific production. (UFSM, 1981)

From the above discussion, it can be seen that Brazilian educational authorities are trying to improve physical education in the higher education system. It seems, however, that there is still a long way to go; more studies will be needed to achieve the objectives. This study of the Federal University of Viçosa may be a first step in making officials throughout the country aware of the needs and in preparing the way to strengthening old programs and developing new ones.

The Physical Education Programs in the State of Minas Gerais

Minas Gerais is one of the largest states in Brazil. For a long time, it was the most developed state, with great economic

potential. However, to date, this part of the country has had problems that are most apparent in small cities. Because of cultural inheritance or failure to recognize errors and to try to correct them, it is usually common to think that the state is doing well.

The concern of the present study is education. There has been some effort by authorities at federal and state levels to improve the educational system. Emphasis is being given to elementary and secondary schools (Law 6251/75). It is assumed that improvement at this level will facilitate the work at higher levels. Presently, the average scores (vestibular) of students entering college are the lowest of the last six years (Federal University of Juiz de Fora, 1981).

Physical education and sports training programs are being offered at the undergraduate level in Minas Gerais. In the 1970s, only one program existed--that in Belo Horizonte, the state capital. Programs have started to grow since then. There are presently six undergraduate programs offered by six different universities. These are licenciatura programs that train teachers for elementary and secondary teaching. There has been no reported interaction between the physical education departments of these universities, and no coordinated effort to improve the programs has been made to this point. It is not clear if the objectives are being reached or whether the real needs of the state are being met. However, it is known that the Federal University of Juiz de Fora is changing its curriculum in the physical education undergraduate program. In regard to graduate programs in physical education in Minas Gerais, the only known interest demonstrated is the present study of the Federal University of Viçosa.

The Physical Education Program at the
Federal University of Viçosa

Viçosa, a small town in the state of Minas Gerais, was the site chosen by the government in 1928 for the Superior Agriculture School. In 1948, the Rural University of the State of Minas Gerais was established, integrating the schools of agriculture, veterinary medicine, home economics, and the school of specialization, and research and extension services. In 1969, the school became the Federal University of Viçosa (Decree 64825, July 15, 1969). Today the university has more than 20 undergraduate programs and at least 15 programs at the graduate level.

Every year, many students come to Viçosa to take the vestibular (entrance examination) test that will enable them to take the various courses at the university. There are 1,000 places for all courses each year at the university. There are 50 openings for the Department of Physical Education, and every year the department graduates an average of 15 students. The physical education course at the Federal University of Viçosa ranges from three to five years, and there are no specialization courses to date.

The Department of Physical Education is one of the newest units of the university. It was created in 1972 as a service unit for physical education and sports activities for the students to comply with the government directives that made those activities mandatory (UFV, 1982).

Objective of the Physical Education Program at Viçosa

The objective of a licenciatura course in physical education at the undergraduate level at the Federal University of Viçosa is to prepare students to work as instructors at elementary and secondary schools, at universities, and at sports and recreation clubs. The student is expected to solve problems in all of these areas and to finish the school term with knowledge in exact sciences, pedagogy, and biological sciences; in rhythm gymnastics, aquatics, and land sports; in biometry, hygiene, sport administration, and related activities (UFV, 1982).

In 1975, the School of Physical Education was created, offering an undergraduate program for those who wanted to be elementary or secondary teachers. The department now has 27 professors. The training in Brazil and abroad of the faculty at the graduate level has developed since 1975; there are 16 professors who have graduate degrees or who are on leave to do graduate work. Every year, three or more professors take graduate courses.

Summary

The review of literature relevant to this study was divided into five areas: (1) the role of graduate education in general, (2) graduate education in Brazil, (3) a review of Brazilian physical education graduate programs, (4) the physical education program in Minas Gerais, and (5) the physical education program at the Federal University of Viçosa.

The role of graduate education is being studied. Graduate education began in the United States in the 1880s to aid young American men in advanced study. The master's degree was established as an intermediate degree and to prepare teachers for secondary schools. The Ph.D. degree became the degree for scientific research and higher specialization. Programs for graduate study in physical education have faced essentially the same issues as other disciplines. Programs continue to be revised to adjust to cultural changes.

Brazilian graduate education has followed the American system. The master's and doctoral degrees were defined in 1966. Since then, the Ministry of Education and Culture has been studying ways of planning, executing, and improving programs suited to the needs of Brazil.

Physical education graduate programs are fairly new in the country, with the first started in São Paulo in 1977. Presently there are only three master's degree programs in Brazil. No material is available regarding the evaluation of these programs, so it is not possible to know precisely what is being done in the area. Minas Gerais has six undergraduate programs in physical education, but currently there are none at the graduate level. The Federal University of Viçosa may be the first in the state of establish such a program.

A physical education undergraduate program was begun at the university (UFV) in 1975. At present, there is a program for teachers to be trained at the master's degree level in Brazil and abroad (CAPES). The Department of Physical Education at the Federal University of Viçosa has 16 professors who have completed the program through the master's degree.

CHAPTER III

DESIGN OF THE STUDY

Introduction

This study was designed to determine the opinions of individuals associated with the physical education program at the University of Viçosa concerning the development of a graduate program. A survey was conducted at the university and among graduates of the physical education program to assess perceptions of the need for such a program and to determine the equipment and facilities deemed necessary for its planning and development. Research questions were formulated related to goals, objectives, knowledge, and attitudes perceived as necessary for a graduate program. The adequacy of equipment and facilities and the qualifications of teachers were also assessed by the research questions.

Pilot Study

A pilot study was conducted at the University of Iowa. At the time, 20 Brazilian professors from various universities were enrolled in a graduate program in physical education at the master's level. This program was part of a U.S./Brazil project for physical education graduate training. Such training represents one of the objectives set by the Ministry of Education and Culture for the improvement of college teaching. The professors were enrolled in

different areas of specialization in the Department of Physical Education. At the time of the pilot study four professors from Viçosa were in residence at the University of Iowa.

A questionnaire for the pilot study was constructed with the assistance of the researcher's committee chairman and a staff member of the Office of Research Consultation. The instrument consisted of open- and closed-ended questions. The questionnaire used at the University of Iowa was in English.

All of the Brazilian professors at the University of Iowa were sympathetic with the research problem and were eager to participate in the pilot study. After they had answered the questionnaire, they were asked to make suggestions for its improvement. Several modifications were made based on the pilot study results. The questionnaire was then translated into Portuguese for use in Brazil.

Present Study

Description of the Population

Four different groups from the Federal University of Viçosa were interviewed to fulfill the objectives set for this study. The groups were as follows:

1. Professors teaching in the Department of Physical Education at the time of the survey; some had received graduate training, whereas others were leaving for such training. Of the 22 professors of the department faculty contacted, 21 returned the questionnaire.

2. Graduates from the undergraduate program of the Department of Physical Education. The program was begun in 1975, with the

first graduates in 1978. Since then, 90 students have graduated. At the time of this study, some were teaching at elementary schools; others were working at clubs, academies, and clinics. Of the 90, 68 were contacted and 28 responded.

3. Top administrators of the Federal University of Viçosa. Twenty-seven directors, council presidents, council members, the chairman of the Department of Physical Education, and administrative personnel were contacted. Seventeen responded.

4. Undergraduate physical education majors in the last year of study who were to be graduated in December 1980. Of the 12 students contacted, 8 responded.

The Instrument

Seven general problem areas were addressed in this research. As indicated above, there were four different groups of subjects. Because of the varying nature of their experience and their varying involvement with a potential graduate program, different versions of the questionnaire were developed. In Table 3.1 an overview is presented of the areas covered by the different questionnaires given to the four groups of subjects. (For complete copies of the questionnaires, see Appendix B.)

Procedures

In July 1980, the questionnaires were administered to the various groups. Of the 22 subjects in the first group (professors currently teaching at the university), 21 returned the questionnaires. Many of the subjects in the second group (graduates of the Department

of Physical Education) were employed in different states in Brazil. Therefore, the questionnaires were sent to Espirito Santo, Rio de Janeiro, Bahia, and Minas Gerais. Previously, 87 letters had been sent explaining the reasons for the study and asking for cooperation and participation from this group. Twelve of these letters were returned as undeliverable. Seventy-five questionnaires were then sent. Seven of the questionnaires were returned as undeliverable. Twenty-eight questionnaires were returned from this group.

Table 3.1.--Overview of areas covered by questionnaires given to the four groups of respondents.

Areas Covered by Research Questions	Questionnaire Number
1--Goals and objectives	1, 2, 3
2--Areas	1, 3
3--Discipline	1, 3
4--Attitudes	1, 2, 3
5--Criteria and professional preparation	1, 2, 3
6--Adequacy of equipment and facilities	1, 2, 3
7--Evaluation of present program	1, 3

NOTE: Questionnaire 1 was given to faculty and graduates.
 Questionnaire 2 was given to administrators.
 Questionnaire 3 was given to students.

Subjects in the third group (administrators within the university) were sent their letters, instruction sheets, and questionnaires through the internal university mailing service. The respondents in this group were from the central administration; the library; the registration office; the research, teaching, and extension councils; and the graduate and undergraduate councils. None of these respondents was directly involved with the Department of Physical Education. They were included in the study because of the structural organization of the university, which limits the autonomy of the departments (Montandon, 1980). If a new program is to be developed in any of the university units, it must be approved by these different offices. Thus it was necessary to solicit reactions and suggestions for this new program for the university from the people in these administrative positions. Of the 27 questionnaires sent, 17 were returned.

In the fourth group (undergraduate physical education majors concluding their program of study), there were only 12 to whom questionnaires were sent. In the program, physical education students are allowed to complete the whole course in three to five years. In general, there are only 10 to 15 students graduating each year. Eight questionnaires were returned from this group.

Table 3.2 shows the distribution of questionnaires returned from the four groups of respondents in the study.

Table 3.2.--Number and percentage of questionnaires returned from the four groups of respondents.

Group	Questionnaires Sent	Questionnaires Returned	Percent Returned
1	22	21	95.45
2	68 ^a	28	42.65
3	27	17	62.96
4	12	8	66.66
Total	129	74	57.75

^aSeventy-five questionnaires were sent, but seven were returned as undeliverable.

Statistical Analysis

Since the objectives of the study were to compare responses from members of different university constituencies (i.e., students, graduates, faculty, and administrators), tables showing frequencies and percentages, as well as rank orders, were constructed. Furthermore, as appropriate, the Friedman two-way analysis of variance and the Spearman rank correlation were computed. The tables and results of these analyses are presented in Chapter IV.

Summary

In this chapter, the procedures that fulfilled the objectives of this study were described. A pilot study was conducted at the University of Iowa to test and improve the questionnaire. The population was described and the reason for dividing the population into

four subgroups was given. The questionnaire was discussed, including the groups to which the research questions were applicable. Procedures for administering the questionnaires were described. The methods of statistical analysis were listed.

CHAPTER IV

ANALYSIS OF DATA

Introduction

The data gathered in this survey and subsequent statistical analysis results are presented in this section. The chapter is organized to show first demographic data of the respondents--sex, age, educational status, and location of employment--and second, to present data gathered from responses to the seven research questions. In the second part of the chapter, the perceptions of the four groups of respondents are discussed in relation to the problems of the study. Their opinions on facilities, equipment, and personnel needs for planning and implementing the graduate program in physical education at the Federal University of Viçosa are also presented.

Demographic Characteristics

There were 74 respondents in this study, representing 57.3 percent of the 129 individuals contacted. The answers to the personal-data questions yielded the information presented in Tables 4.1 to 4.3.

As shown in Table 4.1, the majority of the participants were male.

As shown in Table 4.2, the participants were, in general, young--66.2 percent were between 20 and 29 years of age. Administrators, as expected, were older than faculty, graduates, and students.

Table 4.1.--Distribution of respondents according to sex.

Sex	Respondent Group				N	%
	Faculty	Graduates	Administrators	Students		
Female	7	12	1	5	25	33.8
Male	13	16	16	3	48	64.9
Total	20	28	17	8	73	98.7 ^a

^aThere was one missing response, or 1.3 percent of the total.

Table 4.2.--Distribution of respondents according to age.

Age	Respondent Group				N	%
	Faculty	Graduates	Administrators	Students		
20-29	14	26	1	8	49	66.2
30-39	5	2	5	..	12	16.2
40-49	2	..	8	..	10	13.5
50 and over	..	..	3	..	3	4.1
Total	21	28	17	8	74	100.0

As shown in Table 4.3, only seven administrators had received the doctoral degree. The administrators were from different areas of education. Only two of the group of 28 graduates responding had taken especialização courses. At least six of the physical education faculty had master's degrees at the time the questionnaire was administered. Both faculty and graduates showed interest in further graduate study.

Table 4.3.--Distribution of respondents according to current educational levels and plans for future education.

Education Level	Respondent Group			Total Responses
	Faculty (N=21)	Graduates (N=28)	Administrators (N=17)	
<u>Current level</u>				
Especialização	9	2	3	14
Master's degree	6	..	14	20
Doctoral degree	..	..	7	7
<u>Future plans</u>				
Especialização	3	14	..	17
Master's degree	13	14	..	27
Doctoral degree	17	13	..	30

Data Gathered in Response to
the Research Questions

The first research question was: What should be the goals and objectives of a graduate program in physical education at the Federal University of Viçosa? The following items of the questionnaires addressed this question:

1. On a scale of 1 to 4 (1 = very important; 4 = not important), how important are these goals for a graduate program in physical education? (See Table 4.4.)

2. In rank order, what should be taken into consideration as far as the goals are concerned?

3. What area of specialization should the candidate be prepared for?

4. Besides preparing teachers for elementary and secondary school, what else do you feel the undergraduate program prepares the physical education majors for?

5. Do you think the graduate program will improve the undergraduate program? Should it develop areas not satisfactorily developed in the undergraduate program?

As shown in the tabulation of results and the overall means, all of the items were considered very important. (See Table 4.4.) Separately, the faculty, graduates, and students felt nearly the same about the importance of the goals. Administrators showed a tendency to consider the goals less important. The means ranged from 1.42 to 2.00 on the four-point scale.

Table 4.4.--The goals regarded as important in a physical education graduate program.

Items	Group Means				Overall Means
	Faculty (N=20)	Graduates (N=27)	Administrators (N=14)	Students (N=8)	
01. To develop teaching techniques	1.35	1.33	1.57	1.37	1.39
02. To increase general knowledge	1.81	1.63	2.00	1.50	1.74
03. To increase specific knowledge	1.23	1.11	1.42	1.12	1.21
04. To increase knowledge acquired at the undergraduate level	1.80	1.22	1.90	1.28	1.52
05. To prepare specialists in various physical education areas	1.42	1.25	1.46	1.12	1.33

In response to what they perceived as important regarding goals, research, professional improvement, and specialization were the three first choices of the groups. (See Table 4.5.) This question was addressed to faculty, graduates, and students.

Table 4.5.--Rank order of perceived importance of objectives of a graduate program in physical education.

Item	Median Rank
02. To provide introduction to scientific research	1.65
01. To be a continuation of professional improvement	2.00
04. To provide specialization	2.92
03. To fulfill areas lacking in the undergraduate program	3.44
05. To give personal satisfaction	4.83

The four groups of respondents perceived the function of the current undergraduate program was to prepare physical education majors to be coaches, recreation teachers, or referees. However, seven of the respondents perceived therapy as one of the career objectives of the program. The 50 respondents could choose one or more of the objectives shown. (See Table 4.6.)

The next item was addressed to administrators to determine their reactions concerning what the professional preparation should be of future candidates in the graduate program. The administrators predominantly felt the program should prepare the candidates to be sport researchers (15 of 17). Eight of the 17 administrators opted for coaching. (See Table 4.7.)

Table 4.6.--Responses from faculty, graduates, and students regarding the professional preparation of physical education majors in the present program.

Item	Respondent Groups			No. of Responses	%
	Faculty (N=17)	Graduates (N=25)	Students (N=8)		
02. Coach	13	22	8	43	25.2
05. Recreation leader	12	15	8	35	20.5
04. Referee	9	12	6	27	15.7
03. Coordinator	6	14	2	22	12.9
01. Administrator	4	13	3	20	11.7
07. Athletic director	6	6	5	17	9.9
06. Therapist	1	4	2	7	4.1
Total	51	86	34	171	100.0

Table 4.7.--Frequencies of the areas of professional preparation suggested for the graduate program by administrators.

Item	No. of Responses
01. Coach	8
02. Coordinator	5
03. Administrator	3
04. Therapist	5
05. Athletic director	3
06. Sport researcher	15

Of all respondents, 75.4 percent agreed that a graduate program would enhance the present undergraduate program. (See Table 4.8.)

Table 4.8.--Frequencies and percentages of responses to whether a graduate program would enhance the undergraduate program.

Yes	Respondent Group			Total (N=65)
	Faculty (N=21)	Graduates (N=27)	Administrators (N=17)	
Number	12	20	17	49
Percent	57.1	74.0	100.0	75.4

The second research question was: What areas of physical education should constitute a model for such a graduate program?

The following items of the questionnaire addressed this question:

1. What are the essential areas of specialization?
2. What are other important areas with which the program should be concerned as reflected in the views of the faculty and students concerning equipment and facilities?
3. Should the graduate program develop areas lacking in the current undergraduate program?
4. Based on the experience of the respondents, to which areas should the program be addressed?

As shown in Table 4.9, work physiology and coaching were the two main areas that were perceived as necessary parts of the graduate program. Also, 62.5 percent of the respondents chose sports administration for the program.

The faculty, graduates, and students felt that improving professional qualifications, increasing knowledge of education in Brazil, and better utilization of community resources were the three

Table 4.9.--Multiple responses from faculty, graduates, and students regarding areas of specialization (N = 56).

Area of Specialization	No. of Responses	%	% of Respondents
01. Work physiology	42	13.7	75.0
02. Coaching	42	13.7	75.0
03. Theory and methods of physical education teaching	33	10.8	58.9
04. Sports administration	35	11.4	62.5
05. Sports training	31	10.1	55.4
06. Motor development	32	10.5	57.1
07. Motor learning	31	10.1	55.4
08. Program for handicapped	26	8.5	49.4
09. Sports physiology	34	11.1	60.7
Total	306	100.0	546.4 ^a

^aPercentages totalled over 100 percent since respondents could choose more than one category.

most important areas related to faculty. (See Table 4.10A.) In Table 4.10B, the following areas perceived as necessary for students are tabulated: improving specific knowledge, increasing scientific training, and improving general knowledge. The perceptions of the three groups pertaining to equipment and facilities are presented in Table 4.11. A specific library and a research laboratory are two of the necessary items for a graduate program. A Friedman two-way analysis of variance was performed to compare the responses of the groups. No significant differences among the three groups were found.

Table 4.10.--Rank order of importance of program functions relative to the faculty and students.

Item	Group Medians			Overall Median
	Faculty	Graduates	Students	
A. Relative to Faculty				
02. Improving professional qualifications	1.08	1.57	1.30	1.27
04. Increasing knowledge of education in Brazil	2.12	2.21	1.90	2.10
01. Better utilization of community resources	3.25	3.31	2.90	3.18
03. Improving relationships among physical-education professionals	3.85	2.92	4.00	3.60
05. Improving relationships with other areas of professionals	4.70	4.79	4.83	4.77
B. Relative to Students				
01. Improving specific knowledge	2.05	1.55	1.50	1.76
04. Increasing scientific training	1.71	2.70	3.70	2.46
03. Improving general knowledge	2.92	3.05	1.90	2.80
02. Improving student attitude toward physical education	3.21	2.72	1.41	2.92

As shown in Table 4.12, the groups again chose specific knowledge (87.8 percent) and research (71.4 percent) as the primary areas on which the program should be based. There was also considerable importance given to the teaching experience and more specialization (both 63.3 percent).

Table 4.11.--Rank order of importance of equipment and facilities for a graduate program.

Item	Group Medians			Overall Median
	Faculty	Graduates	Students	
01. Specific library	1.15	1.87	1.16	1.32
02. Research laboratory	2.00	2.75	2.10	2.22
03. Appropriate equipment	2.86	2.10	2.90	2.64
04. Sufficient quantity of equipment	3.91	3.08	3.70	3.68

Table 4.12.--Responses regarding areas on which the program should be based (faculty and student N = 49).

Item	No. of Responses	%	% of Respondents
04. Expansion of specific knowledge	43	22.2	87.8
02. Research	35	18.0	71.4
03. Teaching experience	31	16.0	63.3
05. More specialization	31	16.0	63.3
01. Advising by faculty	27	13.9	55.1
06. A realistic study of equipment and facilities of elementary and secondary schools	26	13.4	53.0
Total	193	99.5 ^a	393.9

^aOne observation was missing.

The third research question was: Which disciplines should be included as requirements for a master's degree in physical education? The following item of the questionnaire addressed this question:

In rank order, which physical education disciplines should be included in the program of graduate study?

The responses to this item are presented in Table 4.13. As can be seen, the first ten subject content areas were somewhat related to the areas the groups chose previously. A Friedman two-way analysis of variance showed no difference among the groups ($\chi^2_r = 1.075$).

The fourth research question was: What are the attitudes of the faculty, the students, and the administrators toward physical education and toward future implementation of a graduate program? The following items of the questionnaires addressed this question:

1. Why is physical education important? What is your concept of physical education?
2. Do you believe a graduate education should be considered an important factor in the individual's professional improvement?
3. Generally speaking, do you believe a graduate program would give you better opportunities for your future career?

The groups perceived as the three most important contributions of a physical education program the development of the whole youth, to maintain good health, and for social integration. The administrators indicated they perceived the importance of physical education primarily for recreation and leisure. A Friedman two-way analysis of variance was performed, but it showed no significant differences among the groups. (See Table 4.14.)

Students' and administrators' perception of physical education was that it is educational and competitive (sports). (See Table 4.15.)

Table 4.13.--Rank order of subject content areas that the respondents thought should be included in the physical education curriculum.

Item	Group Medians			Overall Median
	Faculty	Graduates	Students	
01. Physiology	3.50	4.00	3.85	4.00
02. Anatomy	5.00	3.50	2.25	4.20
07. Research techniques	3.00	7.50	8.50	5.87
13. Cardiovascular system	8.50	5.50	6.16	6.80
05. Motor learning	5.75	7.00	9.00	7.00
03. Biomechanics	6.25	8.10	8.00	7.35
04. Motor development	6.50	7.50	7.50	7.50
14. Respiratory physiology	9.50	7.00	5.50	7.50
12. Neurophysiology	6.66	8.12	6.50	7.50
11. Sport physiology	9.33	8.25	5.50	8.75
09. Physical conditioning	10.30	8.83	11.50	10.00
16. Measurement and evaluation	8.75	11.75	12.00	10.37
18. Theory and methods of teaching physical education	9.75	12.00	16.00	10.50
08. Biochemistry	8.00	11.00	12.25	10.66
06. Physiology	11.00	14.25	10.00	11.30
10. General biology	14.25	11.50	13.00	13.25
17. Sport administration	14.50	11.00	17.00	13.50
20. Structure of higher education	11.25	16.75	18.00	15.00
19. Structure of elementary and secondary schools	13.50	16.80	17.00	15.75
15. Safety education	17.50	13.00	16.00	15.75

NOTE: Friedman $\chi^2_r = 1.075$; not significant.

Table 4.14.--Rank order of perceived benefits of a physical education program.

Item	Group Medians				Overall Median
	Faculty (N=20)	Graduates (N=26)	Administrators (N=16)	Students (N=8)	
01. Development of whole youth	1.25	1.66	1.66	1.16	1.36
02. Maintain good health	2.27	2.12	2.00	3.50	1.61
04. Social integration	2.92	3.10	3.37	2.50	3.00
06. Good mental health	4.30	3.35	3.10	4.00	3.86
03. Recreation and leisure	4.68	4.14	1.49	3.50	4.41
05. Enhance enjoyment of life	5.86	5.73	5.20	5.70	5.77

NOTE: Friedman $\chi^2_r = 3.45$; not significant.

Table 4.15.--Responses of administrators and students regarding their perception of physical education (N = 25).

Item	No. of Responses	%	% of Respondents ^a
02. Educational	19	28.8	76.0
03. Competitive	19	28.8	76.0
01. Recreational	13	19.7	52.0
04. Therapeutic	10	15.2	40.0
05. Leisure	5	7.5	20.0
Total	66	100.0%	237.0%

^aPercentages total to over 100% since respondents could choose more than one category.

Responses to the question addressed to the four groups concerning whether a graduate program in physical education was important for professional development and would give better opportunities to the career were 93.2 percent positive. (See Table 4.16.)

Table 4.16.--Frequencies and percentages of positive responses related to the importance of the graduate program to professional development.

Yes	Respondent Group				Total (N=73)
	Faculty (N=21)	Graduates (N=28)	Administrators (N=16)	Students (N=8)	
Number	19	27	15	8	69
Percent	90.5	96.4	93.8	100.0	93.2

The fifth research question was: What kind of professional preparation should the program give the candidates, and what criteria should be adopted for acceptance into the program, for evaluation during the program, and for graduation requirements? The following item of the questionnaires addressed this question:

If a graduate program in physical education is implemented, what criteria do you think should be set for admission, evaluation, and graduation requirements?

In response to the first part of this research question (see Table 4.7), administrators felt that a physical education program should prepare graduates to be sports researchers and coaches. As shown in Table 4.17, the four groups felt that criteria for admission should be an analysis of the candidate's resumé and/or transcript

Table 4.17.--Responses regarding perceptions of criteria for admission, evaluation, and graduation requirements (N = 72).

Item	Respondent Group			No. of Responses	%	% of Respondents
	Faculty	Graduates	Administrators			
A. For Admission						
01. Interview	14	18	12	5	49	21.4
02. Exam in specific area	17	21	8	8	54	23.6
03. Foreign-language exam	13	4	6	2	25	10.9
04. Analysis of the resumé and/or transcript	19	21	16	3	59	25.8
05. General-knowledge exam	13	18	5	6	42	18.3
Totals	76	82	47	24	229	100.0
B. For Evaluation During the Course						
01. Oral exams	6	11	6	4	27	12.2
02. Written exams	18	16	15	5	54	24.3
03. Self-evaluation	9	16	2	2	29	13.1
04. Field experience	17	21	11	7	56	25.2
05. Papers	20	17	16	3	56	25.2
Totals	70	81	50	21	222	100.0
C. Graduation Requirements						
01. Final exam	8	12	7	1	28	12.5
02. Minimum number of credits attained	19	15	12	5	51	22.8
03. Approval of thesis	18	20	13	8	59	26.3
04. Exam in specific area	13	20	8	5	46	20.5
05. Grade-point average	13	11	13	3	40	17.9
Totals	71	78	53	22	224	100.0

(81.9 percent), examination in a specific area (75.0 percent), and an interview (68.0 percent). The criteria perceived as important for evaluation of students during the course were field experience (77.7 percent), papers (77.7 percent), and written examinations (75.0 percent). For graduation requirements, the criteria perceived as important were approval of thesis (81.9 percent), a minimum number of credits attained (70.8 percent), and an examination in a specific area (63.8 percent).

The sixth research question was: How adequate are the facilities, equipment, and materials for implementation of a graduate program in physical education at the Federal University of Viçosa? The following items of the questionnaire addressed this question:

1. Which of the listed printed materials (Brazilian and foreign) are available at your school and/or library?
2. Which of the items shown do you feel are necessary for a graduate program in physical education? Which of them do you think the school already has and can be used for the program?

In the case of Brazilian materials, a great number of the respondents felt the school offered books, magazines, and handouts as sources of information to be used during the program. In the case of foreign materials, respondents felt that only books were available. (See Table 4.18.)

As shown in Table 4.19, the groups responded that, with the exception of items 4, 5, and 6, there was a high need for all items listed for the graduate program (see overall means, page 53). Items 4, 5, and 6 (courts, fields, and locker rooms) surprisingly were

Table 4.18.--Frequencies and percentages of the perceptions of the respondents related to materials available at the university (N = 54).

Item	Brazilian Sources				Foreign Sources			
	Faculty	Graduates	Students	%	Faculty	Graduates	Students	%
01. Books	18	18	7	79.6	15	11	7	61.1
02. Magazines	13	19	5	68.5	9	6	5	37.0
03. Journals	5	9	2	29.6	1	..	..	1.9
04. Handouts	13	21	8	77.8	1	5	3	16.7
05. Films	7	5	..	22.2	9	7	5	38.9
06. Slides	4	12	2	33.3	3	4	2	16.7
07. Diagrams	1	3	1	9.3	1	..	2	5.6
08. Posters	2	6	2	18.5	2	2	2	11.1
09. Cassette tapes	1	2	2	9.3	..	..	1	1.9
10. Records	..	3	2	9.3	..	..	1	1.9

considered less of a necessity (\bar{X} = 1.78, 1.95, and 1.83, respectively). For the items that already exist in the school, the groups perceived they could be used for the graduate program (\bar{X} = 1.43 to 2.20).

Table 4.19.--Means of perceptions of what is needed and what can be used for a graduate program in physical education.

Item	Group Means				Overall Means
	Faculty ^a	Graduates ^b	Administrators ^c	Students ^d	
A. Items Needed ^e					
01. Equipment	1.21	1.12	1.14	1.12	1.15
02. Gyms	1.95	1.33	1.57	1.87	1.63
03. Classrooms	1.85	1.45	1.50	1.57	1.60
04. Courts	2.00	1.65	1.57	2.00	1.78
05. Fields (track & field)	2.25	1.84	1.50	2.42	1.95
06. Locker rooms	2.52	1.33	1.64	1.85	1.83
07. Specialized library	1.00	1.20	1.15	1.00	1.10
08. Laboratories	1.05	1.26	1.23	1.28	1.19
09. Specialized professors	1.15	1.04	1.08	1.14	1.09
B. Items That Can Be Used ^f					
01. Equipment	2.23	1.68	1.90	1.28	1.87
02. Gyms	2.09	1.65	1.30	1.33	1.71
03. Classrooms	1.71	1.38	1.50	1.37	1.51
04. Courts	1.81	1.66	1.60	1.57	1.69
05. Fields (track & field)	1.81	1.61	1.70	1.50	1.68
06. Locker rooms	2.14	1.68	1.40	1.25	1.73
07. Specialized library	2.50	2.19	2.00	1.50	2.20
08. Laboratories	2.45	2.09	1.77	1.85	2.14
09. Specialized professors	1.65	1.28	1.44	1.25	1.43

NOTE: Scale 1-4: 1 = high need; 2 = average; 3 = low need; 4 = no need.

^aSpearman rank correlation r_s = -.37 (N.S.). The ranking of items needed (faculty) was correlated with the items that can be used.

^bSpearman rank correlation r_s = -.21 (N.S.).

^cSpearman rank correlation r_s = -.54 (N.S.).

^dSpearman rank correlation r_s = .15 (N.S.).

^eFriedman χ^2_r = 4.16 (N.S.).

^fFriedman χ^2_r = 21.4 (N.S.).

The seventh research question was: What is the status of the current undergraduate program at the Federal University of Viçosa? This question was related to evaluation of the program concerning certain issues. The following items of the questionnaires addressed this concern:

1. Which of the sources of information do you use regularly?
2. How do you evaluate these sources?
3. How do you evaluate the Department of Physical Education on its preparation of physical education majors?
4. What do you think should be modified in the current curriculum?
5. Is research essential for your professional activity?
6. Have you had research in your program?
7. Have you had an opportunity to do research?
8. What do you think research can bring to you in terms of knowledge?
9. How much teaching experience have you had during your program (students and graduates) or have you given (faculty) during the undergraduate program?
10. How did you know about the physical-education graduate programs in Brazil?

As indicated by the results, in terms of Brazilian materials, the respondents regularly used books (81.5 percent), handouts (79.6 percent), and magazines (75.9 percent). Only 42.6 percent of the respondents used foreign books regularly. (See Table 4.20.)

Table 4.20.--Frequencies and percentages of responses related to materials regularly used at the university (N = 55).

Item	Brazilian Sources				Foreign Sources			
	Faculty (N=21)	Graduates (N=26)	Students (N=8)	%	Faculty (N=21)	Graduates (N=26)	Students (N=8)	%
01. Books	15	21	8	81.5	13	8	2	42.6
02. Magazines	15	20	6	75.9	8	3	..	20.4
03. Journals	3	10	..	24.0	1	..	..	1.8
04. Handouts	15	20	8	79.6	3	3	..	11.1
05. Films	5	1	..	11.1	7	..	2	16.6
06. Slides	3	3	3	16.6	2	..	2	7.4
07. Diagrams	..	1	..	1.8	1	1	..	3.7
08. Posters	1	3	1	9.2	1	1	1	5.5
09. Cassette tapes	1	3	2	11.1	1	..	..	1.8
10. Records	..	4	2	11.1	..	..	1	1.8

The tendency of the groups was to evaluate the Brazilian sources from good to fair (2 to 3 on the scale) and the foreign sources from 1.95 to 3.00. No source was evaluated as excellent (1 on the scale). (See Table 4.21.)

Although an overall mean of 2.32 was shown in the results, implying "good" on the scale, the graduates indicated a tendency toward "fair" (3 on the scale). (See Table 4.22.)

The primary change suggested in the current program was provision of teaching experience for the students ($\bar{X} = 2.30$). Other significant improvements suggested were motivation of faculty seeking professional improvement ($\bar{X} = 3.25$) and modification of curriculum to meet realistically the needs of the community ($\bar{X} = 3.42$). (See Table 4.23.)

Faculty and graduates agreed that research is an essential part of their professional activities (83.7 percent of the 49 respondents in the two groups). (See Table 4.24.)

The groups of respondents perceived that research activity should bring scientific development (median = 1.95) and increased knowledge of the area (median = 2.34). (See Table 4.25.)

Faculty (60.0 percent) and graduates (64.3 percent) had had no opportunity to do research in physical education. (See Table 4.26.)

Fifty percent of the students had taken research courses in their undergraduate program. (See Table 4.27.)

Table 4.21.--Mean ratings of source materials.

Item	Means: Brazilian Sources				Means: Foreign Sources			
	Faculty (N=18)	Gradu- ates (N=22)	Stu- dents (N=8)	Overall Means	Faculty (N=18)	Gradu- ates (N=22)	Stu- dents (N=8)	Overall Means
01. Books	3.05	2.40	2.12	2.60	2.20	2.00	2.00	2.07
02. Magazines	2.75	2.36	2.00	2.45	2.18	2.28	3.20	2.43
03. Journals	3.25	2.47	3.00	2.75	2.83	2.50	3.66	2.92
04. Handouts	2.46	2.52	2.12	2.43	3.00	2.50	4.00	3.00
05. Films	2.50	2.23	3.25	2.48	2.22	1.33	2.16	1.95
06. Slides	2.85	2.26	2.50	2.46	2.60	1.85	2.75	2.31
07. Diagrams	3.66	2.80	4.00	3.26	3.20	2.50	3.33	3.00
08. Posters	3.50	2.55	2.80	2.90	3.40	2.50	2.60	2.81
09. Cassette tapes	3.28	2.22	2.50	2.65	3.60	2.20	3.00	2.92
10. Records	3.66	2.40	2.50	2.80	3.60	2.40	3.00	3.00

NOTE: Scale 1-4: 1 = excellent; 4 = poor.

Table 4.22.--Mean ratings of the Department of Physical Education.

	Group Means				Overall Mean
	Faculty	Graduates	Administrators	Students	
Department of Physical Education evaluation	2.14	2.55	2.25	2.12	2.32

NOTE: Scale 1-4: 1 = excellent; 4 = poor.

Table 4.23.--Rank order of changes perceived as needed in the undergraduate program.

Item	Median Ranks			Overall Median
	Faculty	Graduates	Students	
07. Provide more teaching experience for students	2.33	2.25	2.50	2.30
04. Motivate faculty to seek professional improvement	2.25	3.42	4.00	3.25
03. Modify curriculum to attend to community needs	3.50	3.00	5.00	3.42
02. Modify present curriculum to meet students' needs	3.50	3.60	2.50	3.44
01. Enrich present curriculum with new disciplines	5.57	3.64	3.50	3.81
05. Improve academic advising	4.90	4.86	4.16	4.81
06. Increase length of program	6.00	6.58	6.50	6.50

Table 4.24.--Frequencies and percentages of positive responses related to research as an essential part of career.

Yes	Respondent Group		Total
	Faculty	Graduates	
Number	17	24	41
Percent	81.0	85.7	83.7

Table 4.24.--Rank order of perceived benefits to professional activity from research.

Item	Group Medians		Overall Medians
	Faculty ^a	Graduates	
02. Scientific development in the field	1.40	2.41	1.95
04. Increased knowledge of the area	2.83	1.92	2.34
03. Renew techniques	3.75	2.42	2.83
01. Solution to practical problems	3.00	3.50	3.25
05. More motivation to continue studies	3.33	4.25	3.95

^aFriedman $\chi_r^2 = 6.2$ (N.S.).

Table 4.26.--Frequencies and percentages of negative responses of the groups engaged in research.

No	Respondent Group		Total
	Faculty (N=20)	Graduates (N=28)	
Number	12	18	30
Percent	60.0	64.3	62.5

Table 4.27.--Frequency and percentage of responses of students who took research courses (N = 8)

Yes	Students
Number	4
Percent	50.0

Faculty members supervise up to one year of teaching. Students and graduates had one year or less of teaching experience. The average amount of teaching experience across the groups was surprisingly low. (See Table 4.28.)

Table 4.28.--Frequencies and percentages of responses regarding students' teaching experience.

Item	Respondent Group			%
	Faculty	Graduates	Students	
01. Three months	3	2	2	13.2
02. Six months	3	6	..	17.0
03. One year	10	12	4	49.1
04. None	4	6	1	20.7
Total	20	26	7	100.0

As shown in Table 4.29, only five of the respondents did not know about the Brazilian graduate programs. These respondents were fairly evenly divided between the administrator and student groups.

Table 4.29.--Multiple responses regarding how administrators and students learned of the physical-education graduate program (N = 25).

Item	Respondent Group		No. of Responses	%	% of Respondents
	Adminis- trators	Stu- dents			
01. Heard about	10	6	16	34.0	64.0
02. Read about	8	3	11	23.4	44.0
03. Know people who take it	10	5	15	31.9	60.0
04. Did not know	2	3	5	10.7	20.0
Total	30	17	47	100.0	188.0

Summary

Chapter IV presented the findings of the survey. The organization of the chapter showed demographic characteristics and the responses to the seven research questions posed in a previous chapter. All the data have been presented in tables.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND REFLECTIONS

Summary

Introduction

The purpose of this study was to assess the perceptions and opinions of individuals relative to the planning of a graduate program in physical education at the Federal University of Viçosa, Brazil.

The target population at the University of Viçosa consisted of all of the faculty in the Department of Physical Education, graduates of the department, university administrators, and physical education majors. The entire study population was directly or indirectly involved with the Department of Physical Education. From the data collected, guidelines were evolved for planning a graduate program. The data were analyzed to determine the respondents' perceptions of the need for a graduate program, its goals and objectives, disciplines, and possible areas of study.

A graduate program in physical education at the Federal University of Viçosa would increase advanced professional preparation, which is lacking in the state of Minas Gerais. In Brazil as a whole, there are only three programs at the master's level. Each year there are many more candidates than places in the three existing programs.

Procedures for Gathering Data

Verbal as well as written instructions to the respondents were used to explain and clarify the procedures to be followed in answering the questionnaires and to explain the reasons for the study. The first part of the questionnaires used for data gathering consisted of demographic questions regarding the respondent's sex, age, current educational status, and aspirations related to advanced studies. The second part included questions related to the primary research questions. This part covered all the items regarding goals and objectives and areas of study of a graduate program; attitudes and professional preparation of students; need for equipment and facilities; and types of evaluation of students. The original versions of the questionnaires were written in English. The questionnaires were then translated into Portuguese, in Viçosa, with the help of members of the education department.

Of the 129 questionnaires distributed to the participants, 74 were returned. To analyze the responses, percentages, means, medians, and frequencies were computed. Nonparametric statistics were used to test differences regarding the opinions and perceptions of the groups of respondents.

Conclusions

The conclusions discussed in this section are based on the findings presented in Chapter IV. These findings provided the basis for answers to the general research questions posed in Chapter I.

According to the respondents, the role of graduate physical education should be to increase specific knowledge in physical education, to prepare specialists at various physical education levels, and to develop new techniques of teaching. Respondents also felt that the program should provide introduction to scientific research, should be a continuation of professional improvement, and should give more specialization in the field. Administrators believed that such a program should mainly prepare researchers and coaches. The necessity to improve specific knowledge was perceived by the groups as an important factor. The world today is demanding more and more specific training. Thus, this should be taken into consideration when a graduate program is planned. From the responses of the groups, it could be inferred that the current program was not meeting the needs of students or of the community.

Curriculum

The three main areas of specialization felt to be necessary in planning a graduate program were: work physiology, coaching, and sports administration. The respondents further indicated that the areas of study in the program should contribute to expansion of specific knowledge, research, and teaching experience. The specific areas of study ranked as the most important were physiology, anatomy, research techniques, and motor learning. There was general consensus among the groups regarding these areas of study.

Other Elements Needed for a Graduate Program

The minimum components seen by the groups of respondents as necessary for such a program were as follows:

1. For the faculty: Improved faculty professional qualifications, better understanding of the Brazilian educational system, and better utilization of community resources.

The Department of Physical Education at the Federal University of Viçosa has been preparing the faculty for advanced teaching. The training of professors at graduate levels started in 1975 when CAPES, a government agency, expanded its priority to the physical education field. Currently there are nine professors at the department who have master's degrees. Another six professors are pursuing studies toward this degree. Present plans call for five more individuals to begin their studies in Brazil and the United States in 1983.

2. For improvement of equipment and facilities: A specialized library, a research laboratory, and appropriate equipment.

The respondents felt that the materials, equipment, and facilities presently available at the university for the implementation of a graduate program were adequate. Books, magazines, and handouts were the printed sources the groups thought were available. However, professors at the department make their own handouts to be distributed among the students because there are not enough books. Unfortunately, the respondents did not have a basis for comparison and judgment. They based their responses on their limited experience

in Viçosa. The books that are available in the department usually belong to the professors. The equipment and facilities that the groups felt were needed for the program were a specialized library, a research laboratory, and equipment in general. The respondents believed these facilities were available for the graduate program at the school.

Attitudes Toward Physical Education

The participants showed a positive attitude toward physical education. Physical activity was seen as that necessary for development of the whole youth, for maintenance of good health, and for recreation and leisure. Physical activity was also seen as educational and competitive (sports) in general. This point of view was expected among the groups in the physical education program (i.e., faculty, graduates, and students); however, it was not expected from the administrators. Their perceptions showed a positive attitude toward physical education and the planning of a graduate program in this field. The graduate program was seen as important to career opportunities and professional improvement.

Admission, Evaluation, and Degree Requirements

Based on the responses of the groups, the criteria for admission should be analysis of a resumé (transcripts of academic work and records of field experience), an examination on a specific area, and an interview. The respondents believed that evaluation during the program should be based on written papers, field experience,

and written examinations. It was considered that the degree requirements should include approval of a thesis, a minimum number of credits attained, and an examination on a specific area.

These perceptions of the respondents were based on their views of the physical education department at the Federal University of Viçosa, which applies these criteria to its graduate programs. In physical education graduate programs in the country as a whole, the usual basis for admissions is an examination. There are usually more candidates for admission than there are places. Generally, each program has one or two openings for each state of the country.

Perceptions of the Current Under-graduate Program at the Federal University of Viçosa

Of the written sources available to undergraduates, the participants ranked books, magazines, and handouts as fair to good. The groups of faculty, graduates, and students said that they used this material on a regular basis.

The Department of Physical Education was evaluated in relation to the professional preparation of the students. Faculty, administrators, and current students tended to consider the department as good. Graduates, however, rated the department closer to fair than to good.

The changes and modifications in the program recommended by the respondents were as follows: to provide more teaching experience; to meet more fully the needs of the community; and to motivate the faculty to improvement. Research was felt to be an essential part

of professional activity, providing scientific development in the field, increasing knowledge of the area, and introducing new techniques for teaching physical activities.

Half of the students said they had had research in their program at the time of the survey. The other students would have the research course before the end of the program. The groups said they had not had opportunity to do research in physical education. In Brazil, research in physical education is still not well developed.

The faculty indicated that teaching experience should be part of a graduate program. Graduates and current students said they had had up to one year of teaching experience in their undergraduate programs. However, they felt this was not enough. An increase in teaching experience was seen as one of the needed improvements in the present program. The respondents also indicated that the graduate program should be concerned with new teaching techniques.

Recommendations

This investigator recommends that the Federal University of Viçosa should plan and implement a graduate program at the master's level in the Department of Physical Education. This recommendation is based on: (1) the policy of the Ministry of Education and Culture, (2) the findings of the present study, (3) the current status of graduate education in Minas Gerais, and (4) this investigator's experience as a professor of physical education at the Federal University of Vicosa.

This investigator further recommends that, before the graduate plan is developed or implemented, the Department of Physical Education should (1) evaluate the current undergraduate curriculum, (2) make a study of the job market in Minas Gerais and in neighboring states, (3) outline a course of study to follow the goals and objectives of the Plan for Graduate Studies of the Ministry of Education and Culture, (4) identify goals and objectives for a graduate program in Viçosa, and (5) prepare a model for the program. It is understood that the model would be based on this study and subsequent research relative to the areas, disciplines, criteria for admissions, evaluation and degree requirements, and the other needs pointed out by the participants.

It is also recommended that a tentative appeal be made to other schools in Minas Gerais to provide for exchange of information among the schools.

Reflections

The implementation of this study has been a superb experience for the writer. It represents a tentative effort to improve physical education in Brazil and at the Federal University of Viçosa in particular. The Department of Physical Education is a very young department both as a unit of the university and in the ages of the professors. With the professional improvement taking place now, very soon the department should have a highly qualified faculty. Clearly, with the development of a graduate program, their potential capacities will be challenged.

This study was conducted in Viçosa in the middle of 1980, and it is limited. Often Brazilians avoid evaluation. To many, evaluation is frequently linked with punishment. Thus they will either rank something good (when it is not) or not evaluate it at all. However, in general, the individuals who participated in this study were cooperative.

The current undergraduate program clearly needs evaluation. Its goals and objectives should be redefined to face the needs of the students and the community. Some preliminary evaluations have already been made, including the meetings the department faculty have had. At that point, an analysis of the curriculum was being done. Now is the time to continue such work in order to accomplish the development of the field in Viçosa.

The Ministry of Education and Culture has also been concerned with physical education as an activity to provide and create good health. It is necessary to motivate the population because Brazil still has the lowest percentage of mass participation in physical activity of the world. The Ministry will give priority to research, to improvement of teacher training, and to specialized personnel at institutions that maintain professional training (i.e., schools of physical education). It is timely for the University of Viçosa to comply with the policies of the Ministry of Education and Culture.

APPENDICES

APPENDIX A

COVER LETTERS AND INSTRUCTION SHEET

APPENDIX A

COVER LETTERS AND INSTRUCTION SHEET

Instructions on how to answer the questions:

Questions 1, 7, 10, 12. The answer must be given in rank order (1st, 2nd, 3rd) according to your opinion.

Questions 5, 9, 13, 14, 18. Mark only the answers you consider essential; do not rank order.

Questions 4, 6, 11. Mark only in the square according to your opinion:

excellent

--	--	--	--

 weak

(Excellent refers to the left hand square; weak refers to the right hand square. The 2 in the middle then correspond to good and regular respectively.)

Question 8. There are 3 columns in the question (A, B, C). They should be answered as follows:

A - Needed. These are the items (equipment, rooms, etc.) you consider as not needed for the physical-education graduate program.

B - Possibility of using what exists. These are the items the school has that could be used during the course.

C - Possibility of being acquired. These are the items the school does not have but that are needed for the program.

You should mark all the items in the 3 columns according to your opinion and in the established scale: 1, 2, 3, 4.

Questions 2, 3, 16, 17. Mark only one option (yes or no).

UNIVERSIDADE FEDERAL DE VIÇOSA
DEPARTAMENTO DE EDUCAÇÃO FÍSICA

Viçosa, 25 de junho de 1980

Prezado Professor:

De acordo com a carta enviada anteriormente, envio-lhe o questionário para que V.S.^a o responda. Solicito-lhe o faça com bastante empenho e atenção já que a sua reação ao mesmo é indispensável ao modelo para um programa de pós-graduação em Educação Física, que será criado para a Universidade Federal de Viçosa.

Informo-lhe, outrossim, que as suas informações serão estritamente confidenciais, não sendo necessário, portanto, colocar o nome.

Desde já, agradeço a sua valiosa colaboração e aguardo a devolução do questionário dentro do menor prazo possível, já que meu estudo está dentro de um prazo para ser concluído.

Atenciosamente,

Vera Lúcia Simões da Silva

Viçosa, 16 de junho de 1980

Prezado Professor:

Sou professora do Departamento de Educação Física da Universidade Federal de Viçosa, Minas Gerais. Atualmente, termino o doutorado em Administração de Educação Superior na Universidade de Michigan State, East Lansing, Michigan, Estados Unidos. Nessa mesma universidade completei, também, o mestrado em Educação Física.

Estou, neste momento, recolhendo dados para terminar a minha tese. Esta será um estudo que pretende estabelecer linhas gerais para um programa de pós-graduação em Educação Física para a Universidade Federal de Viçosa "Perceptions of the Need for a Graduate Physical Education Program at the Federal University of Viçosa."

Necessito da sua colaboração já que o estudo será baseado nas sugestões de V.S.^a e de outros grupos em estreita ligação com a Educação Física, o nas Diretrizes do Conselho Nacional de Pós-Graduação.

Devo enviar-lhe, brevemente, um questionário para que o responda, solicitando a maior brevidade na resposta, já que o prazo que me foi dado para completar os estudos é pequeno.

Se, por acaso, o seu endereço foi mudado, por favor, envie o novo para o departamento de Educação Física da Universidade Federal de Viçosa.

Solicitando-lhe aguardar o envio da próxima correspondência,
despeço-me penhoradamente.

Muito Obrigada.

Vera Lúcia Simões da Silva

Viçosa, 2 de julho de 1980

Prezado professor:

Sou professora do Departamento de Educação Física da Universidade Federal de Viçosa, e, atualmente, termino o Doutorado em Administração em Educação Superior na Universidade de Michigan State, East Lansing, Michigan, Estados Unidos. Nessa universidade completei, também, o Mestrado em Educação Física.

Minha dissertação para completar o atual programa é um estudo que pretende estabelecer linhas gerais para um programa de Pós-Graduação em Educação Física para a Universidade Federal de Viçosa. Essas linhas deverão ser apresentadas de acordo com as opiniões e sugestões dos vários grupos ligados ao Departamento de Educação Física da U.F.V. e com as diretrizes do Plano Nacional de Pós-Graduação do MEC.

Estou encaminhando em anexo, um questionário, parte essencial do estudo, para ser respondido por Vossa senhoria. A colaboração de V.S.^a é indispensável ao estudo por isso, solicito que o faça com a maior brevidade possível.

Informo a V.S.^a que as informações serão estritamente confidenciais, não sendo necessário portanto, colocar vosso nome.

Certa da colaboração, de V.S.^a agradeço penhoradamente, aguardando a devolução do questionário.

Atenciosamente,

Vera Lúcia Simões da Silva - DES

APPENDIX B

ENGLISH VERSION OF QUESTIONNAIRES

APPENDIX B

ENGLISH VERSION OF QUESTIONNAIRES

Personal Data

1. Sex ☐ male
 ☐ female
2. Age
3. Birthplace
4. When did you enter the school? / , 19
5. When were you graduated? / , 19
6. Graduate study: Location Period Title
 Especialização
 Master's
 Ph.D.
 Others

Professional Data (for graduates only)

1. Are you working in the physical-education field?
 ☐ yes
 ☐ no
2. Where do you work?
 ☐ club
 ☐ elementary school
 ☐ secondary school
 ☐ college
 ☐ academy
 ☐ others (please describe):

Questionnaire No. 1

1. Why do you think physical education is important? (Rank order: 1 = most important.)
 - ☐ necessary to development of whole youth
 - ☐ necessary to maintain good health
 - ☐ for recreation and leisure
 - ☐ for social integration
 - ☐ to enhance enjoyment of life
 - ☐ for good mental health
 - ☐ others (please describe): _____

2. Mark the sources of information offered by your physical-education school (i.e., library, department, etc.).

	Brazilian		Foreign	
(a) books	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
(b) magazines	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
(c) journals	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
(d) handouts	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
(e) films	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
(f) slides	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
(g) anatomical diagrams	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
(h) posters	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
(i) cassette tapes	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no
(j) records	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> yes	<input type="checkbox"/> no

3. Which of the above sources do you use regularly?
(same items as on question no. 2)

4. How would you evaluate these sources?

	Brazilian		Foreign	
(a) books	<div style="display: inline-block; text-align: center;"> excel- lent </div> <div style="display: inline-block; border: 1px solid black; width: 40px; height: 20px; margin: 0 5px;"></div> <div style="display: inline-block; text-align: center;"> poor </div>	<div style="display: inline-block; text-align: center;"> excel- lent </div> <div style="display: inline-block; border: 1px solid black; width: 40px; height: 20px; margin: 0 5px;"></div> <div style="display: inline-block; text-align: center;"> poor </div>		

(same items as on question no. 2)

5. One of the main objectives of the undergraduate program is to prepare teachers for primary and secondary schools. Mark any of the other activities for which you feel the program prepares the students.
- ☐ administrator
 - ☐ coach
 - ☐ coordinator
 - ☐ referee
 - ☐ recreation teacher
 - ☐ therapist
 - ☐ athletic director
 - ☐ others (please describe): _____
6. How well do you feel your department prepares physical-education majors?
- very well ☐☐☐☐ poorly
7. What do you think is necessary to modify in the present undergraduate program? (Rank order: 1 = most important.)
- ☐ add new disciplines to enrich the current curriculum
 - ☐ modify curriculum to meet the students' needs
 - ☐ modify curriculum to meet the needs of the community
 - ☐ motivate the faculty to seek professional improvement
 - ☐ improve academic counseling
 - ☐ increase the length of the program
 - ☐ provide more teaching experience for students
 - ☐ other (please describe): _____
8. In the chart below, please mark those items that you feel are (A) necessary for a graduate program, (B) are already in the school and could be incorporated into the program, and (C) could possibly be obtained by the school.
9. Check the areas you feel are necessary for specialization for a graduate program in physical education in Brazil and particularly in Viçosa.
- ☐ work physiology
 - ☐ coaching
 - ☐ theory and methods of physical-education teaching
 - ☐ sports administration

- ___ athletic training
- ___ motor development
- ___ motor learning
- ___ programs for the handicapped
- ___ sport psychology
- ___ other (please specify): _____

10. Rank order the disciplines that you feel should be included in the curriculum for a physical-education graduate program. (Rank order: 1 = most important.)

- | | |
|--|---|
| ___ physiology | ___ conditioning |
| ___ anatomy | ___ general biology |
| ___ biomechanics | ___ sports psychology |
| ___ motor development | ___ neurophysiology |
| ___ motor learning | ___ cardiovascular system |
| ___ psychology | ___ respiratory physiology |
| ___ research techniques | ___ safety education |
| ___ biochemistry | ___ sports administration |
| ___ measurements and evaluation | ___ theory and methods of physical-education teaching |
| ___ primary and secondary-school structure | ___ college |
| ___ other (please describe): _____ | |

11. How important are the following goals for a graduate program in physical education?

- | | important | not important |
|--|--------------------------|--------------------------|
| (a) develop teaching skills | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) increase general knowledge | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) increase specific knowledge | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) improve knowledge acquired at the undergraduate level | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) prepare specialists in various physical-education levels | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) other (describe) | <input type="checkbox"/> | <input type="checkbox"/> |

12. Rank order the areas about which a graduate program should be concerned. (Rank order: 1 = most important.)

Areas related to faculty:

- ___ more utilization of community resources
- ___ improvement of professional qualifications

- ___ improvement of communications between physical-education professionals
- ___ better knowledge of Brazilian educational status
- ___ improvement of relationship with professionals from other fields
- ___ other (please describe): _____

Areas related to students:

- ___ increase specific knowledge
- ___ improvement of student attitude toward physical education
- ___ improvement of general knowledge
- ___ increase of scientific training
- ___ other (please describe): _____

Areas related to equipment and facilities:

- ___ specialized library
- ___ research laboratory
- ___ proper equipment
- ___ adequate amount of equipment
- ___ other (please describe): _____

13. Suppose that a graduate program in physical education is going to be implemented. What criteria do you feel are essential for
(A) admission requirements, (B) student evaluation, and
(C) graduation requirements?

A - Admission of candidate

- ___ interview
- ___ written exam testing knowledge of the field
- ___ written exam in foreign language
- ___ analysis of candidate's resumé
- ___ written exam of general knowledge
- ___ other (please describe): _____

B - Candidate evaluation during the course

- ___ oral exams
- ___ written exams
- ___ self-evaluation
- ___ field experience

___ papers
 ___ other (please describe): _____

C - Graduation requirements

___ final exam
 ___ minimum number of credits obtained
 ___ approval of thesis
 ___ exam in specific area
 ___ grade-point average
 ___ other (please describe): _____

14. What level of the graduate studies do you intend to seek?

___ especialized ___ doctoral
 ___ master's ___ none

15. In your opinion, should a graduate program in physical education help the student develop areas not satisfactorily met in the undergraduate program?

___ yes ___ no

16. In your opinion, a graduate program in physical education should: (rank in order, 1 = most important)

___ be a continuation of professional improvement
 ___ provide introduction to scientific research
 ___ fulfill areas lacking in the undergraduate program
 ___ give personal satisfaction
 ___ other (please describe): _____

17. Based on your professional experience, what areas should a graduate program be concerned with?

___ advising by faculty
 ___ research
 ___ teaching experience
 ___ expansion of specific knowledge
 ___ more specialization
 ___ a realistic study of equipment and facilities of elementary and secondary schools
 ___ other (please describe): _____

18. Do you think it is necessary to engage in research as part of your professional activities?
 ___ yes ___ no
19. Have you done any research in your area of physical education?
 ___ yes ___ no
20. What do you think research, as part of your activity, would bring you: (rank order: 1 = most important)
 ___ solution to practical problems
 ___ scientific development in the field
 ___ renew techniques
 ___ increased knowledge of the area
 ___ more motivation to continue studies
 ___ none of the above
21. Do you believe that a graduate program should be an important factor in professional improvement?
 ___ yes ___ no
22. What amount of student teaching did your students have during their undergraduate course?
 ___ 3 months
 ___ 6 months
 ___ 1 year
 ___ did not leave

Questionnaire No. 3

(The first 13 questions were the same as those on questionnaire no. 1.)

14. How did you perceive physical education before entering the undergraduate course?
 ___ recreational
 ___ educational
 ___ competitive
 ___ therapeutic
 ___ leisure
 ___ other (please describe): _____

15. How did you learn about graduate programs in physical education in Brazil?
- ☐ heard about
 - ☐ read about
 - ☐ know people who take it
 - ☐ did not know
16. In general, do you believe a graduate program in physical education will add to your chances of getting a better job?
- ☐ yes ☐ no
17. Did you have any course in research during your undergraduate program?
- ☐ yes ☐ no
18. What amount of student teaching did you have during your undergraduate study?
- ☐ 3 months
 - ☐ 6 months
 - ☐ 1 year
 - ☐ did not have

Questionnaire No. 2

(Almost all questions on questionnaire no. 2 were the same as those on the other questionnaires.)

1. What is your concept of physical-education activities? (Rank order: 1 = most important.)
2. How do you perceive physical education?
- (same as no. 14--questionnaire no. 3)
9. For what types of activities should a physical-education graduate student be prepared?
- ☐ coaching
 - ☐ coordinator
 - ☐ therapist
 - ☐ athletic director

___ sports researcher

___ other (please describe): _____

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