DOCUMENT RESUME

ED 220 457 SP 020 844

AUTHOR Lawson, Hal A., Ed.
TITLE Undergraduate Physical Education Programs: Issues and Approaches.
INSTITUTION American Alliance for Health, Physical Education, Recreation and Dance, Reston, VA. National Association for Sport and Physical Education.
PUB DATE 81
NOTE 102p.; Based on the proceedings of the National Professional Preparation Conference in Physical Education, "Progress through Diversity" (Chicago, IL, November 5-8, 1980).
AVAILABLE FROM AAHPERD Publications, P. O. Box 704, 44 Industrial Park Cr., Waldorf, MD 20601 (Stock Number: 245-26906, $11.95).

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Academic Standards; *Accreditation (Institutions); Competency Based Teacher Education; Educational Trends; Futures (of Society); Interdisciplinary Approach; *Physical Education; *Physical Education Teachers; *Preservice Teacher Education; *Teacher Education Programs; Undergraduate Students

ABSTRACT

Papers presented at the National Professional Preparation Conference in Physical Education were revised and expanded for publication in this monograph. In part I, two papers, "Professional Preparation Conferences: One More Time" (W. G. Anderson) and "Current Context and Future Curriculum" (M. J. Ellis), set the stage for a presentation of alternatives. Both papers raise questions which are helpful in assessing the approaches to the education of physical education teachers presented in the papers in part II: (1) "Competency-Based Teacher Preparation in Physical Education at Washington State University" (M. L. Enberg, W. Harrington, and L. V. Cady); (2) "The Preparation of Physical Education Teachers: A Subject-Matter-Centered Model" (L. F. Locke, C. L. Mand, and D. Siedentop); (3) "A Disciplinary Model for a Curriculum in Kinesiological Sciences" (B. F. Husman, D. H. Clarke, and D. L. Kelley); and (4) "Undergraduate Physical Education: A Cross-Disciplinary Model" (W. R. Morford, H. A. Lawson, and R. S. Hutton). Papers in parts III, IV, and V, which deal with the topics of program accreditation, analysis and synthesis, and viewpoints toward the future, include: (1) "Accreditation: Is the Horse Already Out of the Barn?" (P. S. Brassie); (2) Professional Preparation: Quality and Diversity" (L. L. Bain); (3) "Textures" (W. Harper); (4) "Issues as Reflections" (M. E. Kneer); and (5) "Undergraduate Preparation: Marching to Different Drummers" (A. A. Annarino). (JD)

UNDERGRADUATE PHYSICAL EDUCATION PROGRAMS:

ISSUES AND APPROACHES

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College and University Physical Education Council

Sponsored by the
National Association for Sport and
Physical Education

Published by the
American Alliance for Health,
Physical Education, Recreation and Dance
1900 Association Drive, Reston, Virginia 22091
Stock Number: 245-26906

Foreword

The National Association for Sport and Physical Education's publication, *Undergraduate Physical Education Programs: Issues and Approaches* is based on the proceedings of the National Professional Preparation Conference in Physical Education, "Progress Through Diversity", held November 5-8, 1980 in Chicago, Illinois. Consistent with the philosophy of providing quality leadership to physical education professional preparation programs, NASPE's College and University Physical Education Council has made a significant contribution to the profession by examining four different (proposed) program models in physical education.

The papers presented provide an excellent overview of contemporary trends and timely issues in professional preparation. The well-conceived approaches will be of interest not only to physical educators and department administrators but to graduate students alike.

The NASPE College and University Physical Education Council wishes to express its gratitude to the authors, conference presenters, and conference participants whose quest for exemplary programs is never-ending.

Roswell D. Merrick
Executive Director(NASPE)
The American Alliance
for Health, Physical Education
Recreation and Dance

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Preface

Every profession seeks consensus among its members. Consensus is the target on fundamental issues such as the central mission(s) of the group, the amount and kind of professional education, and the standards which define good work. Without such consensus, there is little basis for defining and uniting the profession. With consensus, the profession is provided with a platform which guides the thoughts and actions of members and helps to create a favorable impression in the minds of outsiders. The achievement of consensus is, thus, a vital element in the professionalization of physical educators. On the other hand, the platform of a profession, around which consensus is framed, can be expected to change over the decades. With this platform, research on the professions has revealed that the process of consensus-seeking is continuous (Bucher and Strauss, 1961). In fact, this process takes the form of a contest among groups of members in the profession. These groups are formed on the basis of differing views on fundamental issues such as those of mission, appropriate education, and standards of good work. Each has its own platform, and each endeavors to persuade the majority of the members in the profession that its own platform serves best the needs of the profession and society. As long as this contest does not cause the profession to disintegrate, it must be viewed as a healthy sign. After all, the competing views of these groups are among the internal checks and balances which make the profession responsive to change.

There is, then, a balance which must be reached in a profession like physical education between the need for consensus and the need for adaptability. While this balance applies to all of the operations of this profession, the difficulty in maintaining it can be witnessed while the focus is on just one of them, professional education.

Professional education is the major point of entry into the ranks of physical education. Embraced within it, by definition, are the field's missions, its body of skills and knowledge, and an implicit set of standards regarding good work. The task of striking the aforementioned balance in professional education is no mean task, and it becomes increasingly difficult when the diversity which characterizes North American institutions of higher education is considered. Tugs toward consensus attributable to members of the profession and its association, AAHPERD, are counter-balanced by the pulls attributable to institutional uniqueness and to members who wish to adopt a new platform. In short, the question regarding the amount and kind of professional education in physical education occupies center stage in the internal contests of this profession.

If there are indeed differences in what members view as the most appropriate amount and kind of professional education in physical education, and if professional education provides a logical springboard from which to launch into questions surrounding missions and standards of good work, then it follows that there ought to be a forum for the identification and discussion of issues and approaches. Such a forum should not be viewed as a temporary measure. To the contrary, it has been suggested here that there is good reason to argue for sustained efforts in the area of professional education. The forum so provided must give ample recognition to this fact and one other. This latter fact is that professions have as one of their lifelines, rational discourse via the written and spoken word. When the target is a balance between consensus and adaptability, an understanding of the alternatives precedes informed decision-making.

In an effort to provide a suitable forum within which professional education could be discussed and the alternatives better understood, two related measures were planned. The one called for a conference, the other for a publication of the fruits of the conference and more.

The conference was held in Chicago, Illinois from November 5–8, 1980. It included a different, although appropriate, format. Study papers, which were prepared around four model approaches to undergraduate education, were distributed to conferees to allow informed discussion during the conference in lieu of the more usual pattern of merely listening to lectures. In this fashion, conferees were able to address in detail issues which ranged from assumptions, to theoretical or empirical support, to issues surrounding implementation and institutional change. Authors of the four papers were asked to frame their discussion around a common list of questions. These questions, which were developed by W. R. Morford and myself, appear on the following page. They give clues to some of the important issues surrounding professional education and will help the reader to better understand the four model approaches.

Format for Convention Papers

I. Introduction
   A. What is your definition of the field currently called Physical Education? (If you pick another title, or set of supplementary titles, introduce them and define them accordingly.)
   B. Are there any special assumptions which must be identified so that readers may understand your model of professional preparation, e.g., questions of the nature and scope of our professional mission, institution-specific factors, etc.?

II. What specialized body of knowledge and/or skills are imparted to students in the professional preparation program?
   A. Is there a disciplinary component, i.e., where knowledge and/or skills are disseminated without an eye toward application?
      If so
      1. What is the label for the discipline and what is its focus?
      2. What is (are) its method(s) of inquiry?
      3. What are the different orientations (or paradigms) which are involved in such a study?
      4. What body of knowledge results?
   B. Is there a professional component, i.e., where applied knowledge and/or skills are disseminated with an eye toward a professional mission?
      If so
      1. What career or vocational streams are included?
      2. Is the orientation theoretical or technical?
      3. Is there a provision for field experience? If so, explain its role in the professional preparation program.
   C. What is (are) the role(s) of movement performance in your professional preparation programs?
      1. Is performance skill in an activity seen as a necessary prerequisite to teaching the same skill? If not, what is the purpose of performance?
      2. Is performance seen as an end in itself, or a means to other ends, or both? Explain.
      3. What emphasis, if any, is accorded the analysis of performance?
      4. Is performance viewed as the subject matter of physical education? Part of the subject matter? What?

III. Are there entry and/or exit requirements (competencies) for students? How will does your program accommodate students who transfer from community colleges? Explain.

IV. Now that the components in your program of professional preparation have been identified, e.g., disciplinary, professional, performance, field experiences, and entry-exit requirements, discuss the relative weighings which are assigned to each in the program. That is, what is the relationship of the components in your professional preparation to the whole? How are they sequenced? Why are they so sequenced? What problems are associated with implementation? Provide a diagram of content and structure if possible, in addition to your discussion of these questions.

V. What is the relationship of your program to other professional fields, e.g., health, recreation, et. al., and to other departments, e.g., education, history, business? Are there problems of overlap?

VI. How have you evaluated this program? By job placement? By empirical investigations of student's characteristics? By feedback received from employers and graduates? What research is needed?

VII. What do you perceive to be the implications of your approach to professional preparation for the problems and prospects of the field?

After the conference, authors of the four model approaches were asked to revise where necessary their papers with an eye toward communicating to a much wider audience. This publication is directed toward this latter end, and it is offered to the profession as a means of helping us to understand one another better, while we try to strike a balance between consensus and adaptability.

The initial papers by Anderson and Ellis set the stage for a presentation of alternatives. Anderson traces our history in the area of professional preparation to the present and makes it clear that diversity and dissension are newcomers to the formal conferences and publications on professional education. Ellis signals major challenges facing higher education and places faith in scientific inquiry as one means for addressing these challenges. Both papers raise questions which are helpful in assessing the four model approaches presented in the following pages.

Enberg, Harrington, and Cady present one such model, an example of a competency-based approach to teacher education. Since the competency-based approach was the only approach presented at the professional preparation conference of 1973, this provided a necessary and valuable link with the past.

Siedentop, Locke, and Mand also provide a model for teacher education, one which they have called a subject-centered approach. They proceed beyond the call of duty in their paper by presenting an invaluable list of problems and concerns associated with all teacher education programs.

Husman, Kelley, and Clarke present one of the newer models for the field. This is a model of undergraduate education which is non-professional in na-

ture. Reflected in this paper and the one which follows it are recent developments in the field with regard to disciplinary inquiry and non-professional degree programs. Since there are a number of such programs springing up across North America, and since they are spawned in what were once departments of physical education, there would seem to be little question as to whether faculty who have developed these programs remain our colleagues. What they are asking us to do is to adapt our definition of the field and its missions. They are suggesting that we consider the generation and dissemination of knowledge about sport and physical activity in undergraduate education apart from teacher education. The question which they raise implicitly is whether the profession is now ready to accept the label *undergraduate* or *graduate education* as a substitute for "professional preparation".

Morford, Lawson, and Hutton present a cross-disciplinary model which includes the potential for a variety of career streams, including teacher education, as well as non-professional degree options. Like Husman, Kelley, and Clarke, these authors introduce the need for terms other than physical education to describe important facets of their work and models.

The reader should feel compelled to ask after reading the first six papers whether common ground in the name of consensus can be reached, and further, whether any or all of the models allow the profession to adapt to meet the challenges which confront it. The next three papers focus on these very concerns. Brassie takes on the thorny problem of accreditation and shows how our diversity clouds efforts toward quality control through the accreditation process. Consensus, he emphasizes, is a prerequisite to accreditation. Harper and Bain respond much more generically to *all* of the previous papers. They have done their best to do some blending and raise pertinent issues. Their task was the most difficult of all, and it would seem that we owe them a debt for their exceptional efforts. The work of Harper and Bain is supplemented by reactions with a sample of colleagues to the conference proper, with an eye toward the future of the field. Their reactions constitute good reading because they both signal common ground and identify the concerns to be raised next in an appropriate forum.

Acknowledgement for the conference and the publication must include Roswell D. Merrick, the members of the College and University Physical Education Council of NASPE from 1978–80, my colleagues on the original planning committee (Linda Bain, Claire Teufel, and Kate Barrett), and the thirty colleagues across the United States who took the time to suggest exemplary approaches and names of presentors. Last, and far from least, Dr. Tom Loughrey accepted the weighty responsibility as convention manager, a job which he performed effectively and enthusiastically. To all of these people and more, all of us in the profession owe a debt which we can repay by addressing the major issues which they worked so hard to raise for us.

H.A.L.
December 15, 1980
Vancouver, B.C., Canada

Reference

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PART I:

Issues and Challenges in Undergraduate Education

Professional Preparation Conferences: One More Time

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Introduction

The 1980 conference is one in a distinguished series of national professional preparation conferences in physical education, most notably the Jackson's Mill Conference of 1948,[1] the 1950 Graduate Study Conference in Pere Marquette,[2] the 1962 Professional Preparation Conference,[3] the elementary school specialist conference in 1972,[4] and the New Orleans Conference of 1973.[5] In some ways this conference follows in the tradition of its predecessors. In a number of other very important ways, however, it departs from tradition. In fact, it may be different enough to constitute the start of a new tradition, or it may even be the professional preparation conference that ends all professional preparation conferences. It is, therefore, appropriate to examine some of the substantive and procedural characteristics of the 1980 conference in relation to characteristics of past conferences. Hopefully, this exercise will provide some historical perspective for our deliberations and will provide a useful way of thinking about what we may be dealing with in the new future. For the sake of brevity historical references have been limited to the 1962 Professional Preparation Conference and the 1973 New Orleans Conference.

Conference Participants

The 1962 Professional Preparation Conference was a joint conference with representative groups in Health and Safety Education, Physical Education, and Recreation Education. Even though each group worked on its own distinct program standards and the major protion of the conference was devoted to group meetings, nevertheless, there were joint planning committees, joint meetings, and even joint statements of philosophy, objectives, and strategies that represented commonalities across these allied fields. Health educators, physical educators, and recreation specialists actually *agreed* on such things as the percentage of the undergraduate program that should be devoted to general education, and that the basic professional preparation program in all fields should be five years.

In 1973, the conference was once again a joint operation, but by this time the groups had proliferated. There were now separate divisions of dance, and safety education, in addition to the health educators, physical educators, and recreation specialists. Of course, at this point in time the association of professional groups was moving toward a more loosely knit Alliance, and the conference reflected this movement. Joint meetings, committees, and statements of position were more limited. It seemed apparent that the main reason for holding the conference for all the groups at one time and in one place was logistical efficiency. And yet, the effort to retain some semblance of unity persisted. The theme of the conference, interestingly enough, was "Unity Through Diversity".

In 1980, the conference brought together a single group of physical educators, unencumbered by these allied fields, free to focus exclusively on more narrowly circumscribed concerns, and in a favorable position, therefore, to make genuine progress through unity, or so it might seem to an outsider.

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[1] _____. *The National Conference on Undergraduate Professional Preparation in Health Education, Physical Education, and Recreation.* Held at Jackson's Mill, West Virginia in 1948. Chicago: The Athletic Institute, 1948.

[2] _____. *Graduate Study in Health Education, Physical Education and Recreation.* A Report of the National Conference on Graduate Study in Health Education, Physical Education and Recreation held at Pere Marquette State Park, Illinois in 1950. Chicago: The Athletic Institute, 1950.

[3] _____. *Professional Preparation in Health Education, Physical Education and Recreation Education, Report of a National Conference.* Washington, DC: American Alliance for Health, Physical Education and Recreation, 1962.

[4] _____. *Preparing the Elementary Specialist.* Proceedings of the National Conference at Lake Ozark, Missouri in 1972. Washington, DC: American Alliance for Health, Physical Education and Recreation, 1973.

[5] _____. *Professional Preparation in Dance, Physical Education, Recreation Education, Safety Education, and School Health Education.* A Report of the National Conference held in New Orleans in 1973. Washington, DC: American Alliance for Health, Physical Education and Recreation, 1974.

But is today's group of physical educators really less diverse than the ones that gathered at those earlier joint conferences? There is no small amount of irony in the fact that this apparently singular group had in 1980 as its conference theme "progress through *diversity*".

Meanwhile, there may be something distinctly inopportune about the fact that conferences do not now, and may never again in the future, bring together dance educators, recreators, physical educators, and health educators. This development arises at a time when school physical education programs are finally developing serious fitness programs closely tied to related health concepts, expanding the scope of their activities to include a much more substantial emphasis on what were previously thought to be recreational activities, and extending the emphasis on creative movement as a fundamental feature of the elementary school offering. By convening at separate conferences, a serious side-effect is nurtured, namely the isolation of allied professionals from one another at the very time when their common subject matter is beginning to flourish in school programs. Furthermore, the body of knowledge in physical education is so much more generic than it once was in its applicability across professional specializations (at least two of the ensuing model approaches provide vivid illustrations of this development). Yet, strangely enough, by convening at separate conferences the walls are built between physical educators and other professionals who should be involved in both the utilization and development of the body of knowledge.

Another dimension of the concern for "who participates" in these professional preparation conferences relates to the constituencies within physical education represented by conference planners, presenters, and participants. To a certain extent, teacher educators have always been the dominant force in all of the conferences. In past conferences, particularly in 1962, attempts were made to involve representatives of other constituencies such as public school teachers, prospective employers, state education department officers, coaches, and so on. These efforts met with only modest success as reflected in the rosters of past steering committees, task forces, and conference participants; the overwhelming majority of those involved were teacher educators. This conference, too, is dominated by teacher educators: 100% of the planning committee, most of the presenters, and virtually all of the participants are either teacher educators or are engaged in the preparation of allied professionals.

On one hand, this is as it should be. Persons in higher education run the professional preparation programs and have the sustained commitment to, and expertise in, the business of professional preparation. Why shouldn't these people be expected to coordinate these conferences? On the other hand, there are some liabilities attached to this relatively exclusive reliance on teacher educators (or, if you will, "preparers of professionals"). It is possible that this group might not justly represent the best interests of undergraduate students be they prospective teachers, aspiring exercise scientists, future sports administrators, or liberal arts majors. There is also the possibility of losing sight of the on-the-job requirements that face students as they enter the professional world, requirements that can best be represented by practicing professionals. In addition, it may be difficult for professors to accurately account for the employers' needs, i.e., the people who will be hiring the students. Indeed, it does seem possible, however unwittingly, that professors create professional preparation programs which, first and foremost, represent their own best interests, i.e., programs which reflect the talents, research interests, limitations, and ultimately our survival needs, as professionals. A case in point is that enormous list of competencies that emerged from the 1973 conference, a list that satisfies the special interests of all the different specialists gathered at the conference, and, at the same time, a list that would frighten any sensible person faced with having to meet the requirements of all the competencies. One might also point to certain aspects of some of the four program models which follow in this book and ask: In whose best interest was this program feature developed? The point is, then, that professors need to remain mindful of the fact that there are other clienteles to serve, and that most of these clienteles are not in attendance at conferences on professional preparation to represent themselves.

Conference Objectives, Goals, and Outcomes

It is appropriate to turn now to another set of vital features of these professional preparation conferences: objectives; goals; outcomes. The term *objectives* refers to the more immediate aims of the conference, while *goals* refer to the longer range purposes, and *outcomes* refer to whether or not the objectives and goals were accomplished.

The overriding goals of the last two conferences were essentially the same, to improve the standards (and consequently the conduct) of professional preparation programs in physical education. To achieve these goals, the more immediate conference objectives were to bring together leaders within the profession, have them discuss and reach agreement on standards, put those standards in writing, and publish and distribute a report that was to be used directly by physical education departments and others as a basis for upgrading what they were doing. For example, in 1962 there were specific guidelines for how department chairmen were to use the standards to evaluate their programs, and in 1973 there was a clearly stated intent that the listed competencies should be used by state education departments to review and revise their certification requirements.

In both conferences the "profession" referred to was "teaching physical education in schools". It *is* true that some peripheral attention was given to standards for coaches and athletic trainers, but aside from these brief digressions, they were concerned with the profession of teaching school. By implication, therefore, the ultimate goal of these conferences was to improve the practice of physical education in the schools, although curiously enough, this ultimate goal was left unstated.

In retrospect, these goals, objectives, and procedures seem quite logical. They certainly resemble time-honored paths to improvement used by other distinguished professions throughout the world.

And what about the outcomes? Well, the immediate objectives were apparently achieved. Leaders were involved, agreements (of a sort) were reached, and standards were promulgated. As for the longer range goals, it's probably safe to suggest that the standards did have substantial influence on the *design* of professional preparation programs, i.e., many institutions changed their programs to bring them more closely in line with the standards. Whether these design changes resulted in program *improvements* is more difficult to assess. At the very least, however, it can be stated that programs were changed in a direction judged to be desirable on the basis of professional consensus.

As for the ultimate goal of improving the conduct of elementary and secondary school physical education programs, it would appear that the impact was very modest. After all, there is an extraordinary array of powerful factors influencing school programs, and a substantial number of variables that stand between the design of professional preparation programs and the on-the-job behavior of teachers in schools. A professional preparation conference is not likely to have a marked effect on what goes on in the gym *unless* it makes a very special effort to do so.

The immediate objective of this publication and the 1980 conference was to present and discuss *alternative approaches* to professional preparation in physical education so that readers will be better informed professionals, i.e., their perspective of what's going on in the field will be broadened. The longer range goal is implied in the conference theme "Progress Through Diversity", which suggests that they hope to improve professional preparation. So, as in past conferences, improvement is sought. But this time, instead of striving for agreement and issuing uniform standards, alternatives are presented. Furthermore, this time there is a more open-ended conception of the profession, or professions for which students are being prepared. While some persons continue to think in terms of preparing people to teach physical education in schools, others have a much broader notion of the professions encompassed by "physical education". Indeed, there are some who prefer to abandon the term physical education in favor of a more accurate description of the professions represented here; there are still others who are not even concerned with professional preparation, but with a new form of liberal arts program.

With this sort of built-in flexibility it is not easy to envision what the *ultimate* goal of this conference and its attendant publication might be. For some, it will be to have a favorable impact on the practice of physical education in schools (as was the case in previous conferences). Others are apparently interested in improving the preparation of a variety of professionals, e.g., teachers, sports managers, exercise therapists, and so on. Others are clearly interested in improving the structure and utility of a discipline called Kinisiology, or Sports Studies, or Human Movement.

At this point it seems reasonable to ask: Why have the time-honored goals, objectives, and procedures of physical education been forsaken? Why was this conference so different from past conferences? At the risk of oversimplification, it is suggested that the overriding reason for change is that the real world of professional preparation programs in physical education has changed and a responsible professional preparation conference must reflect those changes. College physical education departments in this country and elsewhere are training people for alternate careers, and the modes of training differ substantially both within and across career specializations. As the reader should well know, many of these departments have changed their names to suit their new mission. In the face of this diversity in the real world, how could a conference possibly be held with the expectation of reaching consensus on a uniform set of standards or a single program model?

Next, it is appropriate to ask a related question: What are the possible outcomes of a conference in 1980, in view of the diversity in the field? A few conjectures are in order.

First, the immediate objective will certainly be achieved. Readers will encounter alternative approaches to professional preparation, and will have the chance to dissect them, challenge them, and hopefully better understand them. In fact, readers should come away from this experience as better informed professionals. The same can be said for the thousands of other professionals around the world who will carefully study the conference report. In itself, this can be viewed as a very worthwhile outcome. All who come in contact with the materials will have been *educated*. Furthermore, they will have a clearer sense of the options available to us as we develop professional preparation programs in the future.

But what about our longer range goal, "progress"? Will progress occur? Well, if one thinks of "*progress*" as not having a positive valence, but merely denoting a movement on to the next stage, then it is this author's judgment that the conference and the publication will definitely yield progress by accelerating the already established movement in the direction of diversity. Put simply, there will be witnessed progress toward

greater diversity within physical education. Why will these twin efforts produce greater diversity? They are going to make people more aware of the options available to them; and given no professional consensus regarding which option to pursue, some will follow one option, others will take up other alternatives. Moreover, many will follow the path of *intelligent eclecticism*, choosing the best features from the various alternatives and putting them together to form a unique program that suits the needs of their clienteles and their institutional resources. And then there will be the *devious eclectics* who choose the wrong program features for the wrong reasons. All in all, this adds up to the potential for abundant diversity. (An alternative hypothesis is that one of these models or proposals will be viewed as so superior to the others and its proponents will be so persuasive in their discussions that everyone in physical education will rally to its support and completely abandon those blatantly inferior alternatives. Frankly, in the author's eyes, this is not a very plausible hypothesis.)

Now, if the reader accepts this controversial prediction about progress toward greater diversity, then the next relevant question is: Will greater diversity yield *improvement*?

For sure, there are those who will answer with a resounding "NO!" They foresee impending disaster in this inexorable drift toward diversity. They see excessive fragmentation, increasingly narrow specialization, disunity and distrust, confusion, powerlessness, and eventually extinction.

They may be right. The next round of professional preparation conferences may be held separately and titled: Professional Preparation in Movement Sciences; Professional Preparation in Movement Arts; Professional Preparation in Sports Studies; Professional Preparation in Teaching Physical Education; Movement Studies in the Liberal Arts Curriculum. Of course, within each of these conferences there will be sub-groups which eventually blossom into new, autonomous areas of specialization, which in subsequent years hold their own separate conferences. Imagine, for the sake of example, a conference in 1995 on "Professional Preparation in Therapeutic Movement for Handicapped Sports Managers of Aquatic Facilities!" This conference will be sponsored by the appropriate sub-division of our national organization, now referred to as the A.A.H.P.E.R.D.C.S.K.T.F.N.O.L. Thirteen people will attend the conference representing the three existing professional preparation programs which have a total enrollment of 11 students who are destined to compete for the two jobs available in this specialization world-wide. The conference will split on the issue of whether or not "therapeutic movement for handicapped sports managers" is a discipline or a profession. The conference report and the specialization itself will be totally disregarded by the powers that be and by society at large, will simply fade away as will the hundreds of other diverse movement arts and sciences that have become too narrowly fragmented to wield any influence in the real world.

On the other hand, there are many persons in physical education who regard this increasing diversity as both a natural and healthy developmental stage. They view the incorporation of more professional specializations within our sphere as a way of enhancing the quality of preparation in already existing professions and of creating appropriately specialized training programs where none existed before. Besides, they point out, the need for school teachers in general and for physical education teachers in particular has fallen to zero and below. (In some states the number of teachers released or excessed surpasses the number of new job openings.) Under this sort of market condition they suggest that professors in teacher education better darn well train people for alternate careers or search for alternate careers themselves.

There are those who view the growth in the body of knowledge in human movement, including the several new sub-divisions of knowledge that are emerging, as adding needed depth and breadth to the preparation of physical education teachers, and at the same time serving the needs of other allied professional preparation programs; understandably, there are others who argue that this growth in the body of knowledge is self-justifying and parallels the development of other disciplines and fields of professional knowledge.

In addition, there are those who see great virtue in providing an array of alternate training models, models that are perhaps competency based, or humanistic, or problem-centered, or modularized, or individualized, or field-based, or behavioristic, or computerized, or accountability-based, or some combination of the above. These models provide the raw material for making intelligent decisions in designing preparation programs. Further, they argue, alternate models focus attention on a long-neglected dimension of professional education, *the methods of delivery*, instead of permitting professors to persist with an exclusive concern for the subject matter of professional preparation. In fact, authors of one of the models presented in this book argue very convincingly for making the mode of delivery our principal concern in designing professional preparation programs.

So, there are professionals who regard this movement toward increased diversity with considerable foreboding and other who greet it with enthusiastic approbation. Where do you stand with respect to this issue?

Before reading all of the papers in this book, it is suggested that the reader engage in self-examination on the issue of diversity. Feelings uncovered in the process will influence your perception of the forthcoming models as well as your reactions to them.

If the reader yearns for unity in this profession, prepare to be disappointed: there are some deep and pervasive differences to be found. They are apparent

in the program proposals which reflect not only differences in format and substance, but differences in the way people view the world. Further, it is suggested that the reader resist the temptation to try to create a false vision of unity by pretending that all these diverse points of view can be neatly fit together in some grand design. Instead, it is better to assume a lack of unity within the profession, and seek unity within yourself through intelligent eclecticism, i.e., pick and choose what makes most sense to you and ascertaining that what you do choose fits together. The profession can tolerate extensive diversity, but you, as individuals, will need personal integrity and cohesiveness in your views if you expect to effectively carry on.

Substance of the Proposed Programs

Certainly the most important characteristic of a professional preparation conference of this sort is the substance of the preparation programs (or standards) that are proposed. Here, the reference is to the recommendations for precisely *what* people should study or experience in their professional training and *how* their professional training experiences should be arranged. These substantive recommendations, if followed, dictate how thousands of people spend millions of hours during their collegiate years and, quite literally, shape the kind of professionals they become.

In the 1962 conference report, the areas of study to be included in the programs were listed in a form roughly equivalent to courses that might be taken. The listings were grouped under "general education", "general professional education", and "specialized professional education". The latter group contained some familiar entries: introduction and orientation to the profession; administration and supervision; curriculum and instruction; history, philosophy, and principles; measurement and evaluation; personal acquisition of skills to be taught; skills for teaching and coaching; foundational sciences (which included kinesiology and physiology of activity); adapted physical education; health and safety education; recreation. In addition, a two-page list of the specific sports, games, conditioning activities, and dance activities to be covered, was appended. Finally, special emphasis was given to carefully describing the nature of the professional laboratory experiences (including but not limited to student teaching) which were intended to be a dominant feature of the program.

In 1973, the conference identified the program's substance by describing "competencies" to be achieved using "performance-based" terminology. The competencies were grouped under broad areas: socio-cultural; philosophical; historical; growth and development; physical and biological sciences; behavioral science; research foundations; personal performance competencies; modes facilitate learning; curriculum planning and organization; administration; intramurals.

While the two sets of recommendations had much in common, there had been considerable change between 1962 and 1973. Some of the changes were semantic. A sizeable number were legitimate alterations in substance. For example, several new areas appeared within the science foundations, including perceptual-motor learning, sport psychology, and sport sociology. What was once the history of physical education as a profession and a school subject, had become the history of "play, games, dance, and sport". Where once there was a specification of each sport area, the second conference made only generic references to "motor activities" or "motor patterns". "Growth and Development" had emerged as a major component of the program. There was, of course, the dramatic shift from courses to competencies with all of the attendant changes that accompany that kind of shift. The enumeration of teaching and program development skills (in 1973) reflected the increasing attention being given to pedagogical skills and the knowledge base which underlies them; as a consequence the nature of the field-based experience was much more explicit. In general, the differences between the program recommendations of the 1962 and 1973 conferences signalled a discernible shift in emphasis from developing the technical skills and knowledge required to teach sports and games, and produce physical fitness, to studying the ever-broadening body of knowledge in human movement and applying that knowledge in an instructional setting.

Now, at the 1980 conference and in this publication, four separate program proposals, each with its own very distinct substantive features, are presented. The principal business at hand is to present, examine, and discuss these substantive features. A preliminary analysis of the substance of the proposals is inappropriate at this time. It is suggested, however, that as these substantive features are probed, give some attention to the manner in which authors relate to what has previously occurred. In this author's judgment, each proposal, in its own way, departs significantly from the programs outlined in 1962 and 1973, and yet, each one manages to conserve important substantive features from the past. In this sense none of the proposals preaches total revolution (although when compared in particular to the 1962 recommendations, all of the current proposals represent a radical departure from an earlier tradition). Interestingly, the proposals differ substantially from one another with respect to the features they have chosen to retain and to discard. No doubt much time can be spent debating which proposals reflect the "right" choices.

In closing, two suggestions are offered to readers, in the interest of enhancing the fruitfulness of the discussions and in the hope of maintaining a relatively congenial atmosphere in the profession, in what might otherwise become a somewhat contentious encounter. Readers should recognize that in most instances the proposed programs reflect the very deep commit-

ments of the authors. These authors have worked for years developing the kind of programs they are presenting: at the very least, they avidly support the ideas embedded in the proposal as a consequence of their own experiences. In a very real sense, these proposals are the expressions of the "selves" of those who present them.

It is suggested that the proposals differ not only in terms of the *means* they proffer, but in terms of the *ends* they seek. Readers face questions not only of which course or field experience to include and how to package that experience, but which, if any, professionals shall be prepared. Shall physical educators continue to concentrate primarily on preparing school teachers? If so, what is the nature of the subject they are expected to teach . . . or shall physical educators continue to embrace more career alternatives within our field? If so, which ones . . . or, should professors in higher education devote much of our effort to becoming a viable part of the liberal arts curriculum? And what *reasons* are offered for moving in one direction or another? The author contends that these questions relating to *ends* are the more important issues facing this conference and confronting our field. Readers should feel free to explore these issues and not restrict themselves to a more narrowly circumscribed discussion of means; so, don't be afraid to probe for a clarification of the program's goals and the rationales supporting the goals. To be sure, the discussions which ensue from reading are not likely to proceed without some serious controversy, nor do they hold the promise of prompt resolution of the issues. Nevertheless, it is important that physical educators address these questions because they are the ones that will most decisively influence the future.

Current Context and Future Curriculum

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Introduction

The preparation of this presentation revealed, to my chagrin, that I am not a scholar of the curriculum. Instead of concealing that or engaging in a massive re-education process, I decided to integrate and express some ideas about the physical education field today that have implications for the way the curricula is conducted.

Caveat emptor. Some of the ideas are expressed forcefully rather than tentatively. Deliberations will temper and refine these ideas given the nature of the complementary purposes, mine as a scene-setter and yours as a delegate. Because of this, forcefulness seems appropriate.

Pressures from the Two Meanings of Physical Education

Physical education has come to acquire two meanings. The first implies the delivery of activity services to a client with developmental intent. This is merely a restatement of an old and well-understood purpose. However, it avoids a traditional association with schools, and thus, permits the contemplation of a multitude of settings where there is a guide or leader, a client, and a developmental movement activity.

The second meaning is even looser and implies the body of knowledge, and the procedures that contributed to it, about the interaction of moving humans and their environment. This aspect of physical education implies questions about the impact of human movement on some aspect of human experience, and formal and informal attempts to answer those questions by an individual.

These two aspects of the field are the potentially complementary processes of practice and scholarship. Since Henry's proclamation that physical education could be an academic discipline (1964), the field has been divided into two camps. Recently, the polemic has intensified (Lawson, 1978; Broekhoff, 1978; Locke & Siedentop, 1980) and one purpose of this address is to terminate the battle and to obtain a solution to this problem rather than to joust it.

The complementarity of scholarly research and practice resides in their two functions. Physical education practice is involved in managing the activity of a client and a setting so that the probability of desired outcomes is increased. This function clearly rests on an understanding of the network of relationships that exist between the manageable elements of the client's activity and the setting. When these interrelationships are understood, then the physical educator can arrange matters so that goals are reached. Clients are served by manipulating their activity and influential features of the environment.

The more reliably the practitioner can move clients toward their goals, the more potent is their contribution and more highly valued will be their services. This reliability derives from understanding cause-effect relationships that exist between clients, activities, and settings. So, practice, in the sense developed above, requires a body of knowledge that empowers the practitioner to reach the clients' objectives. It seems clear that much of what is known by anyone comes about by consequences of unique events. Some of those events involve formal attempts to learn and some are the results of the consequences of personal experiences in specific settings. Both formal and informal knowledges are important.

Informal knowledge is often subjective, intuitive, or non-communicable and accumulates from the consequences of a practitioner's actions over time. These unique learnings contribute to a practitioner's success or failure. We recognize this by providing hands-on experience in our curricula and delaying final acceptance until after a period of successful practice. Nevertheless, despite its value, informal knowledge suffers the major disadvantage of being essentially subjective. Knowledge can be subjective and correct, but there is the possibility that it is wrong and it is less amenable to automatic self-correction. This kind of learning by experience only increases a practitioner's reliability if it is systematized by questioning and observation, by rendering it scientific. Practitioners need to know how to turn their streams of experiences into verified generalizations.

Formal knowledge is learned as the result of a conscious effort by teachers and/or learners. Experiences are created with the expectation that the learner will

acquire truths and incorporate them into their method of practice. Formal attempts to teach and learn must be based on more than idiosyncratic interpretations. The stuff of the formal curriculum should have been successfully tested across many settings.

The deliberate generation of objective knowledge about phenomena requires the processes of science. That does not preclude practitioners from being scientific. The important feature about the asking and responding that renders the process scholarly is the attempt to create answers that are objective and generalizable to a class of settings or events.

When a generalizable answer is generated it becomes potentially useful to those who practice. The general statement of the relationship between features of a setting can be used by a practitioner to the advantage of clients. Thus the bedrock of physical education practice is a body of objective knowledge about the phenomena associated with physical activity and its effects.

Each member of the field must have the knowledge to support their practice, but must also appreciate the dynamic nature of knowing. Since the field of practice is emergent and the arenas in which services are delivered are many and changing, a practitioner must be prepared in ways that reflect this dynamism; practitioners must be prepared to change. To do this they must be able to generate knowledge and comprehend new knowledge brought into the field by others using the formal processes of getting to know things—science. They must know how to learn. Faculty must now, more than ever, go beyond narrow technologies tied to specific occupational niches and educate practitioners so that they can define their own avenues to service.

To summarize, practitioners must be able to do things for clients. To do these they must know how to learn the things they will need to know over a career that will be characterized by change. These assertions say much for the structuring of experiences for the entering as well as the continuing practitioner.

Next, the reader's attention is directed to the role of research. The call for research has its roots in the belief that somewhere in the field there has to be a mechanism for systematically questioning that which passes for knowledge and is transmitted through instruction. It is commonly believed that the closer this process is to the curriculum the simpler and better it is, and because of this members of the university[1] are expected to engage in research besides acting as agents of the curriculum.

Now, before the reader's hackles rise, research is defined here as the activity whereby persons systematically and objectively question and refine what is known about the interaction of moving humans and their environment. The research *can* and should ask infinitely varied questions concerning human movement. The methods *must* be those of science.[2]

A dangerous trend has developed to constrain research to the exploration of questions immediately relevant to current practice. There is less tolerance of individuals who follow their noses.

An obscure but significant document, *Technology in Retrospect and Critical Events in Science* (Falk, 1968) prepared for the National Science Foundation argues vigorously for non-mission oriented research, the research conducted by someone playing with ideas and questions because they are there. Careful historical analysis of major technologies revealed the following important facts:

- 90% of key findings and scientific events necessary for a technology were already known by the time the application was conceived;
- the majority of the contributory findings occurred 20–30 years prior to use;
- 76% of these critical findings were conducted in universities;
- the findings for any application or innovation occurred across many disciplines and cross-disciplinary communication was critically important for the emergence of a technology.

These findings from the science of science point dramatically to the fact that innovations of the next generation depend vitally on the non-mission oriented research of today. We cannot predict which findings or events will prove critical. It is necessary to explore, play if you will, so that a body of ideas and findings await cross-disciplinary integration far in the future; so, there must be carefully-planned efforts to hand-on the results of a plethora of explorations for the future of health of physical education. A currently bewildering body of knowledge is our bequest to future practice.

While planning the curriculum, reflect on the fact that it must not squeeze out the non-mission oriented research by teachers and learners. Room must be provided for both teaching and research. Further, there must be provision for the preparation of future researchers in physical education, persons who are ready to explore the unknown reaches of both the curriculum and research to be prepared for the unknown future.

[1]Neophyte practitioners may not always be prepared in universities. When other institutions engage in preparation I believe it important that the agents of these other curricula also be expected to engage in the agony of research. To excuse them of the responsibility for questioning their tenets and the practices dependent on them is to permit stasis.

[2]Science in this context means disciplined enquiry in search of objective truth. It includes, to my mind, phenomenology, logic, historiography as well as the more conventional notions of science (physiology, anthropology, physics, kinesiology). The methods vary operationally in each of the areas, but they have in common the press for objectivity. It is this essence that I mean to capture in this sentence, and this footnote is added because several readers argued forcibly that most people have a more restricted notion, redolent of white coats, in mind for the word "science".

The university by tradition and by virtue of its special relation to the future must create new knowledge and new curricula. It is enough to answer the question "Why did you ask that about human movement?" with the statement, "Because I could".

Thus, research and practice are intimately connected, but different. Ideally, practice consumes or uses the output of scientific research in addition to the fruits of experience. It uses the body of general theory about a set of events to produce a specific outcome. Science is concerned with going beyond the specificity of multiple observations in particular settings to statements of relations between events that are general. Science is not involved with adding values into the statements. Its goal is understanding.

Practitioners are, however, concerned with value judgments. They are expected to produce outcomes that are desirable. So practitioners selectively use known connections between events to move toward the goals of their client. To decide on a goal to be reached requires valuing some outcomes over others. Ultimately those choices involve valuing outcomes, and when that is done consistently and knowingly it implies following a philosophy. A practitioner may honor the philosophy of the client (Hey Coach! Can you help me do . . .?), a guiding set of axioms set down by others responsible for the client, e.g., a statement of beliefs set down by a YMCA board, or in the absence of clear axioms from such sources, imposes a personal set of beliefs (I think it would be good for you if you did . . .). Thus scholars are value-free, objective, and responsible for simplifying the chaos of the interconnections in the world by creating general statements. On the advice of their experience, and guided by a set of values and beliefs, they alter outcomes in specific settings in the service of particular clients.

Pressures from Tradition

As an area of practice, physical education involves the organized transmittal of ideas from one to another until the recipient is enabled to become physically educated. This enabling function is the central task of declared physical educators who can practice wherever there is someone requiring assistance in becoming physically educated. Clients are sending this message to physical educators.

This paints a new picture of the physical educator. It clearly includes face-to-face in addition to a less remote impact, i.e., from the one-on-one coaching or counselling setting to one in which the enabling effect is transmitted via the media or indirectly via others (Bryant, 1979; Considine, 1979). The picture stretches across ages, categories of clients, and settings in which clients are established and activated. Our curricula must reflect these changes, and it is the central task of the parent conference and this resultant publication to accelerate the process to accomodate new realities.

Clearly, those in practice should be capable of delivering the goods. To that end, established programs of education exist which attempt to provide competence at entry into areas of practice. These programs are massive in one particular area of service, teaching. They are established in such areas as coaching, athletic training, and exercise technology, and they are emerging in a plethora of new fields of service in correctional and 24-hour institutions, community development, activity business and retailing, risk management in the insurance business, sport journalism, etc. The provision of narrow technologies to deliver high quality service in the short term only is myopic. Professional preparation must provide the necessary education to recognize changing circumstances and modify practices over the long term.

History has shaped our thinking and program design in physical education to the extent that efforts are concentrated on an extremely narrow range. The majority of effort is concentrated on developing neophytes rather than on the continuing education of existing practitioners, conducting the preparatory experiences in universities rather than in a broad range of settings, firmly limiting those experiences to preparation for teaching youngsters in schools, institutions, and universities rather than for a multiplicity of occupational avenues for the delivery of activity services to humans and animals, and placing very little emphasis on development and enrichment of the body of communicable theory on which good practice rests.

Pressures from Clients

Clearly, changes are afoot. Clients seem to finally have recognition of PE as a process that extends over their lifetimes. Many accept that they must continually prepare and maintain the state of being educated about their changing body and its dynamic constraints and potentials. Thus, physical education does not stop but is an updating process in which individuals learn how to deal with the impact of the biological and social changes on their physical being. This involves all three domains: motor; affective; cognitive. It is education "of" and "through" the physical throughout life.

Continued blindness to the fact that programs of preparation for service reach further than teaching the young in schools, but include a host of services in a variety setting for persons somewhere between birth and death, will end physical education as it currently exists. Support for the field comes from myriad decisions to divert society's surplus resources to people delivering programs of activity services. Dissatisfied clients mean withdrawal of support. Unless physical educators learn to deliver prized services, exhortation is useless in the long run.

Recently, collective action has effectively insulated nearly all physical education teachers in schools and many practitioners in university physical education

programs from any ongoing monitoring and correction of performance once in practice. What is important for physical education as an area of practice is to arrange for all of its areas of contribution to be responsive to the laws of the marketplace. There must be less dependence on decisions made based on conservative views of what is right, the products of adherence to a static view, and recognize that the client's views have merit.

Because of this, readers are urged not to spend any time debating the issues of whether physical education is a profession. The clients could care less. They want the service for which they have paid. The question is irrelevant unless there is maneuvering to create a monopoly over the delivery of services, as has been done in accounting, teaching, medicine, law, plumbing, etc. If the search for professionalism is motivated by a desire to protect the clients' interests, well and good; but, other restrictive professions have a poor record. The professions are replete with ineffective practitioners who are protected rather than eliminated. Attempts to satisfy the definitional criteria for a profession are low on the author's priority list for physical education these days. What is important is to ensure that entering and continuing practitioners are subject to the evaluative decision-making by and on the behalf of, their clients.

Pressure of Current Circumstance

In the USA a major curriculum shift takes about 7-10 years to work its way through a cycle.[3] The cycle comprises: the original recognition of the lack of fit with circumstances; the garnering of support for change; the process of determining and choosing the desired change; the publication of the change to satisfy legal constraints on relations with current and future clients; implementation of a complete cycle (today which is 4 years for a bachelors degree program but may well be 5 before long); the evaluation of the effectiveness of the modified program. Now the dilemma is clear. The existing curriculum must be geared to a future that is alarmingly distant. To predict the circumstances for 1990 should be worrisome to everyone. For example, could you, the reader, predict what this year would be like back in the troubled years at the start of the 1970s?

How can physical educators deal with the conflicting demands of the eternal verities, a conservative position, with those of a rapidly changing set of circumstances and knowledges? The difficulties inherent in resolving this conflict sustain the rest of this presentation. Identified for the reader are the problems in planning for professional preparation where there are conservative and idealistic demands vying with a press for a liberal experimentalistic structure. There are constraints here that have not been faced before, but there are also opportunities previously unavailable.

The constraints upon the actions of physical educators noted above present a choice between protectionism created by legislated constraints on student choice or encouraging a *laissez-faire* free market. Legislated protectionism may often be clothed in the tenets of essentialism. It argues for the status quo by pleading that there are constraints, eternal verities, that must be communicated to our neophytes of any age. It argues that it is merely convenient that the faculty engaged in professional preparation is well versed in the eternal verities of yesteryear.

The opposition argues that there is a collective wisdom in the actions of clients. They should choose from among offerings as they respond to their perceived individual goals and circumstances. Thus individuals have freedom to succeed and to fail. The benefits system-wide are presumed to outweigh the costs born by those who make poor choices.

In a democracy, as in nature, variability is a virtue. The outcome of variation in programming creates a system which, under market pressures, pushes into the nooks and crannies of the unknown. An emergent field of practice, like a playful individual, receives early warnings of onrushing change and may develop practices to deal with it.

Homogenizing influences like dogma, authoritarianism, insensitive legislation, rigid standards, accreditation systems, and even graduation requirements, are dangerous. While they provide a skeletonic structure, their boney form is resistant to modification by the exercise of judgment and the fine tuning of the market.

Clearly, adopting either the extreme conservative position or the ultimately liberal position on this continuum is dangerous. For example, physical educators work with a basic biological system that is evolving slowly, and one cannot argue that there are no constraints. Debates will rage over warm-up, transfer, hyperplasia, and the role of exercise in mobility five years from now. Even if there are startling changes in long-held scientific bases of the field, a long time will be spent determining how to alter practices to have them considered. The important question concerns the relative rate at which change is occurring compared with the rate at which the field responds.

However, it is clear that it is not possible to confidently predict circumstances several years ahead. The unknowns of the middle-range future will demand rapid responses. Physical educators should be ready. This will be a better-prepared field if strategies that nature uses are adopted; then physical educators can prepare for rapid unknown changes that may present critical challenges. There is a need to explore, investigate, and manipulate the settings in which physical

[3]The last major conference such as this that I am aware of was held at New Orleans in 1972.

educators are located. There is a need to adopt a playful attitude to the possibilities presented by the discontinuities in the social fabric. Rather than scorning new ideas, they should be actively encouraged. If physical educators are not imaginative enough to fail, and thereby learn, then it may be concluded that the challenges of the future will prove too hard. The key then, is to tread a precarious path between knee jerk optimism and destructive pessimism. The two prevailing attitudes to the future, optimism and pessimism, must occupy our attention as we proceed because they need to be identified as influences on our thinking. (Lawson, 1974) In fact, the author would argue that physical educators must be equally attentive to the threads of both attitudes in planning.

First there is the darker side. The field exists in a society buffeted by political and economic turbulence that stems from world-wide storms. The beginnings of a new industrial revolution are here. There are requirements for redesigning lifestyles to permit renewable cycles rather than consumption. This will come gradually and may take many generations, but clearly, challenges will surface again and again which require an accomodation for the scarcity of once plentiful resources. The responses will vary between a mix of learning to do without, substitution of other resources made possible by further application of technology, and tailoring output to input. There is no question that during this process there will be severe effects on the lives and thoughts of everyone.

Physical education draws its sustenance as a service to society funded from taxed economic surpluses or expenditure of discretionary monies by individuals. The pessimistic view is one that points to shrinking surpluses and discretionary income as more of the available economic energy diverted to realigning the existing system to run with the narrower limits of a closed ecosystem. It is presumed there will be less resources to fuel programs. An example of this was raised by the ex-President of the University of Oregon (Bill Boyd) when he recently publicly predicted the end of varsity sports as we know it in 10–15 years. (Boyd, 1980) He predicated his statement not on a final thirst for reformation by a disgusted public, but on simple economics. He argued that there would not be the fuel to: jet hordes of athletes, officials, and boosters hither and yon; to build, heat, and maintain myriad vast sport arenas used a few times a year; to move thousands of tiny groups of people in autos, vans, and mobile homes to events; to energize the hype necessary for continued addiction. His simple idea was that sport would become diseconomic and would change.

It is wise to extend that example to physical education. This field is expensive at the moment. Much of the imaginations of physical educators are constrained by the past to a physical education taking place in contrived settings that depend on massive economic support from an affluent surplus economy to heat, maintain, and operate both physical plants and programs.

Pessimism is hard to take Running through the field are strong threads of optimism. As educators there is the obligation to lead people out from their present state toward their potential. Things get better; what is known and done rests on making things better for individuals. Physical educators are thoroughly Victorian in their concept of emergence and progress.

It is convenient to believe that our technology will somehow thwart the predictions of the pessimists. There is some truth to that. The challenge of capturing the sun's energy now rather than using the deposits of the sunshine of the past have spawned a vast array of technical possibilities. For example, catalytic hydrolysis of water into the fuel mixture of hydrogen and oxygen is attractive; photovoltaism is possible. Reversed thermocline salt pools can capture massive amounts of heat, and so on. For the optimists, the slide to extinction is not begun, but the slipping and stumbling through a period of adaptation to new circumstances is being witnessed today.

Nevertheless, even the optimists must be nervous about the immediate erosion of their personal share of our finite resource. While all may turn out well in the end, the learning phase during the next 20-30 years will be troubled and painful.

Without doubt a period must be faced in which the battle for the resources to lead people toward their potential in sport, dance, exercise, and play, will be intense. It takes seven years to seriously modify, implement, and assess a university curriculum. The period of upheaval will last for longer than the time it takes to redesign curricula. So there can be no hiding behind response latency. The time to respond is now.

What other challenges must be faced beyond the problems of expensive energy and resources? The first is rapidly increasing accumulations of regulations governing student and faculty choice. These can be seen in the curriculum, Title IX, affirmative action, and working contracts. Litigation besets the field on all sides. While each starts with the ideals of improving existing affairs, the strategies in each case lay out policies and procedures, actions rather than performance criteria. Given the rigidity of decision-making structures the author fears that one such result will be an inability to respond adequately to changing circumstances. Failure is feared to the point where hands become tied and opportunities for success remain unexplored.

The next major challenge lies in the special problems of an aging professoriate. None are exempt. The passage of time robs all persons of energy and jades appetites. For example, as a researcher the author was educated in the halcyon days of Analysis of Variance. Now he is ill-prepared for an era that now uses multiple regression analysis to dissect its problems with greater precision. Multiply that example many fold throughout the professoriate, and it is a problem. How

can one capture the declining energy of our aging professoriate and persuade them to learn afresh, to risk, to change rather than enjoy the well-understood status quo? It is a complicated problem and it needs to be made an explicit problem of curriculum reform. The agents of the curriculum, the professoriate, must at the same time be prepared.

A further reality is that the interests of the areas formerly thought of as physical education, health education, recreation and community development, and others like music and dance, are moving back towards each other. The movement is being slowed because of resistance to integration and presumed loss of identity. In universities, where the majority of professional preparation is taking place, departmentalized faculties chafe under this and new non-departmental entities are the bellwethers of reorganization, of the new concerns and the new content required by a changed world. Centers, institutes, and dangling interdisciplinary programs are proliferating and maybe therein lies salvation. The words Women's, Black, Hispanic, Indian, Asian, Environmental, Advanced Computation, Solar, Energy, Policy, Foreign Policy, Government, Neuro-science, Genetic, African, Children, Gerontology, all appear in the names of non-departmental entities created outside the petrified departmental structures of today's universities.

Perhaps the current departmental structures with their protectionist impact on the definition of majors and the labels which are given to them, should be downplayed. Conventional career structures are changing too fast. For example, in the Fall of '79, just as physical educators in Oregon were congratulating themselves on reducing the number of teachers headed for careers in elementary education, complaints were received that the employment opportunity teacher applicant ratio in Oregon was too low, a ratio of 1:1.75. Four months later the first signs of a new baby boom was apparent. By 1985, Oregonians face a possible elementary teacher shortage.

Another pressure which tends to maintain the status quo are the rigidities in our physical plant. Today's physical plants were, in the majority of cases, built for an era in which physical education was oriented toward youth and sports. By contrast, there can be now found a dramatic influx of life-long learners and an equally dramatic loss of interest among youth in team sports. Yet there are pressures from mortgages and the momentum of budgets to retard new developments. Yet these tendencies exhibited by clients are laudable from first principles. Having struggled to build the pool physical educators find now that aquatic programs have broadened to include non-self critical activities in natural waters. Who knows what the next ten years will bring. It is clear that physical plants built for different programs in a different time are part of the challenge.

Another challenge before us lies in the increasing popularity of non-rationalistic ways of knowing and deciding. Self-actualization is increasingly stemming from the mystical rather than rational, oriental rather than occidental, from the gut rather than the mind. This runs counter to rationalistic-objective ways of knowing that are the basis of physical education and the core of western universities.

It can be accepted that things can be known by individuals outside of science, i.e., personal knowledge. (Polanyi, 1958) Further, in physical education the disappointment felt by practitioners concerning the progress made by science, can be accepted. We had high hopes, and these are still largely unfulfilled. (Locke, 1969; Campbell & Stanley, 1963) Problems in practice turned out to be far more complex than originally thought. Maybe there is a need for a new science of personal knowledge; it is clear to the author that the processes of a science are the basis for confidence when it comes to knowing things as a group. In short, the trend to non-empirical ways of knowing stands as a challenge to a field that must go beyond quackery to become reliable and therefore desired.

Preparing for the Future

Progressivism, the instrumental pragmatism which is rooted in Dewey's works and thought that had already bloomed among intellectual educators and philosophers by the 1930's, was already being tempered by a wary counterbalancing with essentialism by the 40s and 50s. Ironically, but maybe typically, the heavy pendulum of educational institutions was still moving towards experimentalism as philosophers began to argue that there were fixed standards and higher ideals beyond the context. Now it appears that the pendulum is on its way back towards essentialism.

The "back to the basics" move, the "hoopla" about the Harvard curriculum, will influence everyone in curriculum planning. Existing academic, decision-making processes in universities render everyone susceptible to changes in the fashion of education. For example, persons at Oregon are at the mercy of any large voting block in the Assembly where every academic has a vote. A few years ago this Assembly, in response to a quite short-lived perturbation of its philosophy, liberalized the university-wide curriculum. It slashed away at language and math group requirements and clusters. Colleagues in physical education, being essentialistically inclined, filled the space with their own requirements. Now this same Assembly is restoring requirements, and electives are pinched out.

This tale is introduced because it is typical, and because it exemplifies another powerful pressure on what will be permitted by University curricula. The reality of the climate of opinion in the University swinging rapidly in response to new forces and old positions must be reckoned with, yet one cannot easily look ahead. It is the author's intent in this paper, while

calling for diversity, judgment, and experiment, to be part of the emergent counterforce that decelerates the current swing of the pendulum. As to the role of harbinger of the philosophy extant in the 1990's, it is safe to say that nobody knows.

The common thread uniting procedures for dealing with all of these challenges involves questioning. Current arrangements must, as a matter of course, be questioned. Change itself is good. It brings information. Failure can lead to further change or changing back. It can no longer be assumed that on the basis of personal experience alone that any way is best. These experiences were garnered in other times. Physical educators must continually explore and communicate the fruits of exploration by means of science.

The author objects to the rising tide of essentialism. There is a need for the systematic de-systematization of the field and the curriculum. There is a need for a wave of deregulation to create the circumstances whereby new approaches, new careers, new structures, and new curricula are tried. There is a need for the feedback from myriad individual programs to permit physical educators to chart a course into the unknown. So this paper makes explicit that the central challenge of the next decade is to diverge. Each act that constrains without a formal effort to judge a particular proposal, an action, a curriculum, a way of delivering a service on its merits, retards the eventual emergence of a field of practice uniquely in tune with changing circumstances.

I hope that what was conceived in Chicago results in a pluralistic attempt to meet the future with widely distributed philosophies and practices. Futurism, while important, is frail. We need checks and balances. I fear the institution of any one system of doing anything. I fear uniformity and prescription like a chicken farmer fears fowl pests. Our best bet is to encourage heterogeneous solutions. We need to create the diversity that will permit us to pick and choose on the basis of accomplishment and potential, to meet the circumstances of our emergent world. The content of this conference enshrines the concept; four different approaches have been identified and maybe more will surface. I hope so.

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PART II:

Four Model Approaches to Undergraduate Education

Competency-Based Teacher Preparation in Physical Education at Washington State University

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Introduction

Special Assumptions

For the past 10 years, the state of Washington has been embarked on an adventure in competency-based teacher education (CBTE) and certification. The journey has been exciting, frustrating, rewarding, confusing, thought-provoking, the quest never dull and not yet complete. The decision to move toward competency-based teacher education and certification was made in the late 1960's. It grew out of national forces and conditions at that time as well as the milieu and idiosyncracies of Washington state in teacher education and certification.

It was coincidental that at the same time a thorough review of program standards, certification requirements and structure, and program approval procedures and criteria was underway in the state. The objective of the review was to determine if new or different standards/criteria/procedures could be identified which might increase the probability that those prepared would, in fact, be effective in the classroom. Among the many ideas which emerged, three suggested a CBTE framework and came to undergird the standards subsequently adopted by the State Board of Education:

1. If the ultimate purpose of preparation and certification is to ensure effectiveness on-the-job, training programs should be designed to develop those knowledges, skills, theoretical bases, and attitudes deemed essential to effective performance in the specific professional role, e.g., teacher, principal, etc.
2. Professional preparation programs for teachers should reflect and be consistent with what is known about learning and about individual differences in learning styles and rate and characteristics.
3. Preparation programs must be relevant to the actual and current world of the teacher (the classroom and school setting), student populations, curriculum, organizational patterns, etc.

Historically, six assumptions underlie the state approach to teacher education and certification:

1. The design of teacher education programs must be based on a clear statement/concept of the role to be performed and, following therefrom, specific competencies (knowledges, skills, theoretical understandings) needed to perform such role.
2. Preparation and certification should be integrally related; that is, certification requirements should provide the framework for the design of teacher education programs.
3. The education and certification of teachers is a *professional* endeavor necessitating different and/or additional preparation from that for the degree. Degree and certificate are not viewed as synonymous nor simultaneous achievements. In Washington state a degree is a requirement for certification. However, in and of itself it is not evidence of the degree holder's competency to teach.

(It is interesting to note that many professional associations with special interest in teacher education, such as the National Education Association, American Association of Colleges for Teacher Education, and Association for Teacher Educators, as well as higher education faculty and administrators are suggesting that professional training in education, as in other fields, should be distinct from and subsequent to completion of a degree. The "Point of View" feature in the July 7, 1980 issue of *The*

Chronicle of Higher Education addresses this position.)

4. A fourth assumption posits the existence of some generic competencies in pedagogy and the discipline to be taught, e.g., physical education, which are believed to be essential to effective instruction. A number of efforts have been undertaken to delineate the generic teaching competencies. Florida, Georgia, and Washington state serve as examples of such efforts.
5. Professional organizations, e.g., unions, specialization associations such as WAHPERD, and other agencies such as the employing school districts as well as colleges/universities, share the responsibility for and must be involved in identifying competencies and designing the professional preparation programs, i.e., the content, process, and outcomes of training.
6. The pre-service program cannot identify nor develop all competencies needed for effective teaching. Some competencies/needs can be identified only after the individual has begun professional practice; they are unique to the person involved and to the milieu in which he/she is teaching.

These factors and assumptions led to the development and adoption of Washington state's first competency-based teacher education and certification standards in 1971. The standards emphasized two key notions: first, preparation programs must be designed around competencies derived from a clear role statement/definition; second, competencies relevant to the respective role, e.g., physical education teacher, must be identified by a "consortium" representing the various special interest groups, i.e., a college/university physical education faculty, school district(s), a teacher union, and the appropriate specialized professional association. The consortium was responsible for defining the professional role and essential competencies, since no generic or specific competencies were set forth in the 1971 Standards. In 1978, the State Board of Education adopted revised program standards and certification requirements which identified three components of professional training programs. These elements must be included in any program to be approved by the State Board of Education: a degree component; an experience component; a competency component (see Appendix A).

Although the 1978 Standards provide more structure and specify requirements in the degree, experience, and competency components, they retain some of the principles from the 1971 Standards. Chief among those notions is that of the consortium and the necessity for all who have special expertise and vested interest in teacher education to also share the responsibility and accountability for the design and implementation of the program as well as its outcomes (product). Figure 1 depicts the role of the consortium in Washington state's CBTE programs.

Definition

Given the preceding assumptions and limitations, our definition of a physical educator was arrived at by consensus of the program unit, Teacher Education Standards in Physical Education, known by its acronym, TESPE. The following member agencies participated in the development of definitions, role statements, and performance indicators (see Appendix B): Kennewick School District No. 17; Kennewick Education Association; Richland School District No. 400; Richland Education Association; Department of Physical Education for Men, Washington State University; Department of Physical Education for Women, Washington State University. The TESPE document describes a physical educator as a specialist in human movement and the play element in culture; therefore, the departments of physical education use the following working definition for the body of knowledge: the study of human movement phenomena, including the play element in our culture.

The TESPE document further delineates roles which a physical educator fulfills: teacher of physical skills and related activities; program planner; promoter of

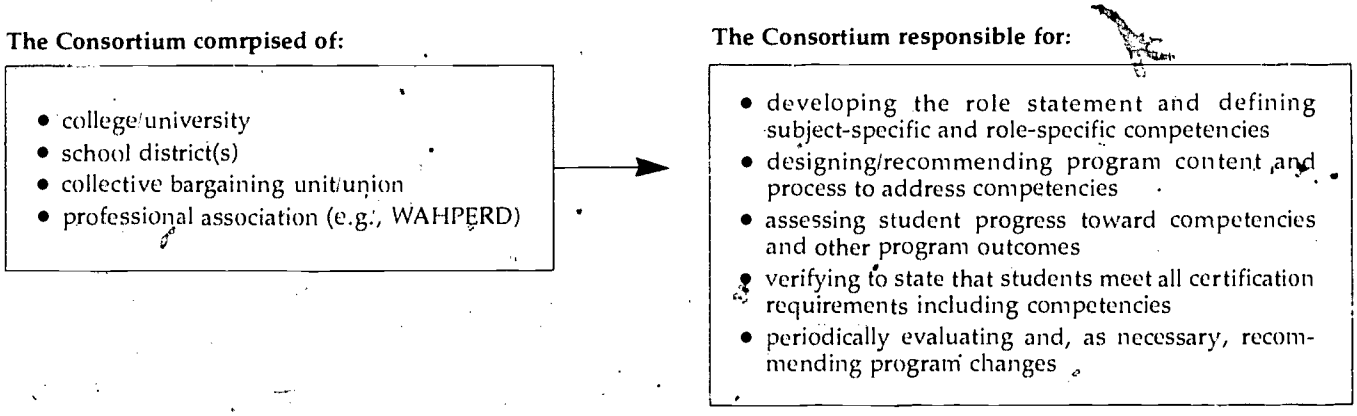

Figure 1. The consortium function in CBTE programs in Washington State.

health and safety; requisitioner of equipment and maintenance thereof; public relations interpreter; adviser (counseling and guidance); member of school faculty and professional organizations; member of a team (physicians, staff associates, special education, other faculty). Although the definitions, roles, and competency indicators were originally developed in 1971, they appear to be consistent with the 1978 standards of the state of Washington (WAC 180-79) inasmuch as the latter generic competencies required for initial certification of teachers include: instructional skill; classroom management techniques; subject matter knowledge; pupil-student personnel competencies (learning, growth, development); pupil discipline.

Arriving at a definition, or indeed at roles or competency indicators, by the process of consensus is not an easy task. That this 1971 definition is still valid speaks to the foresight, and in some instances, fearlessness of the participants. The public school people, for example, indicated that they could not convince their audience that a study of play constituted an educational experience. Conversely, some of the university people had difficulty accepting any of the body of knowledge literature at that time. Thus, while the definition may have imperfections, it has permitted us to collaborate with the public schools, meet state certification standards, survey our own curricula for omissions, and generally talk with each other about alternate means for achieving the agreed-upon competencies. The preceding rhetoric is another way of saying: "we know that we are not perfect, but we do have a vehicle and a direction which allow us to move toward a solution of some of the problems inherent in teacher education".

A second definition should be included here, that for curriculum. Within this program, curriculum is taken to include both the content (discipline elements, professional elements, movement elements) and the means of delivery to students (competency base). As will be noted in the next section, although the curricular changes have been occurring over a nearly 10-year period, not every course in the physical education curriculum has a complete competency base. Perhaps there are some which never will.

Professional Preparation

Secondary

The curriculum for professional preparation students in the secondary school program at Washington State University (WSU) has the following components: core (mostly what others would term "discipline", some professional, but *required* of all secondary preparation students); coursework or competency (basically movement-oriented); analysis of skill or teaching of skill (movement base with a high level of cognitive and affective competency indicators that are professional in nature, i.e., indicative of effective teachers).

Core component. While many of the courses in the core could be considered as those where knowledge is disseminated without an eye toward application, in almost all cases, the instructors who appeared before the Professional Preparation (P2) Committee (see Appendix B) have indicated that application to the teaching/learning situation is one portion of each course. Therefore, within our competency-based model, what is generally identified as a study of the discipline by others is partially translated into competency statements (outcomes) that are geared toward one or more of the eight roles for the physical educator previously identified as part of the TESPE document.

There are two ways in which a curriculum can be changed to a competency base. All courses could be dropped, and new ones created to speak to the specific roles and outcomes. Two, competency indicators which have been developed could be attached to existing courses, cross-indexing until the stated outcomes can be accounted for within the curriculum. We have retained the traditional course structure and have attempted to match the competencies to course content, adding and dropping courses in the refining process. Table 1 indicates the core courses in the WSU curriculum for the secondary school major.

Some cautionary statements with regard to the linkage of competency statements and discipline courses are necessary here. Because of the changes within our

Table 1. Core courses in the secondary curriculum.

Course Number	Name	Semester Credit Hours
MPE WPE 104	Art and Science of Movement	1 (lab)
PEP 199	Disciplines of Human Movement	2 (lecture)
PEP 261	Human Anatomy	3 (2 lecture, 1 lab)
PEP 313	Motor Skills Acquisition	2 (1 lecture, 1 lab)
PEP 362	Kinesiology	3 (2 lecture, 1 lab)
PEP 382*	Secondary School Programs	4 (3 lecture, 1 lab)
PEP 463*	The Atypical Student in Phys Educ	2 (1 lecture, 1 lab)
PEP 465	Physiology of Exercise	3 (2 lecture, 1 lab)
PEP 482	Psychological/Sociological Principles	3 (3 lecture)
PEP 494	Evaluation in Physical Education	3 (2 lecture, 1 lab)
HEd 363*	First Aid	2 (1 lecture, 1 lab)
		Total 27–28 semester hours

*professional, rather than discipline

two departments, e.g., a mandate to merge curricula, and those from the Superintendent of Public Instruction, e.g., 1978 Standards, our work in revising competency statements in the discipline area has not kept pace with the curriculum work in the professional and movement-based sequences. However, in the last year, the P2 Committee requested that the instructors of the discipline core courses evaluate their course content in relation to existing competency indicators. We are convinced at this time that, although revisions are necessary, the courses offered still respond to the roles identified by TESPE.

One further explanation is necessary. The format for conference papers viewed the disciplinary component as purely knowledge-based, with no eye toward application. Our conceptualization of the physical educator as possessing specific competencies necessary to function in a variety of roles presupposes application of knowledge from the discipline of human movement. This application is currently seen as occurring through laboratory experiences. The only course within the secondary curriculum which does not carry a laboratory-related experience is in the psychological and sociological area (WPE/MPE 104 serves as the laboratory for PEP 199). All of the other courses provide for some application and exploration of the principles, theories, and concepts associated with that portion of the discipline of human movement. However, because there has not been a concerted effort to specify the competencies for all courses, some classes are currently concerned more with transmission of knowledge, in the traditional pattern of a university.

A schematic of the roles, competencies, and specific courses will be more helpful, as seen in Table 2. The complete listing of competencies and courses will be available upon request. It should be noted also that the curriculum for the elementary school concentration and for the K–12 specialist elementary courses has been reviewed and keyed to the competency indicators. Each course in that series carries primary and secondary responsibility toward the attainment of a specific listing of competencies.

The modes of inquiry used in the core courses vary for each class. The paradigms employed exemplify those associated with the area addressed: scientific method, cinematographic analysis of movement, problem-solving, and/or creative expression, among others. Ideally, the resultant body of knowledge attained from the core courses is seen as specific competency sets necessary to perform the roles identified by the TESPE model, that is, to make the student a specialist in human movement phenomena.

The professional component courses provide a combination of theoretical and practical experiences to support four areas of teacher preparation: the elementary school physical educator (degree in education); the K–12 physical education specialist (degree in physical education); the secondary school physical educator (degree in physical education); the coaching minor (an approved teaching minor offered through the departments of physical education). In addition to these professional areas, but not included in this paper are the health education teaching minor, the options in athletic training, aquatics, and dance, and the recreation degree programs. Each of the areas of specialization, except coaching, requires students to take courses identified in the physical education theory core, but the professional core differs for each. In each case, there are theory-based courses which lead to field experiences. Three of the courses for teacher certification required by the department of education also provide field experience. These are EDUC 300 (assisting at the student's local high school or junior high school prior to the start of the university academic year), EDUC 303 (observation and limited teaching in the Pullman schools), and EDUC 405/06 (student teaching). These opportunities through the education department may or may not be in the physical education setting. Within the physical education curriculum, students have a variety of field experiences related to their major area (elementary, etc.).

One of the major courses in the secondary curriculum is a theoretical-practical one, Secondary School Programs (PEP 328), which provides lecture,

Table 2. Example of roles, competencies, and courses.

ROLE: Teacher of Physical Skills and Related Activities

Competencies	"Discipline" Course
1. Analyzes skills, rules, theory, and strategy of general program activities appropriate to all levels of ability	Kinesiology (PEP 362) Motor Skills Acquisition (PEP 313)
2. Can generalize mechanics of performance from one activity to another when appropriate by application of: a. mechanical principles b. movement principles c. time, space, force, and flow concepts	Kinesiology (PEP 362) Motor Skills Acquisition (PEP 313)
3. Evaluates pupil performance	Evaluation in Physical Education (PEP 494)

laboratory, and practicum experiences. The course content is organized to cover teaching strategies, some learning theory, class organization and conduct, and legal liability. The laboratory portion of the class focuses on Mosston's (1972) spectrum of styles. Students participate in a micro-teaching activity where they choose a particular style, teach the lesson, are evaluated, and reteach the lesson based on the changes suggested by the evaluation.

As part of this course, each student is assigned to assist an instructor in a university activity course. These courses are part of the elective program offered by both departments of physical education. The PEP 382 students are required to act as both aides and teachers. They assume organization duties and, when ready, gradually begin teaching. At first they teach a portion of the class period then have full responsibility for at least two class periods. This segment of PEP 382 is not graded but is evaluated by the instructor of the activity class. The evaluation is conducted twice during the semester. The forms used are those developed from the TESPE roles and competency statements and become part of the student's closed file retained by the academic adviser.

The newly established 300-series courses (analysis of sport or teaching of dance or aquatics) also offer the secondary preparation student an opportunity for theory-into-practice work. An examination of some sample competencies from these courses (see Appendix C and the next section of this paper) will illustrate how the student must translate knowledges into higher order cognitive activities in these courses.

Students at the secondary level have the responsibility for middle school, junior high, or high school classes during the 8-week student teaching experience. They also have the option at several of the student teaching centers to remain for a full semester and teach at one level or, if they are K–12, at both elementary and secondary levels. If the student is assigned to one of the two student teaching centers associated with the TESPE unit, he or she is supervised by members of the consortium. Such students are evaluated by their supervisor and cooperating teacher with the TESPE-derived form. This senior year practicum is usually eight weeks in duration although more students appear to remain for the full semester, and this additional time commitment may soon become a requirement.

In the student teaching centers associated with TESPE, the evaluation forms are returned to the physical education departments for review and reference. Because only two of the eight teaching centers are involved in the collaborative unit, other centers do not return the evaluation forms to the physical education departments. The cooperation extended by the TESPE members is voluntary.

A brief explanation is necessary here regarding the student teaching experience. Much of Washington is rural, with only four "densely populated" areas. Therefore, it is impossible for departments to travel to the various student teaching centers to supervise their own candidates. The education department provides the supervisory work by hiring and placing individuals in the communities surrounding the centers. These individuals have the responsibility for students from all disciplines, with the master teacher providing the major role model during this period. The education department has not yet employed the competency-based, collaborative model in their approach to teacher preparation; they must do so to comply with the 1978 Standards upon the next site visit by OSPI.

Professional component—professional mission. The purpose of the professional component of the curriculum is to help in the translation of theory into practice at some point before the student enters the field as a certified professional. The courses discussed are seen as providing the knowledges and understandings essential to planning, organizing, and executing learning experiences. The P2 Committee made a philosophical commitment, or acted upon the assumption that, the primary goal was to prepare professionals, rather than technicians. By our definition, a professional teaches children and adolescents rather than content as the overriding goal. Therefore, it became necessary to make hard decisions based on what was required in the way of preparation for teaching. The assumptions under which curricular decisions were made (ultimately accepted by the joint faculty) were:

1. We cannot prepare every initial candidate in every area of physical skills and related activities.
2. Either the scientific base courses are important as leading to competent decision-making, or anyone with knowledge of the specific skill or sport can teach physical education.
3. The ability to solve problems, read, and gain information about subject matter not taken in undergraduate (initial) work is an important competency.
4. The courses should be taught in a manner which will permit transfer of learning from one skill area to another, from one teaching situation to another, and from the scientific base to the practical situation.

Conversely, a technician was seen as an individual who has specialized competence in a limited range of activities and whose goal is to teach these activities. It has been our intention to prepare professional individuals who fulfill the definition of physical educator and can function in all eight specified roles.

Movement performance. During the decade in which Washington State University has been involved with an on-off affair with CBTE, the curricula for the two departments, at the undergraduate level, was formulated upon two separate models with two distinct philosophies about the role of movement performance. In March, 1980, following a 3-year intensive

study by the P2 Committee, a combined undergraduate curriculum for the secondary school specialist was approved by the two faculties. The previous work of the Department of Physical Education for Women as reported by Hulac, et al. (1975) was an important underpinning for this project. However, consensus for the combined curriculum is attributable to P2 efforts to develop common competencies, in three domains, for what would be, in the new curriculum, the PEP 100-level skills courses and the PEP 300-level analysis courses (see Appendix C).

Performance: means, ends, or meaning. Performance in movement is important in the preparation of the secondary school major. Of the 39-40 hours required for a major in physical education, students must elect 8 hours of activity courses. The choices are somewhat controlled, but students select 5 to 8 hours from PEP 100-series courses, 0 to 3 units from among a number of MPE/WPE general activities, and/or pass competency examinations in the three domains for each activity in which such competency is to be demonstrated. Performance in activity is seen both as an end, as indicated in the competencies below, and as a means to advance to other stages of the professional curriculum. Thus, the value of movement performance in the WSU curriculum can be judged externally by three indices: proportion of the total hours; kinds of competencies required in movement courses; the sequence of courses.

As indicated, students spend approximately 20% of their major course work in activity unless they pass waiver examinations. However, the general competency indicators for the PEP 100-level courses prepared by P2 and approved by the joint faculties number six in the cognitive domain, seven in the affective, and four in the psycho-motor. Therefore, it may be said that, while movement performance is important, the performer is viewed as a thinking, feeling, doing person.

The current list of competency indicators for both the 100-level skills courses and the 300-level analysis courses is included in Appendix C. Some of the earlier work at WSU was reported by Coleman (1972) and Enberg (1974). In the psycho-motor domain, for example, the last of the four indicators states:

> "students will execute a movement pattern with finesse and with good form. There should be evidence of mastery of movement pattern, a quality performance (refining). Desirable, but not required to pass the course."

The taxonomy for the psych-motor domain is based on Jewett and Mullan (1977) and earlier works from that group.

In the 100-series skills classes, students are expected to operate between 1.00 and 3.00 in Bloom's (1956) taxonomy. General level statements were originally attached to the competency indicators, but P2 determined that, with the bulk of information that our colleagues had to consider, it was not necessary that they wrestle with the problem of levels at that point. The competency indicators were arranged in hierarchical order for consideration by the faculty, however.

The work in the affective domain was patterned after the efforts of the Department of Physical Education for Women (Hulac, et al, 1975) and generated many healthy discussions within the P2 committee. For a task which utilized so much committee time, the number of competency indicators is relatively few. However, the faculty (followed by the University Catalog Committee and the University Senate) agreed that the competency format was valid, understandable, and an adequate basis for the generation of the 100- and 300-level courses.

The third index of importance is sequencing. Within the new curriculum, the 100-level skills classes are the base of the professional preparation program. Figure 2 indicates the thinking of the P2 Committee for the sequencing from learning the skills of an activity to learning about teaching an activity.

Analysis. The new 300-series, analysis of sports performance of teaching of dance or aquatics, is arranged upon the competency indicator base so that students must pass the exit competencies for the 100-level skills classes to be able to enter the 300-level analysis course. The emphasis in these courses is mainly cognitive and affective. There is only one psycho-motor objective:

> "The student will invent or construct unique or novel options in motor performance. These may be different ways of performing the same skill, extemporaneous performances or combining of learned movements into unique motor designs new to the performer (varying, improvising, composing; the creative processes)."

The assumption is that the discipline course, kinesiology, gives the student tools for analysis of human movement. In addition, four units are required in analysis of the chosen sports activity or in the teaching of the selected dance or in water safety instruction.

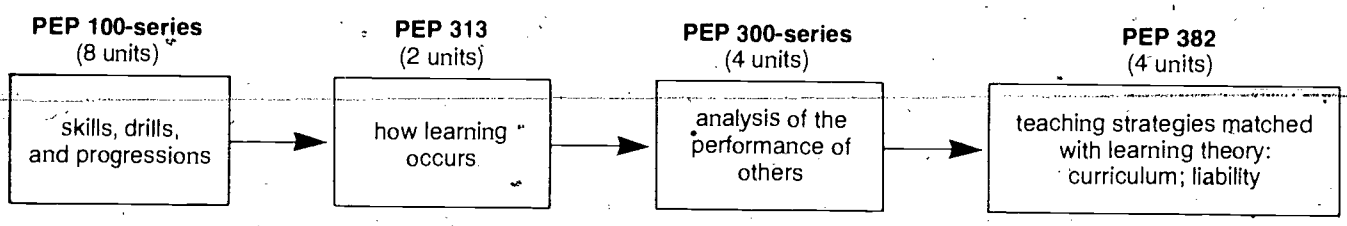

Figure 2. Concept of progression in the "professional" sequence.

The evaluation course is also a requirement, so students have the equivalent of 10 hours in analysis-oriented work: kinesiology, plus four special activities, plus evaluation.

Summary. It would be a fair assumption that movement performance and analysis are viewed as valid subject matter both by the scope of the curriculum and by the definition of physical education as the study of human movement. Table 3 indicates the pattern of classes, placing their emphasis as theoretical (body of knowledge) or practical (professional). It will again be noted that most pure discipline classes are expected to emphasize application to movement events.

Elementary

The course work for the elementary specialist has a similar distribution pattern, although the courses differ. There are two possible combinations; the elementary major, which is really housed in the Department of Education, is "on loan" to physical education for 30 hours of course work; the K–12 specialist is a secondary major who adds the elementary core courses to his/her curriculum. Practicum experiences are offered to these students in PEP 254, a creative dance class in which children are taught by the students at the university or in another setting. Two courses in activity, PEP 379 (primary) and 380 (intermediate), offer students the opportunity to teach peers and use video replay as a device for identifying strengths and weaknesses. Students in these courses are urged to contract for additional work in programs for handicapped children or in the elementary school program for an informal class day once a week. The practicum, PEP 389, places the student in one of the Pullman elementary schools for two afternoons or two mornings each week for a full semester of observation and teaching. The experience is supervised by both a district and a university specialist. Again, the evaluation is keyed to TESPE roles and competency indicators and parallels the form used for the secondary student on campus and in student teaching. In addition to these experiences, the K–12 student has PEP 382, previously described. The culminating professional experience for the elementary school and K–12 major, as for all teaching majors, is student teaching (EDUC 405-06).

Coaching

In the coaching minor, the courses are labeled professional, analysis, application, and movement. This teaching minor, unlike the parent, physical education, lacks a true "discipline" component and is thus more professionally (practically)-oriented. The theory-into-practice courses are Care and Prevention of Athletic Injuries (PEP 266) and Administration (PEP 488) along with two to four courses in the coaching of a given activity. There is also a practicum (PEP 390) which may be taken in the athletic programs of the public schools or with one of the many youth sports programs in the local area. For the practicum, students must contract with both the coaching minor adviser and the agency involved. The student may choose more than one coaching practicum. Where possible, students in the coaching minor are given some coaching responsibilities in addition to their student teaching assignment. This experience is not related to the practicum just described and is dependent on the needs of the school district.

Table 3. Emphasis of course work in secondary curriculum.

Body of Knowledge		Professional
WPE MPE 104	Art and Science of Movement	
PEP 199	Disciplines of Human Movement	
		PEP 100-series skills classes
PEP 261	Human Anatomy	
PEP 313	Motor Skills Acquisition	
		PEP 300-series analysis classes
PEP 362	Kinesiology	
		HEd 363 First Aid PEP 382 Secondary Programs PEP 463 Atypical in Phys Educ
PEP 465	Physiology of Exercise	
PEP 482	Psychological/Sociological Principles	
PEP 494	Evaluation in Physical Education	

Entry and Exit Requirements

Entry and Exit

Entry may be dealt with in two ways: entry into courses; entry into, or acceptance into, the program. It is assumed that students admitted to the university are able to enter the 100-level courses in skills and any other university courses. Entry into other than freshman level course work may depend upon completing prerequisites. For example, at least two of the 100-level skills courses must precede the motor learning course, at least two of the 300-level courses must precede the secondary programs course, anatomy is a prerequisite for kinesiology, and so on.

Acceptance as a certified major student is considered a serious professional commitment. University policy states that students should declare a major before they have accumulated 60 semester credits. Students interested in physical education, entering as freshmen, are assigned to advisers in the two departments via the university Curriculum Advisory Program (CAP). Competency reporting forms are completed for students in the 100-level activity courses, the 300-level analysis courses, and the secondary programs course. These forms become part of the permanent advising folder and are utilized to counsel students regarding strengths, weaknesses, and potential as major students. When a student requests to major in physical education, this accumulation of reports is considered by the Advising and Scholarship Committee which may vote to accept a student or suggest that the student acquire more skill, higher grades, etc. prior to becoming certified. The committee may also suggest that the student seek another major. Twelve of the TESPE competencies are included on the reporting form for certification and semi-annual review of students. Three sample competencies are:

A 11 b understands self and realizes possible behaviors that could occur while under stress;
G 1 a maintains rapport with peers;
G 2 b completes class assignments.

Exit requirements are stipulated for all courses, but not all courses are based solely upon competencies. An example of exit competencies from the course, PEP 383, which is the development and learning class for the elementary school specialist, is given in the table below.

For those courses which are completely competency-based, e.g., PEP 383, the exit depends upon meeting all of the criteria at the specified level. Such experiences are based on a TOTE (test-retest) model (Miller, Galanter, and Pribram, 1965), and students may repeat evaluation experiences until satisfactory performance is shown. Exit from other courses depends upon meeting the requirements stated with an acceptable grade; students must repeat major courses where the grade earned is a D or below.

A third means of exit is the competency test. Early on, the curriculum committee of the women's department developed standardized competency examinations in the three domains for beginning skills classes (PEP 100-series). Waiver examinations in the men's department were treated by individual instructors and at random times during the semester. For the new combined curriculum, competency examinations will be given during the first two weeks of class, but the student must register to take the examination. A waiver is given with a passing score. The student may then elect other course(s).

Transfer Students

If a transfer student has less than 45 hours, he or she is normally assigned to a department adviser via CAP. Transcripts of students entering with more hours are evaluated by the Department Chairpersons. In the former case, students may request to certify after a semester of successful work if the proper requirements have been fulfilled. In the latter case, once the Chair signs the transcript, the student becomes a certified major. Currently there is negotiation with the Admissions Office to permit the departments to place these students in a holding pattern for one semester so that the same basic competencies can be checked for them as for the native students or for those who enter with fewer hours. In either case, transfer students are assigned to one of two experienced advisers in the departments who further evaluate their course work and assist the students to project a two- or three-year plan of study. Any errors in first semester planning reduce the degrees of freedom for future semesters. However, if the student has taken the proper sequence in community college, chooses an appropriate minor, and has no grade difficulties, it is possible for him/her to complete degree work within the normal time span.

Table 4. Sample indicators and experiences for PEP 383.

TESPE #	Indicator	Learning Experiences	Evaluation
A 17a(3)	Recognizes perceptual and motor development stages	Viewing tapes, films; reading; lectures	Performance on film evaluation (TOTE model)
A 1d	Can make adjustment within activities so that each pupil can participate at his/her level of ability	Discussions; lecture; readings; role play	IF . . . THEN paper (may be co-authored)

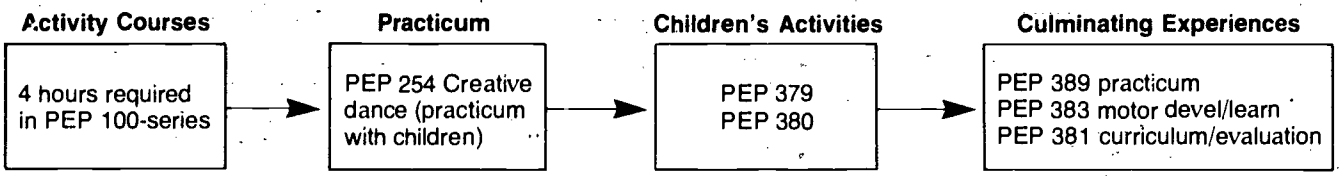

Figure 3. Sequencing of professionally-based courses for elementary.

Barriers to completion within this time frame are: selection of multiple minors; need to repeat courses; previous preparation which is inadequate, e.g., not having completed GUR's; indecision concerning career goals. A trend in recent years is that community college transfers arrive with few science courses. Such preparation places pressure on the student to complete a tight, laboratory-oriented curriculum within the normal time span. A second trend is that students appear to prefer a longer preparation period, and often avail themselves of other teaching options to become more employable, e.g., selecting a K–12 specialization, adding coaching or a second minor, taking an aquatics specialty, etc.

Relationships, Sequences, and Problems

Relationships and Sequencing

The relationship and sequencing of courses in the secondary school major has already been explained. Sequencing of professional courses for the elementary school major is shown in Figure 3. The K–12 specialist, in addition to the secondary major, takes the following courses in the sequence: 254; 379; 380; 381; 383; 389. The concept of sequence, as shown is: activity; experience with children; experience with children's activities; teaching children in the public schools while studying motor development, motor learning, curriculum, and evaluation.

The balance of courses between body of knowledge and professional orientation in the elementary curriculum can be explained, as was that for the secondary school major (see Table 5).

The coaching minor has a base which is strongly professional. For the physical educator, who has taken both kinesiology and physiology of exercise, the course PEP 330 is not required. Obviously, the physical educator who also takes the coaching minor has a more discipline-oriented approach than does the coaching minor student from another discipline.

General competencies for the coaching minor have been developed, but they have not yet been approved through TESPE. The prospective coach could fulfill the teaching minor requirements by taking as few as two movement (skills) courses. For this minor, courses are

Table 5. Emphasis of course work in the elementary curriculum.

Body of Knowledge		Professional
		Activity courses (4 hours of the PEP 100-series specifically required).
		PEP 254 Creative Dance
PEP 261	Human Anatomy ----------▶	
PEP 362	Kinesiology ----------▶	
		HEd 363 First Aid PEP 379 Primary Activities PEP 380 Intermediate Activities
PEP 383	Perceptual-motor learning and development ----------▶	
		PEP 389 Practicum PEP 381 Curriculum and Evaluation

Note: 5 additional hours are chosen. PEP 463, atypical physical education, is an unwritten requirement which has not yet been approved through channels as a major change. The other 3 hours are usually taken in 100-level or 300-level skills or analysis work. It should be remembered that these 30 hour students are not physical education majors but education majors.

Table 6. Emphasis of course work in the coaching minor.

	Speech
	PEP 220 Officiating
	PEP 226 Care and Prevention of Athletic Injuries
Biological and Mechanical Aspects of Sports (PEP 330) ----------	▶
	PEP 488 Administration of Sport
Behavioral Aspects of Sport (PEP 489) ----------	▶
	Advanced Skills (200-level) and Coaching of (300-level) courses (Total of 6, at least 2 from each category)
	Practicum (PEP 390) can satisfy one coaching credit

sequenced only by number and are identified with normal university progress, e.g., 200 = sophomore.

Problems in Implementation

1. Time is the most pressing of all problems. All of the changes in curriculum have been accomplished without time compensation to the individuals involved (committee chair now receives 10%). It is difficult for busy people to find enough time to think through whole problems to whole solutions. Without the efforts of colleagues who feel that curriculum is important, the progress would be much slower, and it is difficult to sustain interest and drive over long periods, e.g., 1971 on. Meetings with the other members of the consortium present time and travel problems. Public school people can participate only during school hours (negotiated), and their substitutes must be compensated out of the small fund from OSPI which supports TESPE.

In 1978, the State Superintendent of Public Instruction (Supervisor of Physical Education) surveyed 10 departments of physical education in higher education. Seven were aware of the new teaching standards. Only two had identified competencies for teacher preparation in physical education. All 10 were interested in working cooperatively with other preparatory programs to develop the competencies. However, six said that their institutions could not provide even minimum financial (travel) and support time for such efforts.

2. Governance is an issue which has never been solved. Presumably the regulations are aimed at departments of education. Yet staff associate groups (counselors, school nurses, etc.) have established their own competency statements and collaborative units. We feel that our governance unit, TESPE, is operational. Yet, when our own department of education forms its program units, we may find ourselves in other alignments and with generic, rather than specific, competencies.

3. Regular progress through the program should be competency-based rather than time-based. Although the 100-level skills, 300-level analysis, first aid, water safety instructor, physical education for the handicapped courses, and the entire elementary school specialist curriculum are established on competency indicators, either from TESPE or other agencies, e.g., Red Cross, IRUC, not all courses are as yet so structured. A true CBTE program would permit recycling as required, until the candidate attained all competencies at specified levels. Practically speaking, those students who fail to complete all competencies receive C– or lower grades. At present, a 2.00 (C) average is required to certify and remain in a major. The departments are attempting to raise this standard to 2.25 but will need to process that change through university channels. At any rate, it is still possible for a student to reach the student teaching stage without having achieved certain competencies. The education requirements for student teaching are less well defined than are our own, and occasionally we must remind that department that certain students are not yet eligible for the practical experience.

4. Legal implications can be a problem. Many of the pre-certification competencies are in that all-important and ill-defined affective domain. The Admissions Office has advised that there could be difficulty denying certification to students who have an adequate GPA. Storage of competency information could be a problem. The collaborative unit would require access to such records to grant a candidate continuing certification. There may be problems in this area that we have not even foreseen. For example, we do not know if we could deny certification or gradua-

tion to students who cannot spell or construct grammatically correct sentences.

5. Alternate learning experiences must be arranged for students, according to CBTE practice. Only a few of our courses presently contain such options. Although of benefit to the student, and ultimately to the pupils in the common schools, these extra assignments are a terrific overload for instructors who have excessive schedules in comparison with sister institutions.

6. Not all instructors in the departments are aware of taxonomies, hierarchies, and task analysis. Further, not all believe that CBTE is *the* route for teacher preparation. Some even feel that current state regulations are an infringement upon academic freedom. These attitudes appear to be dissipating, however, and at the meeting of the two faculties, during which the combined curriculum was accepted, most faculty members felt that their courses could be constructed within the framework offered by P2. One major problem with curricular change in any institution, however, must be education of the faculty, and time-consuming consensus sessions. Since this paper was prepared, two in-service meetings for all PEP 100-activity and PEP 300-analysis course instructors were most beneficial. They precipitated exchange of cognitive strategies and promoted positive feelings about curriculum and fellow instructors.

7. At WSU there is no provision for departments to supervise their own student teachers. Program units will need to be established at all Teaching Centers for quality control of final performance evaluations.

8. Evaluation remains an unsolved problem. To date, maximum effort has gone to construction of a program. The next step is to develop more firm evaluation procedures for the total curriculum.

9. All participants must continue to develop trust, as the feeling of autonomy can be threatened, and the sharing of authority can become paramount.

Relationship to Other Fields

The Departments of Physical Education for Men and for Women, The Department of Continuing Education, The Department of Industrial Education, and the Department of Education constitute the College of Education. There is an All University Teacher Council on Education, composed of representatives of each discipline which offers teaching majors or minors. This council serves in advisory capacity regarding issues in teacher preparation. No other departments represented appear to be concerned with CBTE at this time.

Within the College there is overlap and some sense of territorial imperative. For example, Education requires all teacher preparation students to take a course in tests and measurements. Our departments also require the evaluation in physical education course. We have never resolved this duplication of work.

At the undergraduate level, the departments offer the B.S. degree in physical education and the B.A. degree in recreation. We also grant teaching minors in coaching and health education and options in aquatics, dance, and athletic training. A few courses are shared across majors and options. One health course is required of all teaching majors. Generally, there is a spirit of cooperation and common purpose between the two departments and among the departmental programs. Also, other program units, e.g., recreation, are using competency reporting forms for common courses and are adopting the advising procedures which were developed for CBTE in a manner that would parallel the competency-based notion.

One aspect of the physical education curriculum has not been mentioned in this paper, the work of the Non-Teaching Committee (NT). This paper is concerned with the competency-based program in teacher preparation (CBTE). The NT committee, operating in a parallel time frame with P2, has planned for curriculum leading to careers not educationally-oriented but consistent with a B.S. in physical education. A report of that work and the planned outcomes would require another paper, and the direction is not dissimilar from other options offered at this conference. The process of developing such curricula has been similar to the work of P2 and is best described through the verb forms: caring; studying; sharing; convincing.

The reader may, at this point, assume that the CBTE curriculum is founded solely upon experiences in physical education and education. This degree, as with all others in the University, contains a 28-hour general university requirement (GUR), designed to help the student attain a significant general education. Many of these courses complement both the CBTE program and the "drawing board" NT options. Examples of GUR courses would be those in psychology, physiology, sociology, and communications. It is anticipated that the NT options would draw heavily from such courses at both lower- and upper-division (specialized) levels.

Evaluation

Original validation of the roles and competencies came from statements of the teachers in our collaborative unit about what they actually did in their jobs. Therefore, the program itself has face validity. The roles of teachers may have changed in the interim, and the competencies themselves should be evaluated and weighted for importance. The recent OSPI site team found the program to be in compliance with the 1978 Standards. Included in this site visit were interviews with students and graduates, review of program components, review of competency statements, review of the new curriculum and procedures leading to the change, etc. At the same time, an NCATE team found the physical education programs to be "exemplary".

One portion of the old curriculum which served an evaluative purpose was the PEP 496 Senior Seminar in which students assessed their preparation and the student teaching experience. Job placement indirectly supports the excellence of the program because feedback from employers is positive. At present, our student evaluations can tell us whether the initial candidates have attained the competencies; we need to evaluate the relevance of the competencies. Since this paper was prepared, evaluation of the new PEP 100 and 300 courses has been obtained from students and instructors. The latter have attempted to evaluate the roles of these courses within the scope of the curriculum. It would be fair to say that the stated outcomes are being achieved. Whether these are the *best* outcomes is not known.

Implications

Some educators have looked to CBTE to solve the problems and resolve the criticisms of teacher education. Obviously, they delude themselves.

CBTE will not in and of itself guarantee change or improvement in teacher education programs nor practitioners.

The quality and relevance of the program and its product will continue to be a function of the persons and resources involved, the way in which the program is implemented, the process by which outcomes (including competencies) are identified, and the validity of the program in preparing persons for the respective role.

CBTE will not necessarily alter the deductive, a priori, and often-unilateral process by which preparation programs are determined.

A single individual or group representing a single agency can identify in armchair fashion the inputs, learning experiences, and outputs of a CBTE program. Participatory decision-making, representative input, and inductive processing are neither ensured nor needed to design and implement CBTE programs. (Washington state has believed that without such input and decision-making, competencies tend to be less relevant, less role-related, and less valid.)

CBTE need not be individualized nor personalized.

In fact, CBTE could result in more rigid and uniform programs than those that currently exist. CBTE can be as behavioristic and mechanistic or as humanistic and existential as those responsible for its design make it. Not only could CBTE be designed to mold standard products, but it could also ensure that only persons fitting a pre-conceived pattern be admitted to the "production" process.

CBTE will not cause educators to explore teaching/learning as a synthesizing rather than an analytic process.

We have spent great quantities of time and money analyzing the teacher and the instructional process, breaking each into its most minute parts. Unfortunately, analysis has not helped us synthesize the "teacher" nor the "teachering" act. Because CBTE emphasizes systematic and logical analysis and explicitness, it could actually lead to greater emphasis on the analytic.

Finally, CBTE will not result in the "perfect" teacher education program.

CBTE should, however, provide a better, more objective basis for us to evaluate the program being offered, identify weaknesses, and make changes. As indicated early in this paper, the quest is not complete for such a "perfect" program and probably never should be. Change is essential in a dynamic organism. Teacher education (whether competency-based or not) must be dynamic if it is to be reality-oriented, responsive, and relevant.

The effect of the CBTE standards in any state, including Washington, will depend on those who design and implement the programs. An example of implementation has been discussed in the preceding sections of this presentation. The program described has been approved by the State Board of Education for preparation of physical educators. It was developed with involvement from the state professional association, local school districts, a teacher's association, and Washington State University. During a recent state review of the program, the visiting team suggested that the program could be a model for other departments as well as other institutions.

The factors, conditions, and assumptions extant in Washington state during the past ten years have made competency-based program standards and certification requirements viable for us. They may not/would not/should not work in other states.

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Appendix A

Program Elements Required by the State Board of Education

1. **A "degree" component.** A degree and/or certain number of hours of training is set forth as a requirement for each type and level of certification. (In Washington state, all teachers are required to complete two levels of certification. The "initial" certificate is granted on completion of the preservice program; the "continuing" certificate, which must be obtained within seven years after the initial certificate, is issued on verification of competencies in the generic areas required at the continuing level, completion of three years of experience, and completion of 45 quarter hours of course work beyond the baccalaureate degree.) This component addresses the teacher's need for a sound general education and depth in a discipline.
2. **An "experience" component.** The individual must complete specified field experiences during the training program; these include observation, micro-teaching, tutoring, student teaching, internships, and/or other practica as required. Field experiences provide the laboratory for one's developing competencies as well as a clinic for demonstrating and testing oneself in the role of teacher and one's ability to apply competencies in real settings.
3. **A "competency" component.** Three categories of competencies are set forth in the standards. A set of generic competency areas is delineated in which all programs must address the development and assessment of knowledges, skills, and theoretical understanding relevant to those generic competency areas. A second constellation of competencies is subject matter-specific. These are to be delineated by the appropriate specialized professional association in collaboration with experts from college/university faculties, the school districts, and other relevant groups. Finally, the consortium responsible for program design may supplement this component with additional or unique competencies it deems important to the role as defined.

Appendix B

Members of the TESPE Consortium 1979-80

Dr. Robert J. Valiant, Kennewick School District No. 17
Ms. Billie Carlson, Kennewick Education Association
Mr. Kenneth Olssen, Richland School District No. 400
Ms. Cheryl Boatman, Richland Education Association
Dr. Wilma Harrington, Department of Physical Education for Women, WSU
Dr. Roger C. Wiley, Department of Physical Education for Men, WSU

Professional Preparation (P2) Committee Department of Physical Education for Men and Women Washington State University 1979-80

Dr. Samuel H. Adams
Ms. Andrea Brown
Dr. Jon Christopher
Mr. Rex Davis
Dr. David Engerbretson
Dr. Carol E. Gordon
Ms. Jane Gutting
Dr. Wilma Harrington
Dr. Mary Lou Enberg, Chair

Appendix C

PEP 100 Level Class Competencies

Cognitive Domain

Students will:

1. Be able to define terms related to the subject area.
2. Understand and apply safety measures and principles appropriate to the activity.
3. Know, understand, and apply rules and etiquette appropriate to the activity.
4. Know, understand, and apply sound principles of conditioning appropriate to the activity.
5. Know, understand, and apply sound mechanical principles appropriate to the activity.
6. Know, understand, and be able to apply correct procedures for setting up, adjusting, and maintaining equipment required by the activity.

Affective Domain

Students will:

1. Actively participate in class.
2. Accept, at least while participating, the persons, rules, situations, events, etc. which occur during participation.
3. Ask others for additional aid or information.
4. Accept, consciously or unconsciously, the role (or part) which is appropriate to the activity setting.
5. Accept that there are values inherent in the activity.
6. Show sensitivity toward
   a. own responsibilities in carrying out the activity,
   b. helping others analyze their performance.
7. Attempt to identify their own ideas, feelings, or information concerning the activity.

Psychomotor Domain

For the 100-level skills courses, students will:

1. Imitate prescribed movement in a very basic manner, but the performance may be low (perceiving).
2. Execute the gross movement pattern which can be repeated with some accuracy (patterning).

3. Utilize a movement pattern in a drill or practice stituation (adapting).
4. Not be required (but desired) to pass course; execute a movement pattern with finesse and with good form. There should be evidnece of mastery of a movement pattern, a quality performance (refining).

PEP 300 Level Classes Competencies

Cognitive Domain

Students should enter with appropriate competencies from PEP 100-level courses. Students will:

1. Know, understand, and apply game strategy appropriate to the activity.
2. Be able to analyze an activity or component of that activity into sub-units.
3. Be able to make an adjustment within an activity so each student can participate to his/her level of ability.
4. Formulate a logical teaching progression for the sub-units of that activity.
5. Be able to critique a performance of the activity.
6. Formulate a plan for the improvement of performance as in #5 above.
7. Be able to effectively communicate principles, knowledges, analyses, syntheses, strategies, and critiques to others, e.g., teacher, peers.

Affective Domain

Students should enter with appropriate competencies from PEP 100-level courses. Students will:

1. Utilize self-analysis as a performance tool.
2. Attempt to identify their own ideas, feelings, or information concerning the activity.
3. Accept the existence of a variety of
   a. philosophical approaches to the activity,
   b. mechanical approaches to the activity.
4. Exhibit their values through their selection of (for example) texts and materials, methods, emphases, etc.

Psychomotor Domain

Students should enter with appropriate competencies from PEP 100-level courses. Students will:

Invent or construct unique or novel options in motor performance. These may be different ways of performing the same skill, extemporaneous performances or combining of learned movements into unique motor designs new to the performer (varying, improvising, composing; the creative processes).

The Preparation of Physical Education Teachers: A Subject-Matter-Centered Model

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Introduction

We began work on this project with the proposition that there must be many different ways to help physical education teachers learn to teach. That observation is more than a platitude about possible alternatives and the powers of a pluralistic system. The proposition is a fact of immense significance because it permits the exercise of special and compelling visions, the utilization of unique constellations of resources, and the development of educative processes which yield special strengths in their teacher products.

We also held, however, that certain problematic factors exist which are generic to all teacher education programs. These factors may be prioritized differently, and certainly may be confronted through widely different program provisions, but in the end most of them must be accommodated in any system which is to effectively work in the context of higher education.

Teacher preparation programs in physical education generally have been a low impact enterprise. What pre-service students learn while passing through them makes little evident difference in their daily behavior once employed as teachers. Other powerful mechanisms not associated with formal preparation shape and maintain what physical education teachers actually do.

Note: We wish to express our special appreciation to Dolly Lambdin of St. Andrews School and the University of Texas at Austin for her invaluable assistance in reviewing earlier drafts of this study paper. Her dual role as an active practitioner and working teacher educator once again has proven to be a special strength. Where readers sense an optimism about what can be accomplished within the hard constraints of the real world, they have perceived her influence. We also wish to thank Kathleen Higgins, now a Graduate Fellow at Yale University, for the application of her expert editorial skills and unending patience in translating our ideas into a readable document.

This arrangement, though certainly wasteful and probably dysfunctional, is not especially surprising. Programs for the preparation of physical education teachers are not designed with particular reference either to the nature of pre-service students or to the specifications of the vocational role which awaits them. Instead, preparation programs always have been more responsive to the interests and abilities of teacher educators and to the demands of the institutions in which they serve.

The perennial search for approval by academic colleagues, the pursuit of rewards in the university community, the insistent urge to conform to already established traditions, the enticements of new fashions in the training of classroom teachers, the attractive fantasy of an idealized physical education conducted in the best of all possible gymnasia, a jaundiced and unreasonable pessimism about what can be accomplished to improve practice and program in the schools, a romantic vision of preparation models based upon elegant exercises in abstract logic, and even the personal convenience of faculty members—all have shaped what is now done in the name of pre-service teacher education. What real teachers actually do and believe in their roles, what pre-service students actually learn to do and believe in their roles, and what one set of role dimensions has to do with others, are questions which rarely intrude into the process of designing, operating, and evaluating preparation programs.

Fifty years ago, sociologist Willard Waller watched young teachers entering their school careers and found that "a landmark in one's assimilation into the profession is reached when it is decided that only teachers are important". Socialization into the role of teacher educator may involve a similar lesson, for preparation programs often reflect greater concern for

the designers and operators than the raw material and products. To permit the nature of pre-service students and the real nature of teaching to become fundamental arbiters for decisions about pre-service education would violate our sense of priorities in professorial life. It also would change beyond any recognition the way physical educators are prepared.

The substance of this paper, then, reflects our dual concern for making undergraduate majors and public school teaching the facts of first importance in program design, and for confronting some of the most troublesome problems which have bedeviled the process of preparing teachers. The first step was to identify the primary factors which all teacher education designs (including our own idealized model) have to recognize. Then, given personal priorities as physical educators and collective experiences in the operation of teacher education programs, a model was designed which represents an alternative to the typical approach to preparing teachers. The product, a subject-matter-centered preparation program, is faithful both to what we regard as the proper content of physical education and a great deal that we know to be true about learning, teaching, and schools. Most important, however, because it deals directly with the dual realities of pre-service students and public school teaching, the program is designed to provide more powerful forces in shaping the behavior and commitments of graduates.

Our sense of the constraints in higher education and our personal histories as thoroughly socialized teacher educators have served, no doubt, to deflect us from holding perfectly true to all of our intentions, even in this idealized model of preparation. We hope, however, that more daring and creative colleagues will find it possible to push beyond this first step.

The material to follow is divided into four sections:

1. A list of factors which constitute problematic elements within *any* teacher preparation program, irrespective of its resources. We have included this material because all models, including the four presented at this conference, must confront these implacable demons or exist only as playful abstractions.
2. A brief list of assumptions about teaching teachers which we elected to hold in developing our proposal. This material is included because it gives some insight into the problems which received our closest attention.
3. A presentation of the subject-matter-centered program, with brief explanations.
4. A short closing discussion designed to draw the attention of the reader to particular aspects of the proposal, and to anticipate some of the questions which will be raised about its operation.

The Problem Chart

The chart which follows is *not* intended as a list of all factors to be considered in the design of a preparation program. This is a list of problematic factors which in our experience have been the least adequately resolved in most existing programs. In short, these are the endemic difficulties of producing good physical education teachers. If the reader finds the table incomplete, suggestions are welcomed for its expansion.

Because of the nature of the material and format used for presentation, most readers will not wish to read through the chart from beginning to end. Instead, we suggest that you read the *Index of Problems* provided below and then browse through the chart to obtain a general sense of the content. Subsequently, the chart can be used as a reference tool in considering particular program elements.

Index of Problems

Problem Chart for Professional Preparation Programs

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
Basic Problems in Program Design		
1. *Definition of Subject Matter* Faculty members agree on a broad definition of the subject matter their graduates will teach. Expectations for what pre-service students must master themselves and learn how to teach to others are reasonably consistent throughout the program.	Faculty do not have a working consensus on what constitutes the subject matter of physical education. Disagreement is so fundamental that students can not regard different visions simply as possible alternatives. Sharp differences in priorities and content included or excluded are reflected in inconsistent and conflicting program material.	Discrepant visions of the basic subject matter of physical education produce unclear or inconsistent expectations for student behavior, particularly in practicum experiences. The consequence is confusion and loss of program impact.
2. *Definition of Good Teaching* Good teaching is defined in explicit, unambiguous terms. The definition is available to all, subject to periodic review and used as a reference point for all decisions about the program.	No serious attempt is made to establish a definition of good teaching to which all faculty can subscribe. Statements about teaching used in the program are unclear, ambiguous, unrealistic, and highly generalized. No single set of qualitative/quantitative criteria is shared widely enough to be used in determining program content or evaluating student progress.	Individual faculty work toward discrepant visions of effective teaching. This produces confusion and loss of program impact. Some aspects of teaching receive little or no emphasis. Because faculty do not agree in evaluating student achievement of pedagogical skill, students receive conflicting and ultimately destructive messages about their progress.
3. *Use of Knowledge in Design* Design and procedures for operation and evaluation of the program reflect what has been learned from research on teaching, teachers, and teacher education. Specific effort is made to acquire and apply knowledge in developing program components.	The literature on teacher education is ignored. Only tradition, personal inclination, trial and error, and abstract logic serve as resources in deciding how to prepare teachers.	Practices known to be ineffective are perpetuated. Procedures with a high probability of success are not utilized. Useful alternatives are not available for consideration.
4. *False Constraints* In designing and implementing the program, faculty remain open to alternative means of accomplishing program goals and do not reject promising strategies without a trial. Judgment is suspended until alternatives have been attempted and assessed in practice.	Subject matter, program arrangements, training strategies, and operating procedures are discarded from consideration because "everyone knows" they would not work.	Alternatives for meeting program needs are severely limited (largely to traditional strategies), and inferior solutions are accepted as necessary.
5. *Integration of Theory and Practice* Pre-service students acquire knowledge *about* physical activity and play, learn how to perform play activities, and learn how to teach physical activity and play in ways which demonstrate and illuminate the relationships between those three domains.	Students encounter academic subject matter, development of personal play skills, and development of teaching skill in entirely separate experiences. There is little or no opportunity to integrate knowledge, skill, and pedagogy. Faculty in one area may be ignorant or disdainful of content in other areas.	Students are left with the unreasonable task of devising their own applications of knowledge to performance problems and the process of teaching. Because students do not perceive how what they learn can fit together to aid understanding and suggest solutions to problems, decisions about professional practice are based on inferior sources. Graduates may decide that knowledge has little to do with practice. Physical education loses respect in the educational community as a field without a knowledge base to guide action.

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
6. *Program Sequence* The order in which students encounter courses and practicums is the result of decisions about which skills and knowledge constitute entry requirements for a subsequent program component.	Either chance or convenience determines the order of many program experiences. Concepts which make sense only after a practicum, are provided before. Skills needed to fully profit from a field practicum are delivered after its completion.	Students are ill-equipped to learn efficiently. The perpetual complaint "If I had only known . . .!" or "What is the use of that?" reflects the loss of program impact consequent to poor progression.
7. *Specialized Preparation* Graduates who are to be designated as specialists and certified to serve particular client populations are provided with specialized streams of study and field experience.	Graduates who will be designated as competent to work at a particular level of school or to serve particular clients are offered only a thin scattering of courses and subsequently may obtain certification without substantial field practice in the specified area.	When graduates without adequate training are passed off as prepared to render professional service, everyone suffers. Employers are misled, clients are deprived and endangered, the graduate has been cheated and, ultimately, the program has been devalued.
Problems in Entry, Progress, and Exit		
8. *Entry Points* The program specifies particular points at which students may enter and provides treatment which is appropriate to the needs of students entering at each point.	Students drift into the program at any point and are permitted to omit important program experiences or are required to repeat work accomplished prior to entry.	Students forced to waste time in repetition lose motivation and respect for the program. Students who appear in courses or practicums without entry skills disrupt the training process and waste faculty time. Students who skip program experiences may be inadequately prepared.
9. *Progress and Completion* Students who enroll in courses which demand particular entry skills have actually mastered those skills. Minimum expectations for achievement in all courses are made explicit and consistently enforced. Students who graduate can demonstrate mastery of all essential technical skills at a safe, minimum level of competence.	Faculty have not identified the minimum level of learning required for safe practice and do not immediately and unambiguously identify students who fail to reach that level. Students continue to move through the program as long as they accumulate the required credits, spend the required number of semesters and maintain the minimum grade index. Long sequences of inferior or incomplete learning lead just as surely to graduation as superior achievement. Nothing in either the program's formal record or the process of certification can discriminate between the superior teaching prospect and the program survivor.	Students regarded as inadequate by the entire faculty nonetheless become eligible for costly and sensitive field experiences simply because they have been passed with marginal grades. Such students may even graduate because there is no serious review of overall competence. The use of credits rather than competence as the currency of program operation makes rational placement impossible.
10. *Selective Retention* Students are encouraged and assisted in self-selection into or out of the program. When required, faculty take direct responsibility for retaining only those students who are suitable candidates for professional careers.	Students are not confronted by significant realities about teaching until late in their program of studies when large investments of time and money entrap them into continuing despite negative experience. Feedback from faculty concerning performance is minimal, diffuse, or evasive. The program provides no mechanism through which faculty can exercise their responsibility for screening out unsuitable candidates for graduation and certification.	Students graduate and seek jobs already knowing that they will not find a satisfying career. Students graduate and obtain positions even though the entire faculty may regard them as incompetent or even dangerous to their clients.

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
11. *Interrupted Preparation* Students who must interrupt their studies are assisted in making plans for orderly departure and return with a minimum of disruption in professional growth and progress toward graduation.	Despite the fact that a substantial and growing number of students leave all preparation programs, they are regarded as aberrant. No plans are made to ease the process of re-entry. Personal development is needlessly penalized by absence.	Students who interrupt their studies make poor decisions about departure and re-entry with consequent frustration and waste of program resources.
12. *Placement* Students who show special promise for advanced study are guided into appropriate opportunities. Faculty members act vigorously and in concert to influence the placement of promising graduates in positions which control the quality or availability of field experiences utilized by the program.	Graduates with limited or inferior potential compete for positions in local programs on equal terms with graduates of exceptional potential. Local programs persist in hiring physical education personnel primarily in terms of coaching ability. Graduates do not continue their development as teachers because they are not directed to and sponsored for programs which provide excellence in appropriate forms of graduate study.	The best products of the program fail to achieve their full potential. Local schools are staffed with personnel who, because they possess inferior teaching skills and little or no potential for the supervisory role, have only limited or no utility to the program. Local programs of indifferent quality fail to gain and hold public favor—creating a negative climate for operation of the preparation program.
13. *Follow-up and Support of Graduates* Contact is retained with all graduates and those entering careers in education are followed with special care. Whenever possible, faculty visit graduates and provisions are made to offer them special support services when needed.	Nobody knows how many graduates sought or obtained jobs in education. There is no way to contact recent graduates; many just disappear. No effort is expended to make graduates feel that they are important to the program and worthy of special treatment and support.	Opportunities to assist the further professional development of graduates are missed. Potentially important resources are lost to the program through neglect. Vital feedback about product performance is ignored. The program flies blind without information on job placement and market conditions.
Problems in Program Operation and Development		
14. *Program Monitoring and Evaluation* The faculty has reached a working consensus on what constitutes successful operation of the program. Process and product indices of program health have been identified. Individuals or committees responsible for overall program operation have regular access to feedback about execution of program activities. Efficient procedures collect concise information at regular intervals from each course and practicum. Feedback includes information about which program objectives have and have not been achieved, what problems have been encountered and what changes have been made or recommended. Periodic evaluation of this information provides the basis for program revision.	No single person or group really knows what is going on in the program. Information can be obtained only by special effort, usually in a crisis situation such as program review or accreditation. Courses change, whole components fail to achieve their intended objective, important changes are recommended, but no procedure exists to insure that someone sees the whole picture. Because there is no agreement on how to judge the adequacy of program operation, no one has more than an impressionistic notion of the program's quality.	The sense of faculty control declines as each person becomes less sure of what is happening outside his or her own area. The absence of qualitative feedback deprives the faculty of both motivation and the substantive basis for program development. Overall program quality is not sustained or improved, and may decline. It is impossible to provide convincing evidence of program success even when it is achieved.
15. *Resource/Commitment Balance* Periodic evaluation and monitoring make it possible to maintain the three factors of available resources, number of students enrolled, and program commitments in a reasonable balance.	The program operates in a perpetual state of tension as too many students are admitted, or available resources decline, or the faculty initiates training experiences which absorb more resources.	Faculty are overextended and become fatigued, less effective, or embittered. Students receive inferior opportunities to learn because of program restrictions. Necessary economies make development of new training procedures impossible.

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
16. *Flexibility Vs. Orthodoxy* Faculty are sensitive to changes in the needs or characteristics of their pre-service clients, in what is known about teaching or teacher education, and in market demand for graduates. Prompt change is made in the program when new needs or opportunities occur. Intimate contact with schools permits some prediction and anticipation of changing demands.	Faculty members ignore social changes which call for program adjustment. Change is threatening to faculty security. The established way of doing things is cherished and protected even when dysfunctional. Faculty are caught off guard by the changes in their own students which easily could have been noted in the schools a generation earlier.	Discontinuities develop between the world as it is and the world as it is pretended by faculty. Opportunities to serve new needs or attract new resources are missed. Students experience disassociation from the world of real professional practice.
Problems Involving Faculty		
17. *Faculty Consensus and Commitments* Faculty have arrived at a working consensus about the core of essential program goals. Even though they may take vigorous exception to particular points, individual faculty members are committed to supporting all program actions designed to achieve jointly agreed upon goals.	Faculty do not share a common set of program objectives and no effort is made to negotiate a compromise which permits consensus and group commitment. The "voting majority" simply exerts its will without effort. to persuade or accommodate members who hold other positions. Actions are taken which individuals can't support.	Some faculty members feel alienated from the program and their colleagues. Divisive behaviors emerge and members of the minority fail to support or even may actively undermine efforts they do not approve.
18. *Models of Professional Behavior* Teacher educators exemplify what they explicate. Students see in action the values espoused in the program. There is high congruence between program means and its ends.	Humanistic goals and methods are idealized in faculty rhetoric while pre-service students are subject to rigid, insensitive, and depersonalized elements in the program.	Pre-service students learn that action and ideals have no necessary relationship in education. In turn, what they do to their students will not be anchored in an explicit and examinable system of belief. Self-improvement is impossible under these conditions.
19. *Realistic Optimism* Faculty have an optimistic view of what a strong teacher can do to improve school practice and program. Tempered by an intimate and current knowledge of school conditions, this optimism helps graduates feel responsible for accomplishing realistic reforms.	Faculty take a position of total pessimism about the possibility of individual teacher action to stimulate change. The world of work is portrayed as an alien environment with impenetrable resistance to reform. Alternately, faculty may inspire students with reformist zeal without providing a clear sense of the limits of individual efforts, or accurate information about the barriers to change in educational institutions.	Students are alienated from the world of which they must become a part. They are encouraged to accept what they find in practice and program because they have not been encouraged to believe that change is possible. Alternately, they attempt naive and ill-considered reform and when rebuffed by school realities become confused and discouraged. Ultimately, such naive graduates become cynical exponents of the status quo who regard their preparation experiences as having been an irrelevant exercise in wishful thinking.
20. *Faculty Development* Provisions are made to assist faculty in developing new competencies needed when the program is expanded or revised. Faculty accept the necessity for performing different tasks as the program evolves. The use of outside resources and expert assistance in upgrading faculty skills is a routine and accepted procedure.	Faculty members expect to continue in exactly the same role they assumed when hired. No effort is made to assist faculty confronted with the need to retool for new assignments. Even the intimation that faculty members might profit from expert assistance in upgrading some of their teaching or research skills is resented and rejected. Faculty development is a stopgap measure taken only after problems have disabled the program.	Program development is restricted by rigid definition of faculty roles. Faculty lack the time or resources needed to master new knowledge or skills, but nevertheless are pressured into service. Faculty who might provide superior service to the program fail to do so because assistance is not provided in developing their abilities.

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
21. *University Scholarship* Where university status demands that the teacher educator perform scholarly functions in addition to teaching and professional service, the program accommodates and supports this activity. Special effort is expended in encouraging young faculty to establish career patterns of productive inquiry.	Inquiry is considered to be a personal enterprise unrelated to the interests of the program, colleagues, or students. Productive faculty are expected to carry a full load of professorial responsibility and pursue research interests on their own time and at their own expense. Young faculty facing tenure review are the most heavily burdened with teaching and service expectations.	Tenured faculty are unproductive because intrinsic rewards are inadequate to motivate the extra required effort. Young faculty must rob their personal lives, neglect their teaching, advisement, and professional service functions, or simply move on when refused tenure.
Problems Involving Pre-service Students		
22. *Pre-socialization Effects* Faculty are aware that entering pre-service students already have fully formed value systems and deeply entrenched ideas about the nature of teaching, schools, students, and physical education. Students are assisted in becoming aware of this and helped to examine the consequences of what they believe about physical education (see #32).	It is assumed that whatever students know or believe about physical education is learned in the program. Deep conflicts between program demands and the lessons of prior student experience are ignored or regarded as aberrant. No effort is made to alter values or conceptions which will impede growth toward professional status.	Students feel forced to give lip service to ideas and values which are belied by their own experience. Without resolution, these conflicts remain to confuse students about fundamental issues even though they appear to make satisfactory progress through the program.
23. *Academic Ability* The program makes realistic accommodations to the actual level of ability and achievement represented in the population of pre-service students. Faculty are prepared to start "where they are". Students are assisted in remediating deficiencies in subject matter and study skills. Students are helped to understand and accept the fact that both remediation and extension/repetition of learning experiences require longer time to reach completion.	Faculty are ashamed or defensive about the comparative impoverishment of academic skills in many pre-service students. Adjustments in program schedule, teaching methods, and expectations for achievement are not made, often out of fear of "lowering standards". Students are allowed to believe that any extension of required program enrollment beyond normal time to completion is unfair and unreasonable.	Learning is made inefficient by failure to make realistic accommodations to student ability. Failure to deal with remediable deficiencies leads to unnecessary drop-outs. Students think poorly of themselves and faculty feel frustrated and discouraged when students do not live up to expectations for academic achievement.
24. *Teaching/Coaching Commitments* Faculty members are fully aware that many pre-service students regard coaching as their primary vocational goal. Lack of commitment to teaching physical education is dealt with in open and positive ways.	Faculty ignore the primary orientation of their students to the coaching role and pretend that learning how to teach is everyone's primary interest.	Students are unresponsive to efforts to prepare them for teaching careers. Poor motivation leads to poor achievement and frustration for everyone. Faculty are seen as out of touch with the real interests and aspirations of their students.
25. *Socialization Effect of Student Culture* Faculty carefully monitor the group-determined perspectives held and transmitted by students within the program environment. Attitudes that are dysfunctional to program goals are vigorously confronted.	The powerful socialization influence of student culture teaches new students what really matters in the program, how pre-service students should think about preparation and the careers beyond graduation, and what kinds of behaviors are acceptable in the training context. Some of the perspectives fostered within student culture are in serious conflict with central presumptions of the program.	Students quickly acquire attitudes, values, and behaviors which are contrary to their best interests and the goals of the program. Faculty ignorance about this level of program function fosters a sense of separation between "us" and "them".

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
26. *Passivity vs. Responsibility* Pre-service students take an active and responsible part in the conduct of their own education. They perform specific functions in the operation and development of the program. Student responsibility grows as they proceed through the program. Instructional, tutorial, and supervisory tasks are assigned as students become ready for these roles. Faculty are active in helping students make the transition from the student role to the teaching role.	Students are largely passive with regard to the program and completely dependent on faculty for all significant decisions concerning their preparation. Pre-service students learn that compliance is the appropriate behavior for a subordinate client. Faculty are unwilling to share significant responsibility for any aspect of program operation and remain threatened by student participation in evaluation of program quality.	The program is deprived of the valuable contributions which could be made by pre-service students. Students are deprived of an opportunity to practice skills vital to their professional development. Rigid definition of subordinate/superordinate roles within the program prevent the emergence of rich, intense, and significant relationships between faculty and students.
27. *Stages of Student Concern* The fact that students enter the program with sharply different primary concerns is well understood by the faculty. Much preliminary effort is expended in identifying and coping with these primary student concerns. Program tasks are sequenced in terms of a developmental model of professional growth.	The student's personal concerns are considered irrelevant to program functions. Training tasks often are out of phase with the student's level of professional development. What the professor thinks is of vital importance is not what concerns the student at that point in time.	Because students are repeatedly requested to learn things which seem inconsequential when compared with their real concerns, motivation and consequent achievement are poor.
28. *Love of Active Play* All graduates place a high, positive value on active play. The fact that they enjoy participation in sports, dance, and exercise will be evident to their students as a model of the active lifestyle.	Some pre-service students do not like to play or engage in physical activity. Self-conscious about their bodies or their motor competence, anxious about competition, uneasy in ambiguous or uncertain situations, or threatened by the fantasy element in play, such students may acquire a high level of skill in both motor performance and pedagogy, but their fundamental distaste for exercise and play is evident.	As teachers, these students will be unable to model the active lifestyle which displays the personal joy and deep rewards of motor play. The negative influence they exert on the lives of their students will be subtle and thus particularly destructive.
29. *Personal Fitness* All graduates place a high, positive value on personal fitness for an active lifestyle. Their attention to maintaining personal health and specific capacities needed for work and play will serve as a model of commitment to and informed concern about personal fitness.	Some pre-service students have poor habits of personal health, inadequate physical capacity for skill acquisition in activity courses, or an evident attitude of unconcern for the physical image which they will project to their clients. Students may graduate still ignorant of basic health principles, uninformed and uncritical as consumers of products related to health and fitness, and uncommitted to a life-long regimen appropriate to their fitness needs.	As teachers, these students will be unable to model the advantages and rewards of a personal fitness program. Such teachers are unlikely to convince others to believe that successful participation in a play activity is always possible at the price of the required fitness level. Such clients remain forever limited by a rigid definition of their capacity.
Problems Related to Program Content: Motor and Analytic Skills		
30. *Play Skills* Graduates can play with reasonable competence and demonstrate the key elements of basic skills in a wide range of play activities.	Students acquire playing competence in only a few activities, or fail to master basic skills in the activities which they will teach.	Unprepared to perform a reasonable range of teaching assignments, graduates have difficulty obtaining employment. As teachers these students provide inferior instruction and their clients fail to learn sufficient skill to enjoy the activity.

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
31. *Perception of Movement* Students can see individual elements of movement within complex performances. They know how to accurately observe and have had extensive practice in the skills of movement analysis (see #39).	The program provides no attention to the task of developing skill in observing motor performance. Students obtain only vague or highly general impressions when they watch complex movement. They are unable to pick out specific elements within a motor pattern. Their reports of movement are often inaccurate.	Students are unable to assist learners through the provision of accurate feedback. Incorrect analysis impedes the process of correction and skill development.
Problems Related to Program Content: Values		
32. *Clarification of Values* The program provides opportunity for students to identify and clarify their already existing values about critical elements in physical education (for example, play, competition, cooperation, freedom, compulsion) (see #22).	Students are not aware of their values in areas central to the teaching role. The program does not provide the kind of sensitive, expert help needed to confront personal attitudes and their consequences for behavior.	Lacking clear and specific information about what they believe, students are unable to examine their professional behaviors in terms of their intentions. Their work as teachers betrays confusion and inconsistency.
33. *Program Value Commitments* The program faculty share strong commitment to particular value positions in physical education. The program is designed to influence what students feel and believe about several matters of vital importance to physical education (for example, racism, sexism, and elitism in the gymnasium).	The program is not noted for espousing a particular commitment on important issues in physical education. Faculty regard it as inappropriate to attempt to influence the personal beliefs of preservice students. Faculty either have no strong convictions or display conflicting values about what is desirable in the gymnasium.	Graduates perpetuate destructive practices in physical education simply because they have had no opportunity to develop a clear sense of personal values on these issues.
Problems Related to Program Content: Skills of Instructional Design		
34. *Preparing Educational Objectives* The program provides extensive opportunity for students to identify, select, and articulate educational objectives. Students understand the importance of having clear objectives and can use them in a variety of formats as the basis for designing instruction. Faculty consistently use behavioral objectives as the basis for planning and evaluating courses and practicums.	Students have only a hazy conception of the possible objectives for physical education. They often confuse ends and means and have difficulty communicating their educational intentions to others. The objectives of preservice students are so vague as to be useless in designing instruction.	Instruction not based on clear and explicit objectives is often a random collection of activities which do not move the client toward desirable ends. Teachers without explicit objectives may select activities simply to fill the available time. Because administrators perceive the lack of clear and believable educational intentions, physical education loses priority in planning and implementing school curriculum.
35. *Designing Instruction* The program provides opportunity to acquire theory and practical skill in the planning of units and lessons, designing learning environments, and selecting instructional methods.	The program provides only piecemeal exposure to the elements of instructional design without integration or serious opportunity to practice the skills involved. Students have no sense of how educational intentions, curriculum content, teaching method, physical environment, and evaluation fit together.	As teachers, graduates must operate at half power because they are unable to organize and control the full range of factors needed to produce a powerful instructional design.

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
36. *Maintaining Congruence of Objectives and Methods* The program provides opportunity for students to practice creating, implementing and evaluating instructional units which reflect consistent relationships between objectives and the methods of teaching employed.	Practicum experiences tend to focus exclusively on narrow technical questions of instruction rather than attending to basic matters such as the match between educational intentions and actual decisions about how to teach.	Students employ methods of instruction which produce effects directly contrary to their intentions. Because they are not sensitive to this problem they are often ineffective without knowing why.
37. *Managing Instruction* The program provides opportunity for students to practice the skills required to efficiently manage learning activities. Graduates make maximum use of available time and waste little on housekeeping.	Pre-service students do not learn how to utilize time-saving methods. Their clients spend excessive time on tasks other than learning.	The classes of graduates are filled with meaningless activity such as waiting, moving equipment, role-taking, lining up, unproductive teacher talk, and off-task student behaviors. Students practice less, learn less, and have less satisfaction with what they receive in physical education.
38. *Influencing Learner Behavior* The program provides both theory and extensive practice in the skills of influencing human behavior. Students have command of a repertoire of skills with which to influence what learners do. Graduates can maintain good class order, deal with deviant behavior and elicit high levels of cooperative student behavior.	The program centers primarily on the content of lessons and desirable arrangements for instruction without giving equal attention to specific methods teachers can use to alter student behavior. Topics such as reinforcement, shaping, and modeling are left at the theoretical level and not translated into tools for practice. Graduates do not know how to obtain desired student behavior and in consequence, have difficulty with class discipline, motivating effort, and eliciting positive forms of student interaction.	Graduates attempt ineffective or inefficient methods of influencing their students' behavior. They find themselves in the dangerous position of not knowing exactly how to get students to do what they want. If learned by trial and error on the job, these vital teaching skills will be bought at the price of great frustration and personal trauma, if they can be acquired at all.
39. *Recognizing Learning Problems* The program provides extensive opportunity for students to acquire knowledge of the most common problems in learning basic skills. Students can readily recognize and diagnose the causes of incorrect performance. When correction is appropriate, they can draw from a variety of intervention strategies (see #31).	Students acquire personal skill without also obtaining insight into the problems commonly encountered by learners. There is little opportunity and no encouragement to practice the skills of diagnosis and corrective intervention.	Because they are not able to anticipate learning problems, graduates are inefficient in designing and implementing lessons. Failure to recognize and correctly diagnose problems in performance makes it difficult to facilitate learning. Lack of appropriate intervention strategies makes it impossible. When student clients don't achieve significant skill learning, physical education loses credibility as a school subject.
40. *Evaluating Learning* The program provides opportunity for students to acquire and practice the skills used in monitoring, measuring, and evaluating the achievement of learners. Students know how to follow client learning on a daily basis as a means of making regular adjustments in instruction. Graduates know sophisticated alternatives to letter grades and understand the limitations of terminal evaluation.	Students associate evaluation with testing and all testing with terminal grading. They do not learn to view evaluation as a continuous source of student feedback and teacher guidance. Students do not know how to select and administer tests. There is no opportunity to practice the design of teacher-made measures, develop performance charting systems, communicate achievement information to learners, involve students in self-evaluation, or use test data to revise instructions.	Graduates use tests inappropriately or inefficiently. Client achievement can't serve as a resource for motivating effort or assessing teaching effectiveness. Information is not available for planning better activities. The teacher may be unaware that little or no real achievement actually occurs.

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
41. *Self-evaluation* The program provides pre-service students opportunity to practice the skills needed to assess their own teaching. Self-monitoring and correction of their own behavior through the use of empirical procedures are responsibilities accepted by all graduates of the program.	The program does not emphasize personal responsibility for effectiveness. Students believe that the learning of their clients is largely under the control of external factors rather than the specific nature of their own teaching. Models of self-evaluation are neither presented as program content nor modeled by faculty.	Graduates do not struggle to improve their effectiveness as teachers. Lacking skills in the use of methods for self-evaluation, they must rely on the infrequent and often ineffective assistance of supervisory personnel.
42. *Skills for Changing the School* Students are provided with a relatively sophisticated understanding of power and influence within the education system. They acquire and practice simple skills for inducing change in the school setting. Graduates are inclined to believe that with patience and careful work they can improve physical education by changing how the school operates (see #45).	Pre-service students have no real idea of who controls what is in the schools or how to influence the way things are. The program makes improvement of practice a revisionist assignment for graduates, but neglects to equip them with the tools required for this difficult and delicate task.	Graduates are first confused and then overwhelmed by the complex and seemingly impenetrable nature of power relationships in the school. After abortive attempts at changing things they retire from battle and complain that improvement is impossible because "that's how it is in my school".
43. *Instructing Special Students* The program makes adequate provision for students to work with clients having special needs. Graduates have learned methods of instruction adopted to special learners and practiced some of them in clinical settings (see #44).	Pre-service students never have encountered students with special needs. They have not practiced the skills of integrating special students into the learning activities of a regular class, and are ignorant of the demands mandated by federal statute with regard to education of the handicapped.	Graduates are unable to effectively cope with mainstreamed students. They fail to meet the needs of special clients and are unable to represent physical education in the process of designing individualized education programs.
Problems Related to Program Content: Knowledge		
44. *Knowledge About Learners* The program provides opportunity for students to acquire factual information about learners: their growth, development, characteristics, and educational needs. Both courses and practicums are designed to sensitize students to the differential impact of age, sex, culture, and physical capacity on motor learning and play. Students understand the general nature of emotional, cognitive, and physical limitations and how they impact the learning process.	The program does not differentiate among types of learners and is not designed to provide encounters with a wide variety of clients. Students must depend upon their own limited experience to cope with differences in their clients. Students do not understand either the possibilities or limitations inherent in different developmental stages, cultural backgrounds, or ability levels.	Students simply do not know what their clients are really like. They will often inappropriately project their own experience in learning motor skills onto clients who have quite different characteristics and needs. Physical education which is not appropriate to the individual learner is inefficient at best and destructive at worst.
45. *Knowledge About Schools* The program provides opportunity for students to acquire factual information about the school as a social, political, and economic institution. Students develop an accurate picture of the roles played by various individuals in the school community. Courses and practicums are designed to make students sensitive to the differential impact of community environments on the nature of schools (see #42).	Students have little information about how schools really operate or why they are the way they are. Acquired largely from experience as students, their understanding of roles and relationships in the school is incomplete and dangerously inaccurate.	Their unsophisticated views of social and political relationships within the school and between school and community leave graduates unable to make sense out of much they experience in daily work as teachers. Because they are unable to identify sources of control for various school functions, graduates are deprived of much potential influence over decisions which impact their work.

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
46. *Knowledge about Pedagogy* Pre-service students have opportunity to study pedagogy as an area of theory and substantive knowledge. They are aware of alternative models for the instructional process, current topics of debate about effective teaching, and recent research which bears upon their work.	The program provides only general maxims about good teaching, and training in task-specific methods. Pre-service students remain ignorant of both the body of research concerning pedagogy in physical education and the rich resource of theoretical models which integrate knowledge about teaching.	Graduates are deprived of a sense of membership and participation in the area of knowledge and inquiry most closely related to their daily work. They will be unable to resist the powerful forces of school society which teach the primacy of personal experience and informal exchange of folklore in attempting to understand teaching. Systematic inquiry will be seen as futile and teaching outcomes as capricious and mysterious.
47. *Knowledge from Social and Biological Sciences* The program provides opportunity for study in sciences which are foundational to exercise and play. Pre-service students acquire a broad background of information concerning the structure and function of the human body, the place of sport in society and the social and psychological meaning of play activities.	Students remain dangerously ignorant about the impact of exercise stress on body systems. They are unable to intelligently talk or read about the systems which subserve vigorous movement. In short, graduates are uninformed about the stuff with which they will work throughout their careers.	Graduates will have no appreciation for the significance of play in human experience or the elegance of design in human motor systems. They will be unable to provide their own students with accurate information about exercise and play. They will lack information vital to the design of training regimens.
48. *Education in the Liberal Arts* The broad and liberal education of each student is held as a responsibility shared by the program. Skilled individual guidance is provided in course selection. Integrity of the liberal arts component is protected and supplemented by program-related requirements.	Faculty devalue the general studies core and provide inadequate assistance in course selection. Experience in other areas of ludic expression are neglected. Program components are designed to compete with liberal studies.	Graduates are ignorant in whole areas of the human heritage. They are deprived of the joy and meaning found in art, music, history, and science. Whatever their professional competence, they have an inferior education. As teachers, these graduates will not interact on equal terms with the rest of the school community, thus increasing the isolation of physical education from the main stream of education.
49. *Knowledge About Careers in Physical Education* The program provides information about careers in physical education which is current, accurate, comprehensive, and carefully articulated to decisions which pre-service students must make.	Students have unrealistic notions about the nature and rewards of careers in teaching. They have little factual information about alternative careers in physical education.	Graduates, disappointed by the realities they discover in the schools, become another statistic in the dropout rate for young teachers. Some stay in the program when they could have selected other, more satisfying careers.
Problems Related to External Articulation of the Program		
50. *Local Influence of the Program* Faculty retain close contact with physical education in local settings. Practitioners regard faculty members as competent in professional matters and use them as resources for information or special skills.	Faculty have no contact with local programs. They lack credibility as experts in teaching practice. They are regarded as critical or threatening figures who lack a realistic understanding of school problems.	Faculty are unable to exert positive influence on policy and practice in sites needed for field experience. It is difficult to establish the cooperative relationships needed for quality control in practicums. Students sense a gulf between the program and the "real world".

Ideal Condition	Sample Deviation from Ideal	Consequences of Deviation
51. *Involvement of Significant Others* Individuals whose interest are impacted by the operation of the program or the nature of its products are consulted and involved in design, operation, and evaluation.	The program is designed and operated without the advice or participation of people who have interest in the process or the products. Faculty in foundation subjects and other preparation programs, local practitioners, school administrators, pre-service students, and graduates are placed in the position of powerless outsiders.	Inferior decisions about program are made when important sources of information and expertise are ignored. Individuals who control needed resources are uninformed or alienated. The program is isolated from the environment in which it must operate.
52. *Institutional Complementarity* Rational planning is used on a state or regional basis to insure that needed programs are encouraged, duplication is avoided and, functions are placed where they can best be supported.	Programs are expanded into areas of preparation already served by other institutions. Programs are initiated without realistic appraisal of whether resources are adequate to meet long term needs. Programs are retained which are not cost-effective.	Scarce educational resources are wasted through duplication and inefficiency. The quality of new physical education teachers is impaired because existing programs are not adequately supported.
Problems Related to Practicum Experiences		
53. *Practicum Experiences: Logistics* The number and types of practicum sites are sufficient to meet all of the program's training needs. Available experiences include a wide variety of types (field internships, micro-teaching, simulations, on-campus teaching, and peer teaching). Faculty are in a position to create artful combinations of experience in which the factors of expense, time, control, and ecological validity are traded in logical patterns.	The number of accessible sites is inadequate to absorb all of the pre-service students who require practicum experiences at any one time. Students have too much exposure to a single type of practicum. Students may have no opportunity for practical experience at crucial points in their development.	Vital field experiences are restricted in number and kind. Without practice, teaching skills are inadequately developed and without reality testing, students are left unsure or overconfident. Visitor saturation may produce negative reactions in practicum site personnel. Significant program resources may be diverted into placement of students in sites distant from the immediate area.
54. *Practicum Experiences: Quality Control* What students encounter at most practicum sites serves to reinforce many of the values expressed in the program. Much of what they see is congruent with what they have learned. Cooperating teachers are aware of program goals and attempt to provide congruent learning opportunities for pre-service students.	Sites do not provide models of desirable program or teacher behaviors. There is little or no opportunity for students to practice the skills urged by program training. Practitioners pronounce program goals to be unrealistic.	Pre-service students experience sharp dissonance between the content of the preparation program and what they experience in the real world of work. This results in confusion or discrediting the vision of physical education espoused by program faculty.
55. *Practicum Experiences: Individualizing* The program provides a variety of practicums which permit gradual assignment of responsibility at a pace consonant with the developing capacity of the individual student.	Supervisory faculty are not sensitive to the developmental status of the individual pre-service student. Uniform expectations for teaching performance often demand too much too quickly, or too little too slowly.	The student's progress toward mastery of the teaching role is disrupted by the disenchantment of unchallenging routine or the disabling anxiety caused by demands which exceed capacity. Many students never achieve a safe minimum level of competence in basic teaching functions. When graduated, such students are a lethal threat to the program and to their clients.

Limitations and Assumptions

In the program described in the next section we did not attempt to deal with any of the following matters: inservice teacher education; preparation of non-teaching personnel; generic teacher education requirements mandated by state law; general core requirements peculiar to each institution; required study in the educational foundations peculiar to some institutions; preparation of undergraduates for graduate study in a discipline; state or regional accreditation or certification requirements; the approval of faculty colleagues in academic disciplines; the study of academic disciplines in physical education as Liberal Arts.

The proper test of the utility of this model is not whether or not it could be implemented, intact, in an existing college or university. The more appropriate question is "do elements in this approach to teacher preparation seem better designed to deal with the nature of pre-service students, the reality of teaching, and the historic problems of preparing teachers, than other ways of attempting that task?" If the answer is "yes", then the exercise has been worthwhile.

Listed as a set of competencies, all of the possible expectations for the role of physical education teacher constitute an impossible set of skills for anyone to master. Likewise, listed as a series of problems, all of the difficulties encountered by teacher preparation programs constitute an impossible set of demands to confront perfectly with any program design. Consequently, if the first task for a teacher education faculty is to establish some sense of order and priority in the multitude of possible expectations which could be held for their students, then the first task for the program designer is to determine which of the many problems must be confronted most directly. The following list of assumptions reflects our priorities as we began the task of building the subject-matter-centered program. Some of these assumptions receive direct support from the research literature, and all were dictated by our experience as teacher educators.

1. Play activities in the form of sport, games, dance, exercise, and outdoor activities are the subject matter of physical education.
2. The primary purposes of physical education in the schools is to help students master the subject matter and to increase their tendency to engage in physically active play.
3. Development of commitment to the task of teaching and the shaping of teacher values are the most important tasks of professional preparation.
4. The interests and capabilities of faculty constitute a primary limitation on what can be accomplished within any program design. Their consensus on basic questions in physical education is essential if a program is to function effectively.
5. The school as a social institution and the role of the teacher within the school are primary realities which must guide the design of preparation.
6. Pre-service students entering teacher preparation are often racist, sexist, among the least able in academic skills, pursuing a secondary career choice, primarily interested in coaching, not committed to teaching, and often motivated by concerns other than career preparation.
7. Pre-service students must learn and practice specific skills for changing the behavior of their clients. Teacher preparation is in part, a training task.
8. Teaching is more than the process of instruction. Pre-service students must also be prepared to perform important executive and interpersonal tasks as well.
9. Much of the cognitive content required for preparation should be embedded within the subject matter of physical education (physically active play). Performance skills, instructional skills, and foundational knowledge should be learned *concurrently*. This will presume activity courses which include both academic and pedagogic content and which make extensive use of closely articulated self-instructional modules in a learning center.
10. To the degree possible the program should employ capital-intensive technologies with self-paced learning and quality constant standards as the vehicle for instruction. Labor-intensive uses of faculty should be restricted to the subject matter core and practicums.
11. There must be regular and substantial opportunity for intensive, mutual involvement of faculty and students in the subject matter of physical education. Joint engagement of faculty and students in active play should be a formal part of the program, as should joint examination of values and social concepts embedded within these play experiences.
12. There must be carefully directed opportunities for examination and clarification of personal values, particularly those related to interpersonal relationships in play and teaching. Within this context, and throughout the program, the faculty must espouse a single coherent position with regard to sexism, racism, motor elitism, and multiculturalism.
13. Knowledge from exercise science and social science as applied to sport, play, and the process of schooling must be communicated early in the program sequence.
14. Performance skills must be developed beyond the introductory level and must cover a range of activities appropriate to the level and type of teaching certificate to be sought.
15. Practicum experiences must be a part of many program components, whether through service in on-campus physical education, the importation of learners for use in micro-teaching, use of peer

teaching, simulation activities, or field work in schools or agencies.

16. Identification of learning problems, practice in observation and analysis of movement, and the use of interventions for correction should be part of every activity course.
17. Graduates must be prepared to provide effective service for a wide variety of clients, including mainstreamed special education students.
18. The cooperating teacher is *the* crucial actor in the process by which neophyte teachers learn "how-to-do-it" in the school environment. If they are not specifically working to achieve program goals, they will work against the intentions of the program.
19. While the time constraint imposed by the four-year undergraduate program must be accepted as a given in program design, some students cannot graduate without substantial work beyond 8 semesters, and others should have the option of an earlier exit from the program.

A Subject-Matter-Centered Model

Since we have argued that the subject matter of physical education is motor play activity, it is logical that a program designed to prepare teaching professionals in this subject matter should be designed around activity courses. What follows, then, is a curriculum model in which organizing centers are physical education activities, where curriculum as a course of study is defined primarily by a series of activity-oriented experiences.

Assumptions about important elements to which program models must respond require us to examine curriculum at two levels other than that of a "formal course of study". Curriculum can also be viewed at a systemic level as the effects of the entire physical, social, and academic setting upon individual development. Thus, from the macro-perspective, something can be said about the contexts within which the model should be operated. Still another view is that of the "functional curriculum", the degree and manner to which the individual student interacts with subject matter during the formal course of study. At the level of this micro-perspective, a common agendum for all courses within the model program will be advocated.

The purpose of this section is to describe the program as a course of study, to identify the organizing centers, to explain certain features which might run contrary to the ways in which university programs typically function, and to show how the model reflects our sense of appropriate attention to the priorities of teacher education in physical education and the problematic elements to which all programs must respond. The model does not attend to general college/university requirements, general professional study requirements, or electives. Again, this is not because we view these matters as unimportant. Rather, it is because we understand that the physical education unit is but one of many faculty groups which exerts influence over the broad components of undergraduate study. In consequence, the unit can affect such components only marginally, and then only over fairly long periods of time. Thus we have chosen to focus on that part of the college/university experience which most easily can be controlled by physical educators, the requirements for the physical education major within the physical education unit.

The particular version of the model shown here is designed for a physical education major requirement of approximately 50 semester hours, distributed across 7 semesters. While numbers of academic credit hours and semesters/quarters available are potential constraints, with appropriate expansion or reduction, this model could be implemented for either a four- or two-year program. The table which follows displays credit allotments for each course assuming a seven-semester distribution.

Nine features of the model will be explicated to anticipate certain questions and to stimulate others. The nine features follow:

1. The use of physical education activities as organizing centers for the curriculum;
2. The intensive Entry Core experience for all majors beginning the program;
3. The Learning Center;
4. The faculty/student Continuing Seminar;
5. The physical education Activity Sequence;
6. The common agendum for all teachers in the activity sequence;
7. The Initial Internship;
8. The Client/Context Seminar accompanying the Culminating Internship;
9. The creation of an influence system designed to shape student commitments, beliefs, and values.

Subject Matter as Organizing Centers

Perhaps the most striking feature of the curriculum model is that the organizing centers are physical education activities, i.e., it is subject-matter-centered. Except for the activity foci in the Entry Core, we have left the activities unidentified so as not to prejudice the conferees with personal preferences. When it is recognized that the Entry Core includes four activities, and that students then proceed through a five-semester sequence in which they enroll in eight more activity-centered courses, then the degree to which the model is subject-centered will be appreciated.

Entry Core

The Entry Core receives 12 semester hours credit and acts as the initiation period for the student enter-

Table 1. A subject matter-centered physical education teacher education model.

Entry Semester	Physical Education Major Entry Core (12)* Activities: Outdoor Pursuits, Fitness, Football, Movement Fundamentals			
Entry + 1**	Activity A Beginning Level (2)	Activity B Beginning Level (2)	Faculty/Student Continuing Seminar (1)	Learning Center (2)
Entry + 2	Activity A Advanced Level (2)	Activity C Beginning Level (2)	Continuing Seminar (1)	Learning Center (2)
Entry + 3	Activity D Beginning Level (2)	Activity C Advanced Level (2)	Continuing Seminar (1)	Learning Center (2)
Entry + 4	Activity D Advanced Level (2)	Initial Internship (4)	Continuing Seminar (1)	Learning Center (2)
Entry + 5	Activity E Beginning Level (2)	Activity F Beginning Level (2)	Continuing Seminar (1)	Learning Center (2)
Entry + 6	Culminating Internship		Client/Context Seminar (2)	

*Credit hours.
**First semester after completion of Entry Core.

ing the major program. It is designed to be intensive and intimate so that faculty and students can form a foundation of relationships which can be built upon in subsequent semesters. The activity foci in the Entry Core are Outdoor Pursuits, Fitness, Football, and Movement/Education Gymnastics. The activities were chosen because they appear to be particularly well-suited for beginning articulation of the knowledge base foundational to physical education with the subject matter itself. For example, and these are meant to be suggestive rather than exhaustive, the personal/existential dimensions of sport and sport instruction can be explored fruitfully through wilderness activities. Fitness activities can be tied neatly to the study of exercise physiology and kinesiology. Football, in all of its international forms, represents a series of activities through which to examine the socio-cultural implications of subject matter. Finally, Movement Fundamentals and Educational Gymnastics lend themselves to a host of foundation areas including human development, motor development, movement analysis, aesthetics, and others.

The Entry Core would also be used to introduce students to the major pedagogical features of the curriculum, namely the Activity Sequence, the Continuing Seminar, the Learning Center, and the Practica. Each of these elements, which appear more distinctively as the program develops, are embedded in the Entry Core. Since physical education activity courses are appropriately viewed to be within the "laboratory" rather than the "classroom" configuration in universities, they typically warrant two contact hours for each credit hour, thus making 24 contact hours potentially available for the Entry Core. This time should be "blocked" so as to provide flexibility in scheduling various activities.

Learning Center

Throughout the program, capital intensive methods are utilized to help students acquire cognitive content, while labor intensive methods are devoted to skill acquisition, practicum experiences, and shared faculty/student experiences.[1] The capital intensive feature appears in the program as a five-semester, continuous Learning Center involvement for two credit hours each semester. Major content is hierarchically sequenced and fitted, as much as possible, with the activities being offered during any given semester. Most of what is typically taught in physical education major courses (professional and disciplinary) is programmed through the various technological resources of the Learning Center. Clearly, the lecture is a method eschewed in this model.

The Learning Center utilizes explicit, self-paced learning modules with clear objectives, appropriate learning aids, and criterion-referenced standards em-

[1]Labor intensive simply means that the task depends on competent people and the time they spend directly engaged in performing the task; generally, the more people available and the more time spent on the task, the better the outcome. Capital intensive, as used here, simply means that the task depends on a substantial initial investment in the form of space, equipment, learning programs, and system design, followed by an operational phase in which the outcome depends on the quality of the initial investment, rather than extensive use of competent people and their time.

ploying frequent mastery-checks for adequate student feedback on progress, status checks for faculty counseling, and summative information for program redesign. Faculty involvement in the Learning Center is primarily that of instructional design with on-call tutoring and discussion leadership where appropriate. While it might be ideal to program much of this material on a PLATO learning system, there are numerous less expensive models available including the *Keller* Method, auto-tutorial materials and CBTE systems, all of which have been thoroughly tested and found compatible with the model proposed here. The Learning Center is meant to be a *place* (more about the kind of place it should be will be indicated later). It should be open often, particularly at times convenient to students. While this requires some staffing, we do not believe it necessarily requires professional involvement on a regular basis.

Continuing Seminar

The Continuing Seminar is that time when faculty and students are directly and intensively involved in the subject matter together, i.e., they play together. This might take the form of intra-program intramurals, learning a new game together, outdoor adventure experiences, or any of a host of other relationships that are possible within the play context. This also is a time when they may talk together in ways that are designed to minimize the hierarchical relationships that develop between faculty and students, a time to explore personal values regarding sport, competition, practice, ethics, and related issues.

The Continuing Seminar is a regularly scheduled part of the curriculum. It is not extracurricular. It is designed to be a 2-3 hour block, perhaps on a Friday morning when students and faculty gather together to take part in planned educational experiences, just as a drama faculty might together with students produce a play, or a music department might together with students perform as a band, woodwind quintet, or a jazz ensemble. Skill development is not to be neglected here. The experience is seen as a natural variant of the major organizing centers, the activities of physical education, and as such receives one credit hour per semester.

Activity Sequence

The Activity Sequence is most likely to be defined by specific activities that together constitute the subject matter of physical education. Thus, one might find courses in badminton, swimming, lacrosse, gymnastics, team handball, and others. But, it is conceivable that certain courses might be defined by some broader composite label such as outdoor play, which might include hiking, camping, climbing, and orienteering. Or, certain activity courses might more appropriately be defined through a client focus, such as games and dance for the young child or fitness activities for special populations. Regardless, a primary feature of the model is that the major defining focus is activity and that performance skills, instructional skills, and related foundational knowledge will be learned concurrently within these activity-oriented experiences

In the version of the model shown in the previous figure there are six activities taken subsequent to the Entry Core, in which there are four activities. Thus, a student preparing in this version would complete a minimum of 10 activity experiences (more might be taken through elective options). Activities A, C, and D are studied through the advanced level for two consecutive semesters. Activities B, E, and F are taken at the beginning level only. Thus, this version of the model ensures fairly skilled performance and instructional skills in a minimum of seven activities (including those in the Entry Core) and beginning level skills in three others which, taken along with capabilities which many students have at program entry and others acquired through elective options, suggests that the graduating student would indeed possess a broad range of performance and instructional skills, much more so at least than is typically acquired through many current program models.

Common Agendum

It is in the Activity Sequence that the functional curriculum is attended to directly, where certain codicils are adopted which affect the degree and nature of contact the individual student has with the subject matter in the course of study. It is important that the program act as a faithful model for the pedagogical philosophy embraced by its rhetoric and evaluated as its intended outcomes. To achieve a strong modeling effect, a common agendum is proposed for the Entry Core and subsequent activity sequence. Designed and executed as the common obligation of *all* program faculty, the common agendum here is defined from the student perspective and for our version of the model appears as follows.

For each play activity the student must:

1. Learn to perform all skills and master all playing conventions at the beginning level.
2. Make substantial progress on intermediate skills and assimilate higher order strategies.
3. Learn to identify appropriate educational goals and learning progressions for successful learning based on client characteristics.
4. Learn how to organize and manage instruction so as to optimize client interaction with the subject matter within a nurturant class climate.
5. Learn to recognize and analyze common learning problems at individual and systemic levels.
6. Learn a repertoire of intervention strategies specific to the learning problems and an analysis of their causation.

7. Learn the technology of the activity (equipment, aids, facilities, and resource materials).
8. Learn the specific safety and fitness demands of the activity, including a variety of training regimens appropriate to different clients.
9. Learn the nature and status of the activity in contemporary culture (who plays it, when, where, trends, place in the school curriculum).
10. Practice planning instructional skills in a practicum.
11. Practice social interaction skills in a practicum.

This common agendum, although defined from the student outcome perspective, clearly implies that the Entry Core and Activity Sequence must be taught in a manner that is congruent with the intended outcomes, i.e., nurturing climate, success-oriented progressions, high rates of time on task and experience with a wide range of corrective interventions.

During any given semester, faculty teaching courses in the activity sequence must also be thoroughly familiar with the tasks concurrently programmed in the Learning Center, be they modules on legal liability, characteristics of the physically handicapped, explanation and application of biomechanics to movement analysis, or methods of criterion-referenced measurement in the schools. Tasks programmed in the Learning Center will be designed so that certain assignments require students to utilize what they are doing in their activity sequence to complete the assignments. Faculty will also integrate the Learning Center materials with daily work in the activity sequence.

Continuing Seminar

During any given semester, majors will be at different levels in the program, depending on when they completed the Entry Core. But, the Continuing Seminar is for the entire faculty and student population, wherever they might be in the program or whatever their assignment might be for that semester. While certain experiences in the Continuing Seminar might be designed for students/faculty who are in a particular part of the program (that is, a tournament for students and faculty in the Entry + 2 semester, or a New Games experience and discussion for those working in the Entry Core), the experience is primarily intended to be shared at the systemic level and to provide program-wide integration of faculty and students.

Beginning Internship

During the Entry + 4 semester there is a Beginning Internship in a school or agency setting. This does not suggest that this will be the first reality experience for the pre-service teacher. Practica of some kind are to be associated with the Entry Core and each of the activity sequence courses. In many institutions the student would also have had an early school placement as part of a general professional course requirement. The Beginning Internship is designed to provide a more extended and intensive physical education teaching experience at least two semesters prior to the Culminating Internship. Not only can teaching skills be further shaped in the Beginning Internship, but the experience can be used in subsequent semesters to breathe life into the Learning Center activities in a way that much better prepares the student for the important culminating experience of full participation in the teaching role. For both internships, the major is assigned to a public school teacher or agency professional who has been specifically prepared to serve as a change agent in directions that are congruent with program goals. This person becomes a clinical teacher educator in the most real sense and is the major source of influence in this important drama. University supervision is viewed as back-up, on-call service oriented to the practitioner/teacher educator, who assumes the primary responsibility for the intern.

Client/Context Seminar

The Culminating Internship is accompanied by a Client/Context Seminar, the primary purpose of which is to help the intern better understand the nature of the school as an institution, the forces which foster or prevent change in education, and the skills necessary to be an effective change agent. The Client/Context seminar should include clinical faculty whenever possible and should be linked to the internship in a meaningful way, for example, by having as a major project the creation of change in the practicum site, i.e., start a sport club, introduce a new activity, utilize a new teaching method, or employ community resources in a different way. An alternative project, equally well-suited to the purpose of the seminar, would be for a cluster of interns to undertake a participant observation study of some aspect of the working school society.

Systemic Influence

While the proposed model might accomplish much if implemented only at the course of study level, and perhaps even more if the proposal were attended to at the level of the functional curriculum, the model cannot achieve its full potential unless attention is also specifically directed to the systemic level, the degree to which the contexts of the program as a whole are designed to effect change in those who come in contact with them. This is particularly true if one takes seriously, as we have done, the notion that commitment to the task of teaching and the shaping of teacher values are high priority items in teacher education (see Assumption 3). The "school" was once routinely expected to influence students' beliefs in certain directions. A few private schools and colleges still attempt to do that today, although a vast majority of educational institutions have withdrawn from all pretense of

effecting change at the systemic level, partially because it is often thought to be unrealistic and partially because it is sometimes thought to be improper. We feel that such influence is not only realizable and appropriate, but essential as well. Teacher education programs must operate at the systemic level if they are to make a significant impact on their graduates.

While it is no doubt true that we know less about how to effect change at the systemic level, we suspect that there might be widespread agreement about some necessary pre-conditions for programs to exert influence over student commitments and values. The Continuing Seminar is clearly an intended effort to exert such behavioral influence through deliberate attention to program context. The following additional suggestions are offered as other kinds of arrangements that seem to be reasonable pre-conditions for exerting systemic influence (they are illustrative rather than exhaustive):

1. Physical education faculty and majors ought to share a common locker room space that is reasonably well-appointed, appropriate to professionals and pre-professionals involved together in an important preparation process.
2. A student/faculty lounge should be provided for informal meetings and as a gathering place.
3. A departmental library/study room (perhaps as part of the Learning Center complex) should house current professional periodicals and other items of interest both to faculty and students.
4. If possible, a student/faculty lunchroom should be developed and maintained as a pleasant place to meet and share time.
5. Students and faculty should attend professional meetings together as part of a planned pre-professional socialization process.

To expect that student values will be changed without some sense of shared intimacy and mutual respect is unrealistic. If the program does indeed, as we suggest it should, openly espouse value positions on sexism, racism, motor elitism, and multi-culturalism, then these places and times of shared intimacy are probably more potent change settings than the more formal settings of class discussion and Learning Center academic tasks.

Discussion

We have attempted to define a set of primary elements that all teacher education programs must attend to, and to suggest a model which does indeed attend to them while also reflecting our personal convictions as physical educators and teacher education specialists. The model we have developed is consistent with our understanding of the subject matter of physical education and our knowledge about the realities of preparing teachers. We must reiterate our strong conviction that many different models might be developed which are also consistent with the set of reality constraints identified. While it is intriguing to examine the model more closely and to respond to questions about it, we also encourage that attention be directed toward the assumptions on which it is based and the reality constraints to which it responds. As a result of careful readings by colleagues and questions asked by conferees, the following issues are explicated more fully.

Program Evaluation

A professional preparation program centered upon the subject matter of physical education would be no more and no less difficult to evaluate than other training models. Process evaluation would deal with measuring the degree to which a given institution was successful in maintaining the general environment of systemic influence and the requisite mechanisms for the program's operation. Some of those conditions and mechanisms are explicitly made in the preceeding description; while others are implicit in the problem chart and list of assumptions. Product evaluation would be concerned with the exit characteristics of graduates as well as with their subsequent employment and performance records in the field. Evaluation of this latter type hinges on the intentions of the program as expressed in the objectives which shaped its design and guided its operation. To the degree that the subject-centered model is a generic proposal created with the primary intention of increasing program impact, without specification of program objectives, different institutions would be expected to employ different criteria for product evaluation. These standards would reflect the particular dispositions of the resident faculty. To the degree that the model proposed in this paper reflects a particular set of concerns, presumptions, and commitments (those of the three authors), it is possible to identify some of the broad standards which would be used to evaluate success or failure for *this particular version* of the model. Assessment of students exiting the program and follow-up of graduates would give priority to four clusters of characteristics:

1. *Mastery of subject matter* (see Assumptions 1 and 14, as well as Problem Chart items 1, 28-31).
2. *Commitment to teaching* (see Assumptions 2, 3, 6, as well as Problem Chart items 24, 32-33, 38).
3. *Possession of a repertoire of pedagogical skills, practiced and secure at the safe minimum level required for beginning professional practice* (see Assumptions 7, 8, 15-17 as well as Problem Chart items 2, 34-43, 46, 53-55).
4. *Realistic knowledge about professional roles, workplaces, and clients* (see Assumption 5 as well as Problem Chart items 19, 22, 42, 44-45, 49).

In each of these clusters it would be necessary to identify behavioral indices through which to assess student achievement. Some of these measures would

be as obvious and straight-forward as a sport skills test. Others might be as subtle and indirect as the use of a semantic differential test to record changes in the connotative and denotative meanings assigned to sex and race related concepts in the motor play setting.

Faculty

As suggested in Assumption 4, the interests and capabilities of faculty members constitute the primary limitation on implementing any program design. The problems presented for faculty in the operation of the subject-matter-centered model are not different from the generic difficulties noted in the Problem Chart (17-21). What is different lies in the strenuous demands for faculty consensus in designing and implementing such a program. At every point the assumption has been made that individual members of a faculty can come to working agreements on sensitive and often controversial educational issues. Given this, it is clear that recruiting new faculty with skills and dispositions particularly attuned to the program would represent a far less important strategy than staff development procedures designed to help existing faculty form themselves into a community with the appropriate range of skills and shared value commitments. The technology required for such development activities is in common use throughout the business world, government, and other areas of education. Even in an economy of scarcity, the cost would not be prohibitive provided faculty development was held as the *first* priority in creating an effective program.

Specialization and Options

As indicated in the section which lists the limitations imposed on this brief program description, no attempt has been made to deal with the question of non-teaching options. The subject matter was specifically selected with teaching physical education in the schools as the training goal. Other program objectives (for example, preparation for professional positions involving adult fitness, or the study of sport as a liberal arts approach to undergraduate education) would involve both distinctly different subject matters and different assumptions about the nature of program influence.

Whether any portion of the subject-matter-centered model would be helpful in planning non-teaching options is beyond speculation. There are two questions concerning specialization within the model, however, which demand consideration here. First, could the model accommodate the specialized preparation required for teachers at elementary, middle-school, and secondary levels? The answer is that all three should easily fit into the model given appropriate adjustments in the content of the Activity Sequence and the Learning Center. Second, can the model accomodate the preparation of coaches for interscholastic athletics? Here the answer must be qualified in terms of the definition given to the coaching role.

In the broadest and best sense of coaching as teaching in an educational program which extends the purposes of physical education, the model is an ideal setting for the preparation of coaches. For the many graduates who will find employment in the dual role of teacher/coach, the values and commitments which are central to the program should be invaluable in avoiding the serious forms of personal conflict and program dysfunction which so often accompany the dual vocational arrangement. In the narrower sense which defines the coach as a highly skilled technician without commitments either to education goals or to a unified school program of play education, the program would be dysfunctional, wasteful, and entirely inappropriate.

Learning Center

The Learning Center houses all of the substantive content normally found in courses for the major student. The knowledge base for this model is *different* than but *not less* than that for a traditional or a discipline-oriented program. Content would draw on disciplines such as the sociology of education and instructional design in addition to relevant materials derived from physical education sub-disciplines. Since the Learning Center utilizes self-paced learning modules as a primary instructional format, it is conceivable that each student could have a slightly different program, reflecting differing needs and interests. Certainly, the modules completed by a major specializing in elementary physical education would differ markedly from those completed by a student interested in secondary certification.

Horizontal articulation in any given term between experiences in the Activity Sequence and modules completed in the Learning Center would be mediated by activity instructors who would be familiar with the Learning Center program. This articulation would be further enhanced by having Learning Center assignments that would be completed through experiences in the Activity Sequence.

Horizontal articulation is made easier by the fact that the entire substantive content of the major program can be vertically articulated in the Learning Center. The total material for the major would be sequenced hierarchically and programmed in small modules without the need to worry about "courses".

Afterword

From the beginning, the completion of this assignment has been a labor of love. There has been the fun and warmth of working with valued colleagues, the satisfaction of rethinking our collective experience as teacher educators, and the job of creating a new vision which might free us from some of our most painful constraints. Many might wonder, as did several con-

ferees in Chicago, how much playfulness entered into the design of the subject-matter-centered model. In other words, just how serious are we in proposing this model as an alternative for the preparation of physical education teachers? This deserves an honest answer.

The title of the paper, and thus the name given to the model, makes perfect sense to us. But, we must also confess that it was selected as a bit of good fun. Our colleagues in the academic discipline like to think of themselves as stewards of the *real* subject matter of physical education and in this bit of earnest folly make themselves natural targets for such leg-pulling. Aside from the fun we had with the title, all else was seriously taken. The model is offered as our best and most honest appraisal of what would constitute an appropriate strategy to reform the nature of teacher education in physical education.

In the final analysis, we suspect that many in our profession might agree with our analysis of what is thought to be important and necessary in preparation for effective professional practice in physical education. Yet we also sense that many who might so agree would also have serious doubts about both the possibilities and the proprieties of teaching and measuring these knowledge, skill, value, and attitude objectives in a formal preparation program. Physical educators are not alone in this dilemma. In counselor education it is widely known as the Krathwohl-Carkhuff Paradox, the notion that there are certain skills, particularly in the affective domain, which while necessary for successful practice are either impossible to achieve or inappropriate to explicitly state and deliberately teach in training programs.

It is for this latter reason that one ought to carefully separate arguments that are directed toward "can it be done" from those that are directed toward "should it be done". The "can it be done" arguments are easier to deal with simply because they are amenable to both logical and empirical evidence. The "should it be done" arguments are much stickier. Nonetheless, they need to be raised and raised quickly. A recent *Time* article heralded the demise of schools in this culture and one educator has characterized our response to the present crisis as "shifting deck chairs on the Titanic". We are convinced that physical education in the public schools requires dramatic improvement and the best way (perhaps the only way) to change the nature of physical education in the schools is to improve teacher education. It is to that end that this effort was directed.

A Disciplinary Model for a Curriculum in Kinesiological Sciences

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Introduction

The Kinesiological Sciences program was designed to satisfy a need. It was felt that physical education in general, and the Physical Education Department at Maryland in particular, were not offering the breadth of service of which they were capable. We were turning away a large number of students who wanted to study our subject matter but had no desire to train for teaching in the public schools. It was the conviction of some of our faculty members, therefore, that our subject matter must serve in a capacity beyond that of preparing students for a single occupation. Just as music may be studied for its own sake and for teaching it, the "human movement sciences and sport" have much to offer as a core around which a basic baccalaureate education can be fashioned. Thus, the program which resulted was designed to impart to the student a scholarly understanding of the human being as an individual, engaging in the motor activities of daily life which serve as an expression of his/her physical and competitive natures.

No carefully designed curricular model was consulted when the program was originally organized. We conceived of our approach to be the development of a curriculum which identified human movement and sport as the subject matter core and set about to bring together the then presently available courses as well as new ones to cover the knowledge base as best we could. No special decisions were made as to whether or not our approach was to be cross-disciplinary vs. interdisciplinary. We simply organized a plan whereby the University's resources, outside and within our department, could be utilized in an intelligent manner to satisfy student and faculty interests. If such a classification of our curriculum were required of us today, the only reasonable response would be that it demonstrates both characteristics; we primarily believe it is a cross-discipline approach.

Definition of the Field called Physical Education

Physical education is that field whose body of knowledge focuses upon and is derived from the study of human movement, exercise, sport, and the curricular practices and methods of teaching this subject matter in a public school setting. Although it has a long history of use, our feeling has been that there is nothing sacred in the name Physical Education. On the contrary, its use as an umbrella term to broadly describe our ever-changing field is becoming less and less appropriate. Consequently, if some better name could be adopted, it would appear appropriate to identify separate but related curricular paths which lead to separate baccalaureate degrees rather than the accumulation of a series of options under one degree designation. Thus the teacher preparation program would continue under the name Physical Education whatever the new umbrella term for the department might be. Others, with different aims and thrusts, would be labeled to identify their special natures. Our Kinesiological Sciences program is an example of such a separate bachelor's degree program.

Definition of the Field called Kinesiological Sciences. Within the broad definition given in the preceding paragraph, we have partitioned a subfield called Kinesiological Sciences which limits its focus of attention to the human movement sciences and sport. In partitioning out the involvement with pedagogical matters, significant additional time is available to pursue and emphasize disciplinary approaches to the subject matter and provide increased elective flexibility.

Special Assumptions. The program was developed in accordance with the following assumptions. It is assumed that:

1. There is an audience ready to join in the study of such a curriculum.
2. The special body of knowledge is sufficiently developed to support such a curriculum.

3. The program can meet the needs of today's students with their more diversified interests and backgrounds.
4. The program can strongly encourage interdisciplinary activity.
5. The parent department can assimilate the addition of such a program without undue strain.
6. The science-based program can be adequately supported by laboratory facilities.
7. The faculty can provide the enlightened advisement which is required in a program with extensive elective flexibility.
8. The program can encourage the beginnings of specializations.
9. The program is flexible enough to include future "emphasis options" on the general theme without requiring the awarding of a separate degree.
10. The program can make special contributions to preparing students for acceptance into advanced study in graduate and professional schools.
11. There are reasonable possibilities for employment for the graduates of the program.
12. The program makes no claims as to preparing graduates for specific employment.

The Plan

The organization of the subject matter sources undergirding the field presently called physical education is seen to follow the plan depicted in Figure 1. Assume that a small circular disc is centered over its larger mate. The large disc identifies the traditional subject matter field of knowledge. The small disc identifies the subject matter concerns specific to physical education. On its periphery are the "specializations" contained within our field while its center identifies the core elements of the kinesiological sciences. If the small disc is permitted to rotate about its central axis, the subject matter specializations within physical education can be placed to adjoin any of the traditional subject matter fields so that "information passage" routes between them and the kinesiological sciences core are developed. As a result, we see our specializations acting as information and application filters, giving the foundational information coming to the student from the traditional fields the unmistakable and unique hues characteristic of our special interests.

The filtering function noted above must not be thought to be a passive process. Rather, it is an active process in that our courses do more than simply remove matters beyond our specific interests. They introduce new knowledge, embellish and manipulate it between and within the specializations, and set it up for scrutiny in light of what has been learned in the traditional disciplines. This is particularly important for a curriculum which seeks to motivate high levels of student scholarship, for the introduction to and applications of recent research findings is an absolutely necessary component of programs with disciplinary emphases. If the students are then given the opportunity to demonstrate their own independent capabilities for conducting investigative work, the undergraduate, educative circle has reached closure.

Three divisions, named Curricular Studies, Sport Studies, and Biophysical Studies, have been organized to encompass the subject matter interests of our field (see Figure 2). Referring once again to Figure 1, the Curricular Studies division of Figure 2 consists of Administration, Curriculum and Supervision, Teacher Education, and Adapted Programs. Sport Studies encompasses History, Psychology, and Sociology of Sport. Biomechanics-Kinesiology, Physiology of Exercise, and Motor Learning make up the Biophysical Studies Division. Departmental programs sample from these three divisions to construct the scope of their coverage. A program which samples equally from the three content divisions would be diagrammed as in Figure 2a. This sort of program is seldom offered in physical education departments. The more common case is one which finds the selection of content skewed to meet special needs. At Maryland, the two undergraduate program emphases may be depicted as in Figure 2b, the solid circle representing the B.S. in Physical Education (Teacher Preparation) and the dashed circle representing the B.S. in Kinesiological Sciences. As would be expected, the Kinesiological Sciences program emphasizes biophysical and sport matters with very little attention paid to curricular matters.

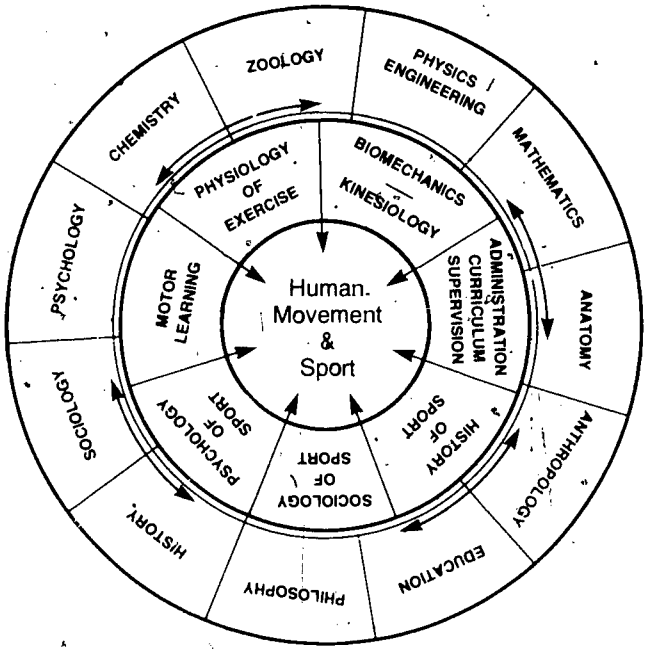

Figure 1. Organizational plan for subject matter sources.

From the beginning, a bothersome problem concerning the writing of this paper has been the seeming mandate to categorize our program under the rubric of professional preparation. We have no quarrel with the term preparation as long as it may be broadly thought to mean the study of and mastery of a subject matter.

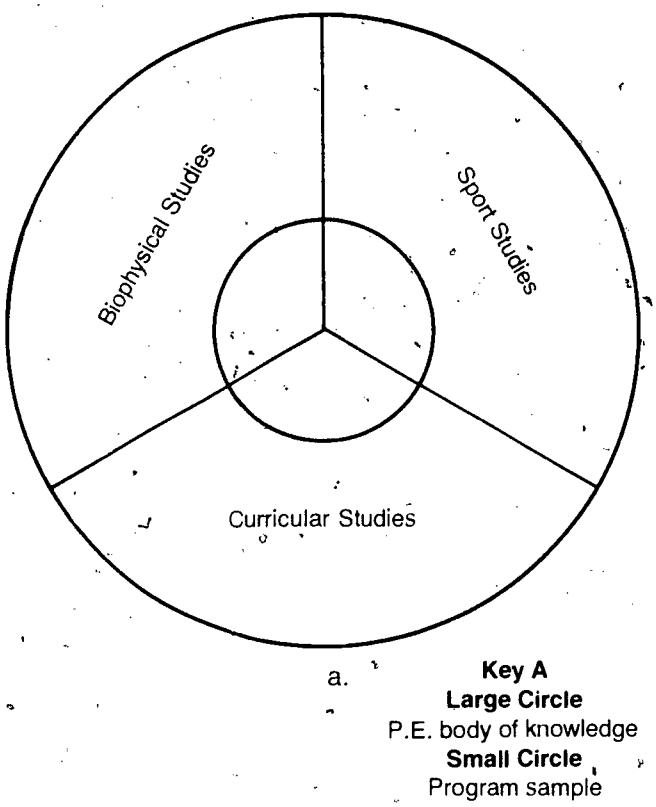

Figure 2. Physical education body of knowledge and program samples.

The problem arises with the term professional and all that it implies regarding the characteristics of a profession. There is no clearly identified professional component in the Kinesiological Science program, that is, no professional mission as traditionally defined. We see the program as being similar to liberal arts programs where no specific employment automatically awaits the graduate. Certain career directions have been established nonetheless, and they are covered in a later section of this paper.

The program's orientation is both theoretical and technical. To avoid the seemingly endless task of description, perhaps the best way to present the interplay of these characteristics is to include a short passage from Thomas Mann's, *The Magic Mountain*, which establishes the hoped for appreciations which can be derived from careful study.

> ". . . He had learned in his technical school about statistics, about supports capable of flexion, about loads, about construction as the advantageous utilization of mechanical material. It would of course be childish to think that the science of engineering, the rules of mechanics, had found application in organic nature; but just as little one might say that they had been derived from organic nature. It was simply that the mechanical laws found themselves repeated and corroborated in nature . . . The thigh-bone was a crane, in the construction of which organic nature, by the direction she had given the shaft, carried out, to a hair, the same draught-and-pressure curves (he) had had to plot in drawing an instrument serving similar purpose . . . He enjoyed the reflection that his relation to the femur, or to organic nature generally, was three-fold: it was lyrical, it was medical, it was *technical* . . .

It would be possible to establish certain emphasis options which could require field experiences. If these necessitated the alteration of the basic program as it is outlined in Section IV, and these experiences contributed substantially to the development of specific job qualifications, then a bona fide professional component of the program would exist. We have consistently avoided any tendencies, which are very marked within the profession of physical education, to act as an employment agency. Consequently, our energies can be given, unabridged, to the task of dealing with the basic subject matter. It should be noted, however, that all Kinesiological Sciences students are encouraged to volunteer service in our Sports Medicine-Physical Fitness Center, regardless of their inclinations toward specializations.

Performance skill, as perceived in the traditional physical education program emphasis, is almost entirely absent from the Kinesiological Sciences program. Six credits in activities courses are required of the students. These experiences are included not for the usual teaching, coaching, and skill development reasons, but to provide movement background which

may be brought to bear in theory courses where the actual mechanisms of the active human being are studied. For example, if golf and gymnastics activities were elected, it will be apparent within the physiology of exercise course that strength and endurance training elements for optimum performance differ widely between the two. The societal importance placed upon the two activities in our culture will become evident in a sport sociology course. Similarly, the historical and philosophical consequences of the differing developmental patterns toward "professionalism" of the two activities will be appreciated. Since most of our students come to us with rather wide backgrounds in physical activities, we always try to steer them toward activities beyond their original experience. If they should improve their performance skills and learn something about skill progressions during these courses, so much the better.

Entry and Exit Requirements

There are no special entrance requirements for this program except an abiding interest in the human movement sciences and sport. The entrance requirements of the University are applicable to all Bachelor's degree programs. At the University of Maryland it is not possible to establish special entrance or retention requirements in specific programs unless approved by the Board of Regents and the State Board of Higher Education, and then only in those programs where there is overcrowding or insufficient resources.

The only exit requirement, other than the University's 2.0 (C) average for all Bachelor's degrees, is the Independent Studies seminar. This senior level course is described in the program section that follows.

In Maryland it is legislated that every University program be articulated with all other college programs. An assistant to the Vice-President of Academic Affairs has articulation records for all community colleges. Community college counselors as well as faculty advisors know what courses are acceptable to our program. Since the elective credit in the program is high, with careful counseling it is relatively easy to adjust the transfer student's program to our Kinesiological Science program with minimal loss of credits. It is often more difficult to accommodate transfer students from within the University, out-of-state, or from foreign countries. Regardless, since there are so many electives, careful advising is necessary if the student is to successfully complete the requirements in four years. The importance of enlightened advisement cannot be overemphasized.

The Program

Recently the basic program has been substantially revised. Although the new requirements have not been fully implemented, that process is only a formality. The recommended sequencing of course work for the new program is given below, followed by sections which explain several of its special requirements.

Table 1.

Freshman Year

Course	*Title*	*Credit*
*ZOOL 101	General Zoology	4
*MATH 110	Introduction to Mathematics	3
*CHEM 103, *104	General Chemistry	4,4
PHED 181	Fundamentals of Movement	2
NUTR 100	Elements of Nutrition	3
Activities	See program sheet	3
Univ. Studies Req.	See University Regulations	6
		Total 29

Sophomore Year

Course	*Title*	*Credit*
ZOOL 201, 202	Human Anatomy and Physiology	4, 4
*PHYS 121 or *141	Fundamentals of Physics	4
*PHED 287	Sport and American Society	3
CMSC 103	Introduction to Computing	3
Activities		3
Electives		3
Univ. Studies Req.		9
		Total 33

*These courses may be applied to both major requirements and University Studies Requirements.

NOTE: For those students with highly defined social science interests, the CHEM 103 and 104 requirement may be replaced by suitable social science courses. See your advisor for selection.

Junior Year

Course	*Title*	*Credit*
PHED 400	Kinesiology	4
PHED 381	Advanced Training and Conditioning	3
*PHED 350	Psychology of Sport	3
Restricted Electives	See program sheet	12
Univ. Studies Req.		9
		Total 31

Senior Year

Course	*Title*	*Credit*
PHED 493	History & Philosophy of Sport and P.E.	3
*PHED 360	Physiology of Exercise	3
*PHED 385	Motor Learning & Skilled Performance	3
PHED 489E	Biomechanics of Sport	3
PHED 496	Quantitative Methods (Statistics)	3
PHED 497	Independent Studies Seminar	3
Electives		9
		Total 27
		Grand Total 120

Courses Especially Recommended for Election

Course	*Title*
PHED 451	American Women in Sport
PHED 461	Exercise and Body Composition
PHED 487	Physical Education and Sport in Contemporary Cultures
PHED 293	History of Sport in America
PHED 489L	International Aspects of Sport
HLTH 285	Controlling Stress and Tension
HLTH 456	Health Problems of the Aging and Aged

*These courses may be applied to both major requirements and University Studies Requirements.
NOTE: For those students with highly defined social science interests, the CHEM 103 and 104 requirement may be replaced by suitable social science courses. See your advisor for selection.

Restricted Electives

A minimum of twelve credits (nominally four courses) is chosen from a prepared list of courses which has been subdivided into seven categories. These categories are: Physiology; Kinesiology; Psychology; Sociology; History; Philosophy; Measurement and Statistics. Seven lists of appropriate courses have been prepared from the University catalog, one for each of the listed categories, by department faculty members who have related specializations.

Courses from the following departments are included within the specialization categories.

1. *Physiology*—Zoology, Chemistry, Biochemistry, Engineering, and Nutrition.
2. *Kinesiology*—Mathematics, Physics, Engineering, Anthropology, and Zoology.
3. *Measurement and Statistics*—Mathematics, Educational Measurement, Computer Science, Psychology, and Sociology.

The remaining categories (History, Psychology, and Sociology) contain courses which are limited to those departments.

Two from these seven are elected as areas for student specialization. Two courses are then selected from the courses listed under the two chosen categories. Often the Physiology and Kinesiology categories are a chosen pair. Similarly, the Psychology and Sociology pair are often elected. Since this is an elective process, any combination of two may be chosen.

The emphasis behind this requirement is to encourage additional specialization after the student has been introduced to our program and a number of its introductory courses. In this way, the subsequent requirement of choosing an Independent Studies Seminar (PHED 497) research problem as the culminating experience of the program, is facilitated. In addition, greater depth of subject matter penetration on an interdisciplinary basis is encouraged.

University Studies Program

During the early 1970's, submitting to student pressures, the University of Maryland developed a General University Requirements program which was almost wholly elective and consisted of 30 credits. This program replaced the old General Education Requirements Program which was very similar to such programs throughout the United States at that time, that is, a traditional sampling from the established and venerated disciplines, including physical education. Very recently, the University has instituted a new University Studies program for all students which

closely resembles the original General Education program. The new program entails the completion of 39-40 credits, distributed as follows:

1. *Fundamental Studies*
   a. English Composition ..... 6 credits
   b. Mathematics ..... 3 credits
2. *Distributive Studies*
   a. Culture and History ..... 6 credits
   b. Natural Sciences and Mathematics 6 credits
   c. Literature and the Arts ..... 6 credits
   d. Social and Behavioral Sciences ... 6 credits
3. *Advanced Studies* (upper Division) .. 6 credits

Independent Studies Seminar

A number of curricula in universities today require a culminating experience where the student demonstrates a particular depth of knowledge in a part of the general subject matter. The Independent Studies Seminar was designed to give the student, under the careful guidance of the faculty, an opportunity to develop (research) a major seminar paper in an area of their own choosing, i.e., in one of our specialization areas. The project, when completed, is submitted in duplicate, written form and is presented to the seminar which is open to faculty and graduate students as well. The completed papers are kept in the department library so they may be studied and consulted in the same manner that is typical for Master's and Doctoral theses. The students in the seminar also have the opportunity to participate in presentations given by selected graduate students, members of the faculty, and invited guests. Since this course demands very large quantities of time, it is recommended that no more than 12 credits be carried during the semester it is taken. Below is an abbreviated list of seminar research project titles which demonstrate the breadth of interest covered:

1. Justification of Salaries Received by Superstars in Baseball and Basketball
2. The Efficiency of the Oxygen Debt Mechanism as a Function of Level of Fitness
3. The Leer Ski Injury: What Research is Telling Us
4. The Need for and Implementation of High School Athletic Training Programs[1]
5. The Roles of Essential Nutrients in Athletic Performance
6. The Geographic Origins of Maryland Athletes
7. History in the Making—Title IX: How One County School System Has Handled Change
8. The Effect of Hypokinesis on the Aging Process: Focus on the Locomotor System
9. Analysis of Injuries in Basketball: Male Versus Female
10. A Comparison of Women's Athletics in England and the United States, 1920-1925
11. The Uses and Abuses of Anabolic Steroids
12. Aggression in Sport
13. The Heart Differential in the Palmer Area of the Forearm During Various Intensities of Isometric Exercise
14. Knee Joint Ligament Stresses and Strains Using the NASTRAN Model

To demonstrate further the nature of this program, it was suggested that the course content of several courses be included. Below are to be found two abbreviated course outlines for PHED 350, Psychology of Sport, and PHED 360, Physiology of Exercise. For the sake of brevity, listings of laboratory exercises have not been included. The knowledge base for the content of these courses is research.

Course Objectives: PHED 350—Psychology of Sport

To explore the personality factors, including, but not limited to motivation, aggression, and emotion, as they affect sport participation and motor skill performance.

Unit Headings

1. Introduction to the Psychology of Sport
2. Attitude and Character Change Through Sports Participation
3. Personality and Sports and Physical Activity
4. Psychological Problems of Outstanding Athletes
5. Social Facilitation and Performance
6. Body Image, Self-Concept, and Motor Performance
7. Emotion, Activation, Arousal, and Performance
8. Anxiety and Performance
9. Motivation—An Overview
10. The High Risk Athlete
11. Mental Health, Social Adjustment, Life Quality, and Sport
12. Academic Achievement, Intellectual Performance, and Sports and Physical Activity
13. Aggression and Violence in Sport
14. The Coach and the Athlete
15. Perceptual Characteristics of the Physically Active

Course Objectives: PHED 360—Physiology of Exercise

The objectives of the course are to provide the student with an understanding of the physiological adjustments of the various systems of the body as man engages in physical activity. It is designed to study the systems of the body as they interact with each other in response to the stress of exercise, to examine the chronic effects of exercise and conditioning on the various physiological parameters of the body, and to reveal the adjustments that are made in response to exercise in changing environments.

Unit Headings

1. Work and Energy
2. Muscle Stimulation and Contraction

[1]Interest in this paper has been so widespread that approximately 150 copies of it have been distributed to professionals throughout the United States.

3. Skeletal Muscle: Structure, Types of Contraction
4. Energy Transformation in Muscle
5. Metabolism and Respiratory Quotient
6. Nutrition and Athletic Performance
7. Energy Metabolism and Oxygen Debt
8. Work and Mechanical Efficiency
9. Oxygen and Carbon Dioxide Transport
10. Transport of Gases in the Blood
11. Respiration
12. Blood and Circulation
13. Cardiac Output
14. Blood Pressure
15. Physiology of Physical Conditioning

Matters of Interaction

The Department of Physical Education is one of the departments contained within the College of Physical Education, Recreation, and Health. The College is placed administratively within the University in the Division of Human and Community Resources, along with the Colleges of Education, Human Ecology, and Library & Information Services. Of the 18 degree-granting programs of the Division, all have professional missions except Kinesiological Sciences.

The Kinesiological Sciences program is administered under the aegis of the Assistant Department Chairman who is responsible for all undergraduate programs. The Kinesiological Sciences Committee is the policy-making body for the program and its recommendations are forwarded to the Department Executive Committee for action. A similar committee serves the Teacher Preparation (Physical Education) program. The two undergraduate programs thus have equal status in the department structure. To date there have been no problems arising from the interactions between the two programs.

As is clear from the material in the program section, the curriculum in Kinesiological Sciences isolates and consolidates the body of knowledge commonly called physical education into a discipline, i.e., it pulls it together under the title, Kinesiological Sciences. A number of courses serve both the Kinesiological Sciences Program and the Physical Education Teacher Preparation Program. These courses are: PHED 181, Fundamentals of Movement; PHED 360, Physiology of Exercise; PHED 385, Motor Learning and Skilled Performance; PHED 381, Advanced Training and Conditioning; PHED 493, History and Philosophy of Sport and Physical Education. One important way these courses differ from those at other institutions which offer only a teacher preparation program in physical education is that our courses strongly adhere to the fundamental subject matter, with performance and pedagogical applications offered only where they are absolutely necessary. It is not unusual to see courses with the same names offered by some physical education departments where the fundamental subject matter is touched upon only for the purpose of applications.

One very interesting result of our course emphasis is that students from other disciplines within the university are enrolling in our courses. In the past this was rare. In fact, we were always sending our students to absorb "good things" from other departments without demonstrating any real drawing power for our own theory courses. One reason for this influx of outside students into our theory courses, we believe, is that it is recognized that our subject matter is now available to them without the former, interminable emphasis on pedagogical matters. We believe this interaction will do more to establish an enviable discipline-oriented reputation for our department than most other efforts that might be chosen for implementation.

With no clear progressional mission for the program, Kinesiological Sciences is more akin to liberal arts and sciences programs than education, recreation, and health education. No binding relationship, therefore, exists between these professional fields and our program. In fact, if any trend is developing with regard to how the university sees us, it would be as an emerging science. A continuation of this discussion is to be found in the section concerning Implications.

Our program depends heavily on the traditional disciplines for background and support information. However, these ancillary disciplines for the most part, do not research or teach the relationships between human movement and sport and their disciplines, so there is little or no overlap or duplication of course content.

Program Evaluation

Since all graduating seniors are required to complete the Independent Studies Seminar, it has been the practice, since the inception of the program, to spend a number of class meetings evaluating every aspect of the program with the students. Not only are the physical education courses evaluated, but the courses in the ancillary disciplines are also critiqued and evaluated. Courses and requirements not making a significant contribution to the program are replaced by others more cogent and workable. Thus evaluation is an ongoing, continuous process.

One measure of the program's success has been its continued growth. It was approved by the Board of Regents on September 21, 1973, and by the State Board of Higher Education on January 4, 1974. It was late April, 1974, before the program could be implemented within the department. Table 2 demonstrates the steady growth of the program.

It is gratifying to note that students come to us from diverse backgrounds. We have had students transfer to Kinesiological Sciences from nursing, biological sciences, pre-medicine, pre-physical therapy, health, li-

Table 2. Growth of the Kinesiological Sciences program.

Semester	Year	Total
Spring	1974	3
Fall	1974	15
Spring	1975	23
Fall	1975	32
Spring	1976	30
Fall	1976	28
Spring	1977	48
Fall	1977	43
Spring	1978	53
Fall	1978	65
Spring	1979	81
Fall	1979	91
Spring	1980	108

brary science, and even horticulture, to name but a few.

Those students who have sought employment immediately upon graduation have been generally successful, with jobs ranging from chief technician, Exercise Cardiology Laboratory, Georgetown University, to coordinator of tennis programs at a year-round resort community, to executive trainee in the YMCA organization. Although we know the whereabouts and activities of most of our graduates, no formal study of their involvements has been undertaken. It is obvious that as our list of graduates grows over the years the task of staying abreast of their work pursuits will become more and more difficult. Unless some systematized feedback plan is implemented to gather that information, knowledge of their activities will be very limited. For a list of those employment opportunities available to graduates, refer to our paper, "A Kinesiological Sciences Program", in *Alternative Professional Preparation in Physical Education*, AAHPERD Publication, 1979, p. 51.

Another indication of the program's success is the degree to which it satisfies the special assumptions listed in the introductory section of this paper. It is our belief that all have been satisfactorily met. We are particularly proud of the success our graduates have had entering graduate and professional schools. Our students have found their way into Schools of Physical Therapy, Corrective Therapy, Law, Chiropractic, Podiatry, and Business. A large percentage of our students pursue Master's degree programs in physical education. Many of these are awarded teaching and/or research assistantships.

What all of this reduces to is that if we can learn the specific interests and goals of our students very early in their college careers, we can develop individualized programs which will go far in fulfilling their required competencies. The elective flexibility of the program makes this feasible, while careful and enlightened advisement makes it happen.

Implications

Of particular value to us is the continued high interest of the students toward the program. They tell us that the content of the program is consistently interesting and, on occasion, exciting. Communication between students then passes this same information along to eventually publicize the program as a worthwhile enterprise. For example, the University recently hosted a Science Career Day in which high school sophomores were invited to visit science departments and learn of their programs. Of the 400 students who participated, 35 specified an interest in the Kinesiological Sciences program and joined us for discussions of the program as well as in tours of the facilities. Thus, in the minds of future students, present students and the perceptions of the University, the Kinesiological Sciences program seems to be taking its place next to Astronomy, Chemistry, Entomology, Physics, etc., as a program with interesting science content.

Of equal importance is the recognition given to a number of our theory courses. Five PHED prefix courses have been selected as applicable for Phi Beta Kappa. Three of these courses and two others have been selected as eligible for meeting the Distributive Studies requirements of the new University Studies program (see the section on programs). In our Division of the University (Human and Community Resources) 11 courses were so selected from the offerings of the 18 degree-granting programs. With 5 of those coming from the Department of Physical Education, we feel that the desired recognition of our subject matter's placement in higher education is on firm footing.

The phenomenon called the Kinesiological Sciences program has made it clear that we, indeed, are making significant strides in the development of an academic discipline which stands secure by virtue of its own unique subject matter, a coherent subject matter worthy of study for its own sake. This program has changed the image of the Physical Education Department on our campus just as similar programs have done on other campuses across the United States. There are those among us who would support the contention, arguable as it is, that the continued good health of departments of physical education in major university settings depends to a large measure on disciplinary programs than on presently constituted professional preparation programs. Only the passage of time will reveal the accuracy of that prophesy.

Undergraduate Physical Education: A Cross-Disciplinary Model

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Introduction

A complete picture of undergraduate education usually includes three components, one of which is optional. Undergraduate education begins with a general education requirement. This requirement provides foundational understandings in a university degree program and is equated with liberal education. It also paves the way for a second component. Subsequent to the breadth of study found in the case of general education, specialized study of a subject matter field in depth builds vertically upon the above-mentioned foundation. In addition to these two components, there is customarily a third component. This optional facet is professional education, or preparation for a specific career. All three components can be accommodated in a cross-disciplinary model. The purpose of this paper is to identify and describe the components, assumptions, and advantages of this model. But first, pivotal definitions and distinctions are in order.

Definitions and Distinctions

If the cross-disciplinary model is to be understood, then a major reorganization of the reader's conception of undergraduate education may be necessary. Like Kuhn's (1975) paradigm or exemplar shift, this reorganization or reorientation toward a cross-disciplinary model begins with a change in primary assumptions. It follows that the first step required of the reader is to shed the traditional assumption that the undergraduate major is designed to serve only the schools in the enterprise known as teacher education. Certainly, this is the historic meaning associated with physical education in universities. For this reason, the label physical education is an appropriate descriptor for teacher education and associated work in the schools. But physical education does not accurately depict the model, nor does it adequately apply to the career streams, other than teaching, which are embraced with the model. A number of separate labels, then, are associated with the cross-disciplinary model, but separate labels do not imply diminished importance for teacher education or a severing of relationships between degree programs and faculty who work within them. The cross-disciplinary model is an integrated model.

Other necessary distinctions can be generally identified stating what the model is *not*. This is not a model in which performance courses and experiences are diminished in importance. Moreover, not all degree programs in this model are professional in nature, so this is not a model of professional preparation. It is a model of undergraduate education. It follows as well that the disciplinary component of the model is not a discipline *of* physical education, but one which provides useful study *for* physical educators. In the next few paragraphs these key distinctions are amplified.

The more precise identification of physical education as a professional program in higher education permits a clearer distinction between it and a discipline. A discipline is structured to permit impartial inquiry quite apart from an applied or professional mission. In other words, inquiry proceeds without strings attached and is propelled by curiosity. It follows that in the cross-disciplinary model any discussion of "a discipline of physical education" invokes a contradiction in terms.

It is for this reason in the main that labels other than physical education have evolved in an attempt to adequately identify and describe the field of study. For example, terms such as Human Kinetics, Leisure Studies, Exercise and Sport Sciences or Studies, and others have all been employed to describe the disciplinary component. For our purpose, the label Kinesiology will be used. The subject matter embraced by it includes:

> "Selected biological, psychological, and sociological factors associated with the growth and development, functional status and ability of the individual

to engage in physical and ludic activities; the historical, socio-historical, and contemporary roles of physical and ludic activities in culture, in both primitive and advanced societies, and the contribution of these activities to the emotional, social, physical, and aesthetic development of the individual."

Clearly, this body of knowledge entails more than the study of school programs of physical education, yet, prospective teachers of physical education would and should profit from this broader exposure to human performance, motor control, and sport studies. Thus, a program in Kinesiology is viewed as providing a pre-professional foundation for teachers and for persons interested in other careers.

To reiterate, performance courses and experiences are not relegated to the perimeter in a cross-disciplinary model. In fact, a primary assumption for the model is that Kinesiology and physical education are, in part, performance-based, with the former devoted to an understanding of performance and the latter to, its' acquisition and refinement. Within the contours of this model, performance courses and experiences may be viewed as means to other ends or as intrinsically valuable. That is, performance courses serve as a valuable laboratory setting in which personal knowledge (Polanyi, 1958) and skill are amplified quite apart from any other purpose. On the other hand, such courses can also serve as a field setting within which knowledge about performance is blended with the performed act. In the latter context, students confront the variables which define skill complexity and delivery. In short, the personal, qualitative experiences which accompany, or stem from, actual performance are as indispensable to a complete understanding of it as are the disciplinary perspectives. Like opposite sides of the same coin, they join to give the student the basis for apprehending the nature and significance of human involvement in physical and ludic activity.

Any true profession must have a disciplinary base with which to identify. This identity involves the question of uniqueness, often a politically-charged concern in higher education. Monopoly of a unique body of knowledge is part of the nexus for a group interested in its professionalization, and uniqueness of a field of inquiry is indispensable to the existence of departments in colleges and universities. The problems associated with establishing in higher education a unique cross-disciplinary oriented program within one department will become obvious; foremost among these is negotiating relationships with related disciplines. However, solutions to these problems have been located in the advantages of a cross-disciplinary framework (Lawson and Morford, 1979).

But the importance of a disciplinary base goes beyond political expedience to practical necessity. The key to responsible action in the name of service, e.g., teaching, is clearly an understanding of the phenomena involved in the service, i.e., the subject matter herein called Kinesiology.

To recapitulate, the cross-disciplinary model leading to professional training in physical education embraces three components: general education (pre-major), Kinesiology (pre-professional study), and professional studies. Since a major in Kinesiology includes other non-professional degree programs, it is not strictly a model of professional preparation, but rather, the orientation of the major rests on assumptions which are embodied in the uniqueness and integration of the subject matter studied. It is now appropriate to turn to a more complete description of the model.

Features of a Cross-Disciplinary Model

Two related characteristics are pivotal in a cross-disciplinary model. The first, identified earlier, is that the model can accommodate one or many degree tracks or options. In cases where only one degree track is offered, the program is strictly non-professional. That is, the degree is comparable to a liberal arts degree. There are varying amounts of specialization in the departmental courses which may be elected; all courses are structured without an eye toward a professional mission. This degree in Kinesiology is, therefore, similar to other programs found in a College of Arts and Sciences. Indeed, this cross-disciplinary model is best harbored in such a unit instead of the more traditional housing in a School or College of Education.

A second feature of the model can be presented by contrasting it with *ad hoc* curriculum designs. When a number of degree tracks are offered in an *ad hoc* format, there results a series of separate or parallel degree tracks. This is a logical outcome because *ad hoc* models are by design riveted upon a particular role. An *an hoc* program is in fact constructed after an analysis of the perceived role requirements and role behaviors of practitioners. What people do or have done is analyzed and broken down into a series of courses, all of which tend to be role-specific. For example, in a university where *ad hoc* degree programs might be offered for teachers, fitness managers, and sport scientists, these three degree programs would be expected to have few common courses. In principle, if not in practice, each degree program would have a life apart from the others. Each would require its own resources. These and other differences between *ad hoc* and cross-disciplinary programs are reviewed in Table 1.

By contrast, in the cross-disciplinary model there is a common denominator of study which is centralized for *all* degree programs. This second, key characteristic of the model is its "core" set of courses and experiences. Such a core is structured in relation to the question which follows. What must *all* undergraduates possess in common to be considered educated in and

Table 1. A comparison of assumptions underlying a traditional ad hoc model and the cross-disciplinary model of professional preparation in physical education.

	Ad Hoc Model	Cross-Disciplinary Model
1.	Course content tends toward strong value orientation; knowledge is selectively filtered in accordance with these values.	Course content is oriented toward free examination of knowledge.
2.	All courses are structured in relation to occupational role requirements; attendant emphasis is upon technical concerns from the beginning of the major.	Core of subject matter is not occupation-specific; attendant emphasis is initially upon subject matter and understanding of theory, with applications and technical mastery coming later.
3.	Performance courses focus equally upon methods of teaching.	Skill is refined for its own sake and as a fundamental experience in the major.
4.	Professional courses concentrate on efficiency of means for goal attainment; goals are viewed as unproblematic.	Professional courses concentrate on examination of goals. Means are considered in relation to basic assumptions about problem-solving and goals.

about Kinesiology? This question obviously calls into play value judgements and requires a thorough assessment of faculty resources. Just as value judgements and faculty resources vary, so, too, does the exact composition of the core vary from institution to institution. The fact remains, however, that in this model the common denominator of courses and experiences, forms the foundation for *all* degree programs. All students enjoy a common fund of knowledge concerning performance. There is parsimony here because core courses serve all undergraduate majors and can easily accommodate non-majors. Specialized or more *ad hoc* course resources surface only later in the professional degree programs rather than at the outset.

Such a core program of studies carries with it two riders. One hinges upon the meaning and delivery of cross-disciplinary study; the other is concerned with performance and performance courses.

The first rider centers on the organization of courses to fit this framework. Critics of disciplinary models charge that courses become overly-specialized to encompass molecular or atomistic distinctions in subject matter. There are two sides to this issue. The critics, on the one hand, tend to view disciplinary study from an *ad hoc* vantage point. Here, knowledge and techniques are directly applied to an identified work role. Since disciplinary knowledge exists apart from application, and since many practitioners now attempt roles without it, this knowledge is often cursorily waived away by critics without full attention to its potential. On the other hand, it must be granted that some disciplinarians have been overly ambitious in the design and conduct of their courses. One root of this problem, it is suggested, is the disciplinary framework which is employed to organize and disseminate knowledge. In many institutions an inter-, multi-, or sub-disciplinary approach is in use. The inter-disciplinary approach has its merits, but it does differ significantly from a cross-disciplinary approach.

The adjective, inter-disciplinary (or multi-disciplinary) describes the interaction among two or more different disciplines (departments). Ideas are cross-fertilized with an eye toward the mutual integration of the disciplines concerned. In other words, an inter-disciplinary framework involves the specialized application of traditional disciplines to problems in sport and physical activity. The focus is upon how a phenomenon such as sport, for example, can be studied as a means of solving specific problems and further developing the parent discipline.

It is suggested that such an inter-disciplinary structure for portraying the body of knowledge embraced within Kinesiology brings continued and unavoidable fragmentation. Affected in this regard are both courses and faculty. Differences among faculty become accentuated because each sub-discipline borrows from the parent discipline subject-specific concepts, constructs, and syntax. Courses, in turn, tend to become equally isolated and specific. As Wolman (1977) has noted, ". . . an educational effort along interdisciplinary lines confronts major difficulties in virtually every area related to the process of education. These problems involve philosophy, faculty, students, curriculum, research, money, and evaluation" (p. 800).

Sport and physical activity require multi-faceted examination if they are to be fully understood. They must be viewed as the objects of analysis instead of mere means. For this reason and others, a cross-disciplinary framework is more appropriate because it allows faculty to continuously interact within a single departmental setting.

By contrast, with an inter-disciplinary framework, in which the parent discipline provides principally a vertical glimpse at aspects of human involvement in physical and ludic activity, the cross-disciplinary framework promotes both a horizontal and a vertical examination of these phenomena. This integral framework is reflected in the definitions of three broad areas of study within Kinesiology. These are:

1. *Biodynamics of Human Performance*—the study of acute and chronic systemic and cellular human adaptations to movement activity.
2. *Motor Control*—the study of neural and behavioral processes underlying pre-selection processing, selection, initiation, execution, error detection—correction, retention of movement behaviors and their adaptive properties.
3. *Sport Studies*—the study of play, games, and sport from socio-historical and contemporary analytic perspectives wherein the social, economic, and political relations existing in the society at large and associated psychological parameters are dramatized.

Academic components involving human development and biomechanics are viewed as inextricably intertwined with these identified areas of inquiry.

To elaborate, a student of biodynamics of human physical performance must be expected to possess a prerequisite knowledge of basic systemic physiology and anatomy. Only then can this student address, for example, that portion of biodynamics which concentrates on problems related to human adaptations to increased demands on metabolism. Specific concerns, in this example, relate to work intensity-energy exchange support systems and their respective interactions to yield specific adaptations, both acute and chronic. Yet, the focus of the student's study here is not on physiology *per se*, but on the biodynamics of physical performance. To more fully comprehend the problem posed in this example, the student needs a multi-faceted approach involving elements of biochemistry, physiology, motor control, biomechanics and principles of exercise training.

Differences between cross- and inter-disciplinary approaches can be further illustrated. (For example, in the socio-cultural area, not the sociology of or the psychology of sport, but sport studies results from a cross-disciplinary orientation. Its scholars, while trained and educated in part in traditional disciplines such as sociology or psychology, are not sociologists and psychologists *per se* but rather academicians in sport studies. Consequently, these persons are colleagues in the strictest sense, because they share nomenclature, concepts, and syntax. They are appropriately housed in the same administrative unit to facilitate the development and dissemination of an integrated and multi-faceted body of knowledge.)

Such claims for uniqueness which are associated with a cross-disciplinary model should not blur relationships which are enjoyed with other disciplines. Three convenient clusters from the traditional disciplines provide contributions to three academic components of Kinesiology. The physical and biological sciences offer contributions to biodynamics of human performance, the neuro-sciences to motor control, and the social sciences and humanities to sport studies. These relationships are depicted in Figure 1.

In summary, there are important differences between inter- and cross-disciplinary frameworks which form one of the two riders to the model described here. The other rider pertains to performance courses.

In this model, performance courses share features of disciplinary course work. Like disciplinary courses, they are conducted without an eye toward a professional role. Simply put, methods and materials for teaching are not central to these courses. Stated another way, practical extractions from theory to performance are examined to test the validity of the constructs entertained, but not in the context of pedagogy. Since not all students in the core courses plan to be teachers, performance courses of this kind are essential.

Performance mastery provides an experiential component around which Kinesiological study is ordered and in which disciplinary study is anchored. This is no less the case in other performance-based fields such as music, art, and drama. The art of performing and knowledge about performance proceed hand-in-hand for students. In fact, upper division courses in the major can serve to further weld the two together. Called performance analysis courses, these offerings require as prerequisites both performance mastery and core courses in Kinesiology. Their intent is to provide laboratory settings in which students gain greater skill in analyzing performance. In fact, this assumption which accords performance such significance is one of the distinguishing features of a cross-disciplinary model. Although scholars outside the field of Kinesiology may gather knowledge about performance, these same scholars, who have a lesser understanding of the actual experiences of performing, will always have less than a complete grasp of performance. The situation here is akin to the distinction between a spectator and an athlete. The athlete's understanding of the subtleties and complexities of the inner world of sport are rich and cumulative. Although the spectator can enjoy the athlete's performance, a complete picture of it can never be attained. As Cady (1978) has pointed out, the performance resulting from physical acts is a language unto itself. While one may discuss its parameters, it remains difficult to fathom performance unless one has been deeply engaged in it. No less is expected when scholars outside the field make isolated and selected attempts to look inside.

Proportional Representation and Sequences for Different Kinds of Courses in the Major

In the typical interdisciplinary framework, disciplinary study is often postponed until the later second or early third year of a student's degree program. This occurs in large part because study in the respective parent disciplines for each of the sub-disciplines is a prerequisite to intra-departmental courses. Furthermore, each sub-discipline generally requires a sepa-

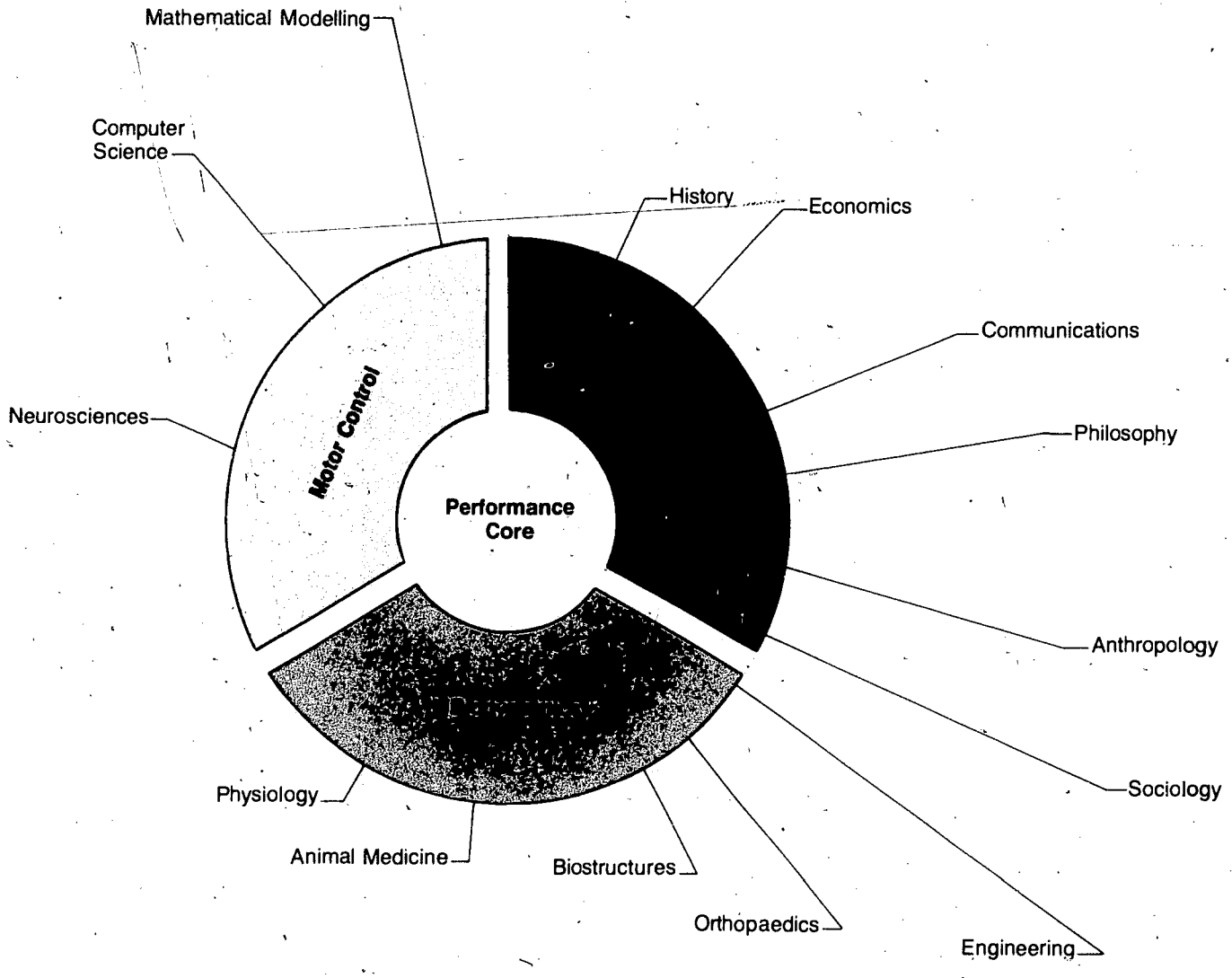


Figure 1. Kinesiology-major components and knowledge stratification for the cross-disciplinary structure.

rate and specialized course or set of courses for knowledge dissemination. By contrast, a cross-disciplinary framework permits an earlier exposure to theory because knowledge generation and dissemination do not occur by dependency upon or borrowing from parent disciplines. Nomenclature, concepts, and modes of inquiry can, therefore, be presented with less extensive prerequisites because much of the material presented is uniquely integrated as Kinesiology. Further, courses organized in this fashion can be delivered thematically which results in a refinement of courses comprising the core program.

The schematic outline for a typical cross-disciplinary major in Kinesiology is comprised of several area components which, for the sake of this description, may be viewed as discrete from one another when in actual fact they are integrated for any given student's program of study. The outline for such a major is presented in Tables 2 and 3. The latter shows a course percentage breakdown for each component within the major. Along with the performance component, the first tier of cross-disciplinary course work is comprised by a comprehensive core of courses representing biodynamics, motor control, and sport studies. Prerequisites may be mandatory but these can, in large part, be accommodated through the general education requirements as defined by the faculty of the college or university. Conceivably, core courses could be offered at the second level, and, in some instances, at the first-year level, particularly in selected courses offered in sport studies.

The final tier of courses in Kinesiology is at the upper division level. These courses are not core courses. They are required for certain specializations within Kinesiology and are open to election by qualified students from other disciplines and from professional tracks within the department. These courses and seminars are organized around a more focalized methodology and related set of substantive concerns in Kinesiology. Their intent is to disseminate knowledge and formulate questions which result in a specialized depth of understanding. The student of Kinesiol-

Table 2. Course areas in a kinesiology major.

Performance & Analysis (21% of program)
- personal skill development & refinement
- analysis of skill and game strategy

Cross-Disciplinary Theory Core (21% of program)

A. Required in 1st and 2nd years
- introductions to: study of sport
  biodynamics of physical activity
  dynamics of motor skill acquisition
- human functional anatomy and applied physiology
- measurement in sport and physical activity

B. Required in 3rd and 4th years
elective courses selected from the three sub areas: biodynamics; sport studies; motor control.

Professional Electives (11-15% of program)
- introduction to professional studies
- planning sport and exercise programs
- instructional design and analysis
- field experience
- exercise management
- sports medicine and athletic training
- foundations of coaching
- physical education for special populations
- advanced courses in cross-disciplinary sub areas
- sport management

ogy, whether in a pre-graduate (research-oriented) or liberal arts degree program (terminal degree intended at the bachelor's level) thereby acquires specialization which is anchored in the breadth which characterizes the core. The implications of this pattern of curricular organization are clear for the future scholars of Kinesiology. It paves the way to integration and uniqueness instead of identification only in relation to a parent discipline.

Professional education is accommodated in a cross-disciplinary model by the provision of professional options or tracks. Like their non-professional counterparts, these courses build from the core. Two kinds of courses can be so organized, but both kinds share two characteristics.

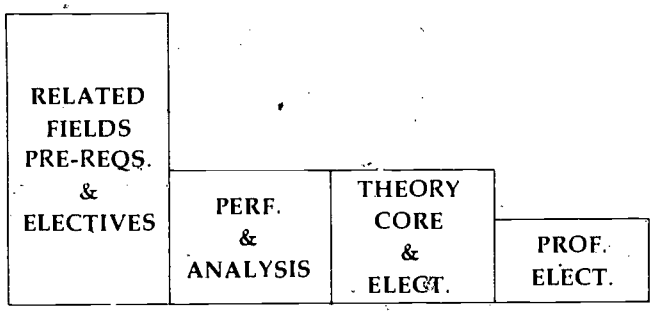
First, in these professional courses, disciplinary knowledge derived from the core is to be mixed with applied theories and oriented to professional roles and role settings. In short, the core courses in Kinesiology, for example, are not just niceties for a liberal education. They are important prerequisites to professional course work.

For example, a course which focuses on the examination of school physical education curricula gives primary attention to the design, planning, and implementation of programs in relation to findings from all three areas of Kinesiology. From human performance and motor control comes findings which have implications for exercise training regimens, physical fitness, optimization of performance, and skill acquisition. In sport studies, implications are derived from investigations of socialization into, and via, sport and physical activity. In the same course, curricular theory from a College of Education provides models for design, implementation, and evaluation which harbour nicely these applications from Kinesiology. The final ingredient in the blend is scholarship in physical education curricula. It is this kind of blend, through Kinesiology, that findings from relevant models and theories, and approaches from physical education and other professional fields bring uniqueness to professional courses within the department. That is, without such an approach, differences, for example, between a curriculum course in education and one in physical education become narrow. This situation is, therefore, akin to the difference between cross- and interdisciplinary in that the latter involves the same borrowing from and dependence upon parent disciplines, while the former requires the generation and integration of knowledge into unique packages.

The second characteristic of these professional courses, perhaps obvious by now, is that they are theoretical and scholarly in nature. That is, they are structured to give a free examination of the professional role or role setting. The intent here is not respectability in relation to kinesiologists, but rather to provide tested and testable theoretical constructs which serve as adequate blueprints for practice in the real world. To some extent, such theory and the specific findings and techniques which it anchors will always be *ad hoc*. But to grant immediate or direct

Table 3. Curricular components—a percentage breakdown.

Area	Lower Division % of 2-year total	Upper Division % of 2-year total	Total % of 4-year total
Performance & Analysis	20	23	21
Theory Core & Core Electives	27	3 10	21
Professional Electives	—	21–30	11–15
Related Fields & Prerequisites Electives	53	34–43	43–47



applicability is not to grant at the same time an uncritical, missionary zeal; the guiding norm is one of rational analysis in the interests of service to society. Professional education in any field is an important catalyst for change in the roles practitioners perform and in the settings within which they work. If this function is to be discharged, then nothing short of a free examination of roles and role settings, which includes where necessary a critique of existing operations and beliefs, is absolutely necessary. The term professional studies is, therefore, an appropriate descriptor for such courses.

This second characteristic of professional courses in the cross-disciplinary model is clearer when the roles of field experiences and internships is bared. Field experiences precede, accompany, and follow professional studies courses. Those which precede are designed for career selection and for introduction to the profession. Those which accompany and follow are structured to permit the student in whatever career track, to move from role observation, to role performance, to role analysis. These experiences, are, in short, predicated upon the assumption that the field provides the optimal site for *ad hoc* role training. Here the important tricks of the trade and situation-specific practices can be unearthed for what they are and mastered accordingly. These field experiences gain amplified meaning, however, because of their intercommunication with professional studies courses. That is, the relationship between theory and practice is planned in lieu of the sink or swim exposure to field work which was characteristic of days gone by.

In summary, professional courses have two characteristics. They require core courses in Kinesiology as prerequisite and they are structured to allow a theoretical and scholarly examination of roles and role settings. Two kinds of professional courses can be so organized. Which kind is employed hinges upon the number of career streams or tracks offered in a particular department as well as upon external requirements for certification. Put simply, some patterns of course organization require more time than others, and time required to complete the degree is often a pivotal factor in curricular decision-making.

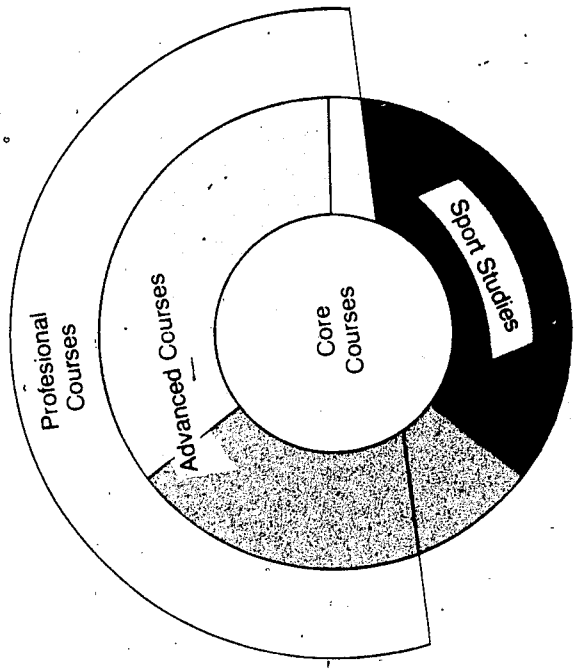
With one or two tracks, professional courses can be expected to be more role-specific or *ad hoc*. With many degree tracks, more generic professional courses may be prerequisite to role-specific counterparts. For example, a generic course which concerns itself with planning and programming for sport and physical activity may be prerequisite to a specific course on school curriculum for physical education, or a course on instructional design may be requisite to teaching methods for secondary schools. The question here is not with right or wrong kinds of courses, but rather, with different sets of assumptions which may be entertained. The advantages of the generic courses are: they provide training and education for careers which, while related to aspects of the schools, occur outside these institutions and differ in form and substance; they pave the way for students to view the entire picture of the work world of physical activity and sport, both within their own and across other professions; they provide a way of uniting students in the same profession, despite the fact that they may have quite different career plans: that is, students are equipped with the same models for problem-solving, speak the same language, and understand their common goals and heritage.

Generic courses are prerequisite, then, to the specialization which is inherent in a profession. Since this model of professional preparation takes the assumption that Kinesiological subject matter applies directly to work roles, it follows that certain of the three areas of specialization with Kinesiology apply more to some roles than to others. For example, a student in exercise prescription and management would be expected, after completing the core, to emphasize biodynamics and, perhaps, human performance (see Table 4), while a perceptual motor specialist would turn to motor control (see Table 5). Still others may desire the preparation of the generalist, as in the case of the master teacher. These kinds of degree patterns are demonstrated in Figure 2.

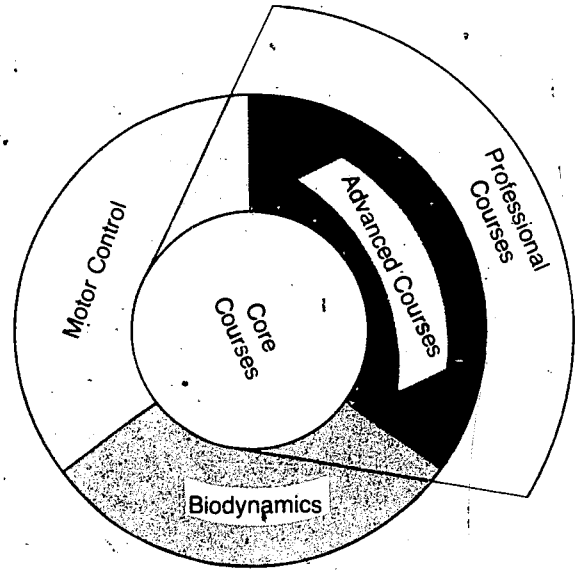
In the case of professional preparation for a career, then, the sequence in the cross-disciplinary model is summarized in Table 6. During the pursuance of a general education requirement, prerequisite courses to a major in Kinesiology are completed. Students then complete a Kinesiology core of course work, e.g., designated by a KIN prefix, integrated with performance courses. An introductory field experience course is preferable at this same time. Following completion of the core, and depending upon the institution, students next proceed to professional courses (designated by a KINPE prefix), whether career-specific or generic, and pursue other electives in

Table 4. Exercise prescription and management.

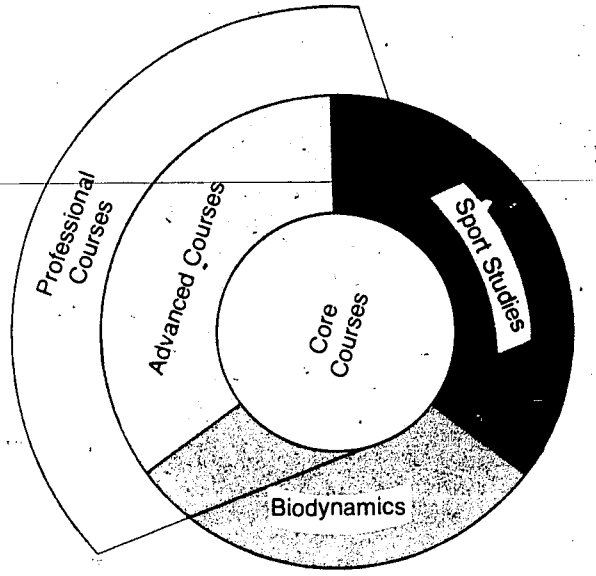
Related Fields Prerequisites	28%
Performance Core	21%
Theory Core & Electives	21%
including advanced electives in:	
Physical Growth and Development	
Physiology of Exercise	
Professional Requirements and Electives	15%
Introduction to Professional Studies	
Planning Sport and Exercise Programs	
Instructional Design and Analysis	
Exercise Management	
Sports Medicine and Athletic Training	
Field or Clinical Experience	
Related Fields Electives	15%
Physiology and Biophysics	
Organizational Behavior	
Marketing	



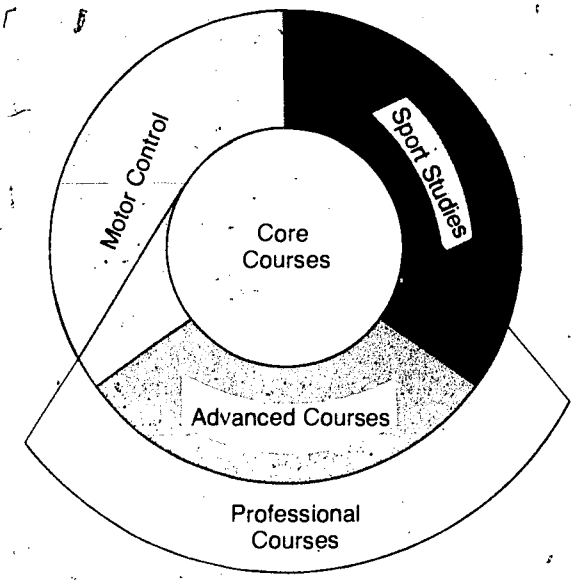
a. Sport Pedagogy and Sport Coaching



b. Sport Management



c. Early Childhood/Perceptual Motor Specialist



d. Exercise Prescription and Management

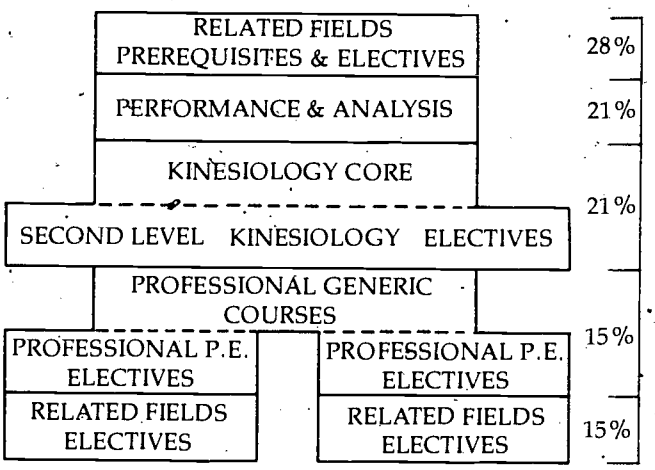
Figure 2. Cross-disciplinary model for undergraduate education. Four examples of special options.

Kinesiology. These professional studies courses are linked to field experiences which both precede and succeed this formal training. Students completing this overall sequence will have moved from an understanding of important phenomena, to questions and approaches surrounding their application and organization in professional work roles, and to direct experiences under field supervision in the real world. The goal at the end of the undergraduate program is successful role performance.

Table 5. Early Childhood/perceptual motor specialist.

Related Fields Prerequisites	28%
Performance Core	21%
Theory Core & Electives	21%
including advanced electives in:	
Human Motor Response	
Physical Growth and Development	
Professional Requirements & Electives	15%
Introduction to Professional Studies	
Instructional Design and Analysis	
Human Motor Performance	
Physical Activities for Young Children	
Physical Education for Special Populations	
Field or Clinical Experience	
Related Fields Electives	15%
Early Childhood Education	
Growth and Development in Psychology Home Economics or Pediatrics	
Child Psychology	
Recreation	

Table 6. Hierarchy of degree program components for two professional options.



Prototypes and Evaluation

Prototypes for the cross-disciplinary model continue to evolve in several North American institutions. While not all are identical in structure, these programs share a similar conceptual focus, namely, the study of human involvement in physical and ludic activity. While the model has withstood the test of time in some institutions, there is some evidence to suggest that it remains widely misunderstood by colleagues in more traditional professional programs. In fact, it is interesting to note that at least one prototype is divorced from all professional training while others may serve more than one professional option beyond the core, e.g., physical education, sport administration, and pre-physical therapy. Some colleagues have difficulty understanding this outcome.

Evaluation of this cross-disciplinary model has occurred in less formal ways than the desirable norm of experimental research. In the professional fields, students have enjoyed successes in job placement; graduates who become physical education teachers, in particular, have initiated school programs in which Kinesiological concepts are taught to elementary and secondary school students; their work is completed with an eye toward theory from both Kinesiology and pedagogy. Liberal arts graduates are as diversely occupied as those from other fields. Some are employed in fields which related to their education, (for example, the sporting goods industry) while others exhibit no such linkage. In relation to the research enterprise, the first generation of kinesiologists with doctoral degrees is just being produced, i.e., those who conform to the cross-disciplinary mold. It will be an interesting experiment to observe how successfully these individuals will compete for teaching-research appointments in higher education and to note whether these appointments will ultimately be restricted to the fields of Kinesiology or physical education. On the basis of the observations at present, these individuals appear to be fairing quite well both within and outside the cross-discipline of Kinesiology.

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PART III:

Accreditation of Programs?

Accreditation: Is the Horse Already Out of the Barn?

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The University of Georgia

Introduction

NASPE has been studying accreditation over the past three years, and this has been most appropriate. When the experience of other disciplines is examined, the accreditation process emerges as the most influential force in the design and conduct of programs of professional preparation. Since accreditation is relatively new in physical education, its impact has yet to be fully realized.

The author has served as coordinator for NASPE's study of accreditation. In this connection, the issues and problems associated with accreditation have been identified, evaluated, and synthesized. It is the purpose of this section to explore these issues and problems. In so doing, a major question must be confronted directly by the reader: Does the profession of physical education have anything to gain by participating in an accreditation procedure? It shall become apparent that there are numerous possible answers to this question. The author has come to the conclusion that there are many reasons why accreditation is worth pursuing by physical educators, and there are some qualifications which must be established in this regard. But first, some groundwork must be laid.

To begin, it is necessary to define the latest, fashionable jargon used in higher education, to differentiate between confusing terms.

Accreditation. The process whereby an *agency* recognizes a *program* of study or an *institution* as meeting certain predetermined qualifications or standards.

Institutional Accreditation. Involves a look at the entire institution without identifying the quality of any one of its parts. (Regional Accreditation Associations are examples.)

Professional Accreditation. A look at the quality of a professional program of study by agencies established by members of the professional discipline.

Certification. The process by which a *non-governmental* agency grants recognition to an *individual* who has met certain predetermined qualifications specified by that agency. (WSI, Scuba, and NATA are examples.)

Licensure. The process by which an agency of *government* grants permission to an individual meeting predetermined qualifications to engage in a given occupation or grants permission to an *institution* to perform specified functions. (Teachers—state grants a teaching license; state licenses a university to prepare teachers; university certification.)

If readers have read the *Chronicle of Higher Education*, they have probably recognized the increasing frequency with which articles on accreditation have been appearing. Accreditation is a proverbial "volleyball" which is being "sworn to" by professional associations and "sworn at" by administrators. It is a very live issue as the decade of the 1980's begins.

For example, in the June 16, 1980 *Chronicle of Higher Education* an article announced that Dr. Kenneth Young had resigned as president of the Council on Post-secondary Accreditation (COPA) after a five-year battle to keep the federal government from encroaching into the accreditation arena. Few physical educators probably bothered to read that three-column article, but many colleagues in *other disciplines* (those governed by accreditation) were very, very concerned that Dr. Young had thrown in the towel. The reason for this concern is that government has been trying to encroach into the accreditation arena for purposes of awarding federal grants. If Uncle Sam succeeds, faculty in physical education may someday be confronted by the stark reality that to qualify for a federal grant the program in which they work must be accredited by an agency representing their profession. Accreditation is, then, a process with far-reaching consequences. It is time that physical educators be given undivided attention.

History

Accreditation began in this country at the turn of the century. From its beginning, it was a non-governmental, voluntary process. This has made it a unique system in the world. In nearly every other country, programs and institutions are controlled and evaluated by governmental ministries of education. Accreditation did not become an influential factor in setting the standards of a profession until 1920 when accreditation developed into a controlling force in the field of medical education. They were the first to feel the impact of the non-governmental program of stan-

dard setting. Within less than a decade (1920-1930) the number of medical schools in the country was reduced in half as shoddy, inept operations were forced to close. This first accreditation process began with the financial backing from a foundation, and with it the medical profession accomplished through accreditation what many members of the AMA and the Association of American Medical Colleges had been endeavoring to accomplish for some years.

As a consequence, accreditation was established as an important and legitimate means by which a profession could raise the standards of education of its future members and exert further control over entrance into its ranks. This example was later followed in order by law, dentistry, business, chemistry, psychology, and countless other professions. It should be added here that some physical educators apparently studied accreditation in the mid 1960's, but the fruits of these efforts have been difficult to locate.

Physical education is today one of very few degree programs on the nation's campuses which has no professional accrediting agency monitoring standards that are established by the profession. Once again, there are consequences for physical education as compared to those degree programs that are being governed by professional accreditation agencies. These consequences span those which are fiscal and capital, although there is no doubt that many other departments on many campuses have used accreditation as leverage for new facilities, equipment, and supplies. These consequences can be traced to the very roots of physical education, including its definition and scope. What, then, has happened or not happened in the past 20 years with the absence of professional accreditation?

1. It appears that there is little or no agreement on *who* physical educators are. Today, there are an increasing number of scholars in the most prestigious institutions who want to be called historians, psychologists, sociologists, physiologists, biomechanists, but not physical educators. (This is not, by the way, a lobby for the name "physical education" *per se*, but the use of it as a collective noun is justified because of its heritage.) The point is, some persons are in a paradoxical position. They want to dissociate themselves from our discipline, yet contribute extensively to its scholarly literature.

Disciplines that established accreditation twenty years ago are not having these dilemmas. Scholars accept the parameters of their body of knowledge and subscribe to the standards which define it. Is the profession of physical education stronger or weaker in 1980 in the absence of such definitions?

2. It appears that there is little or no agreement on *what* physical educators do. After reviewing the well-conceived papers prepared for this publication, one may ask a pointed question: are divergent views of professional preparation *within* a discipline being presented, or is the question one of professional preparation in divergent disciplines? In connection with a pre-convention conference in 1980 on accreditation of graduate programs faculty from one of the most prestigious graduate programs (as identified by a recent survey) declined to attend. Their reason was: "We do not have a graduate program in physical education." Yet their graduate program, known by another name, is considered by colleagues as one of the very best in physical education. Disciplines that established accreditation twenty years ago are not facing this dilemma. They know who they are, what their product must be able to do, and they have identified ways to accomplish this goal. To return to the question, then, is physical education stronger or weaker in 1980 because of divergent views on the identity and functions of the field?

3. It also appears that there is a question of *where* physical education is going. This is the most serious indictment. Even more alarming is that physical educators have no established procedure for determining where they are going. Disciplines that established accreditation procedures twenty years ago have established an organized procedure for determining future directions based upon information systematically gathered from the public sector, professionals in the field, and the institutions involved in professional preparation. Today there is indeed diversity in physical education. It has had great impetus on our growth, but at the same time this has been growth without a unifying element. Perhaps accreditation would have provided that during the 1960's and 1970's.

Accreditation in the 1980's

There is, then, good reason to consider accreditation as the 1980's unfold. Yet, physical education finds itself handling the issue of accreditation at a strange time. Physical educators missed the golden moment in the 60's. Although accreditation seems to have well-served many professions during the past two decades, it is ironically enough, being challenged as never before in its history, just at the time when physical educators appear to need it most. Why is accreditation being challenged? Two primary reasons can be identified:

1. *Cost effectiveness* is one reason, and twin criteria are employed: cost in terms of financial commitment; cost in terms of faculty/administrative time. On the other hand, most departments and most colleges/universities would be willing to pay the PRICE (financial and faculty/administrative) *if* it was concluded that BENEFITS being derived were commensurate with the cost. What institutional/departmental benefits are being derived presently for the cost? There appear to be three which accrue to a single institution, including: self-study (a chore often delegated to an administrator); external peer evaluation (very valuable, but expensive); recognition of quality by the profession.

In addition, there are presently some collective professional benefits being derived for the cost: the provision of a data bank for the profession; the provision of a vehicle for identifying problems, addressing problems collectively, and implementing solutions; the way of transferring the profession's support to institutions to maintain standards in view of declining budgets, etc. These all sound like reasonably good benefits for the cost. Consequently, there must be an underlying reason why accreditation is being challenged.

2. The *validity of the accreditation process* being challenged is the second reason. The goal of accreditation is to establish standards, measure a department's program against those standards, and identify strengths to be commended and weaknesses to be corrected. But is there evidence for the validity of the standards? For the past seventy years, accreditation standards have focused on what this author calls RESOURCE INPUTS. Included in this category are the following: recruitment standards; admission standards; retention standards; administrative structure standards; faculty and support personnel standards; curriculum standards; library and technological support standards; facilities standards; financial resource standards. It is true that all of the above resources are important to departments of physical education. However, the issue focuses on how much of each and how many on each are required for quality. The research that has been done by COPA and USOE show that these independent variables taken individually, collectively in groups, and collectively in total have but a *low* positive correlation with a program's overall quality. The highest predictor was a student's admission standards. For years, accreditation agencies first doubted, then challenged, and finally accepted the fact that their standards were low predictors of quality, but resigned themselves that this was the best way known to evaluate a program.

It might appear at this point that questions of validity might bury the NASPE accreditation project, but there is more to be said on the issue. It is this author's view that accreditation may emerge from this crisis as an even stronger influence in the next 20 years than it has been for the past 20. The reason for this prediction is that accreditation is finally proceeding beyond resource inputs to program outcomes, i.e., to the students graduating from our institutions. The key to accreditation in the future will be the ability to measure these outcomes in addition to the more traditional recource inputs. All decisions about faculty, curricula, teaching methods, facilities, institutional and departmental governance, and finance can be rationally and deliberately determined *only if* there is some knowledge of their effects on outcomes! Furthermore, all of the terms being used today to evaluate education refer to outcomes. These include *efficiency* (the ratio between outcomes and resources employed), *accountability* (the ability to produce outcomes that are commensurate with costs), and *management* (the selection of technologies that will produce the best *outcomes* in relation to the amount of employed resources).

In each case, the assessment of outcomes need not be so precise and expressed in cardinal numbers, but we must be able to get a subjective reading at least. There is no way to solve questions of value by easy quantitative formulas. In the opinion of the author, this is especially so in education where the purpose is to facilitate the sound development of a unique human being. Statistics are no substitute for judgment.

There are better ways and poorer ways of approaching teaching, research, and service. The most efficient ways are those which yield the highest ratio of results to costs. Colleges and universities could be more efficient if they paid greater attention to discovering their outcomes. At present, colleges and universities, and yes, physical education departments, know very little about their results and next to nothing about the effects of change in their procedures and methods on results. What passes for evaluation has little to do with the outcome, what happens to students!

Without a knowledge of outcomes as it pertains to students, physical educators are destined to merely follow tradition, or do what is expedient in the light of prevailing pressures, or be vulnerable to every fad that sweeps education, or manage by intuition, or maybe all of these! (We have all attended faculty meetings where scholars debate educational or curricular policy and make speeches on the advantages of this requirement or that without the remotest notion of what difference their proposals will make on the students, the outcomes).

The author has concluded that physical education, by virtue of its being twenty years late, can definitely benefit from accreditation and become a *leader* in the field of accreditation. There are, however, some qualifications.

1. The study of outcomes in physical education must avoid the confusion of resource inputs. How can a real measure of program effectiveness in physical education be derived, i.e., how do our students change and grow as a result of their college experiences?

2. Assessment of outcomes should be based upon the study of alumni as well as of students. There should be interest in the values and attitudes of alumni, their interests, their citizenship, and their careers as they may have been affected by their college experiences.

3. Assessment of outcomes should be concerned with change in students as a result of their college experiences, not merely with their absolute level of performance during and after college. The outcomes to be measured center around changes, not absolute performance, as the criterion of a true educational outcome.

4. Assessment of outcomes must be practical, not too time consuming or expensive. It should concen-

trate on major goals and avoid trivial detail. It can be based on small samples of students and alumni and not attempt to cover the universe.

5. Assessment of outcomes should be related to the special missions or philosophies of a particular department. A department should not have to adjust their goals and programs to the requirements of a standardized evaluation scheme, or measure its performance to uniform set standards established by NASPE or any other group. However, they should be held accountable for affecting change in their students. The documents which were presented in Detroit last year dealt exclusively with resource inputs. This information will continue to be a source of valuable guidelines and measures, but only useful in terms of outcomes of the programs.

Now that the issues associated with accreditation have been identified and analyzed, it should be clear that there is a yet-unreaped potential associated with the process. There are also some immediate problems which must be solved, especially those related to the measurement of outcomes from programs of professional preparation. When it comes to the selection of valid measures, subjective judgments of competent peers will be a central as quantitative, objective data. Despite such initial problems, the benefits associated with accreditation, in the author's opinion, off-set the costs. Accreditation can serve well the profession of physical education during times such as these when diversity clouds both its identity and purpose.

PART IV:

Analysis and Synthesis

Professional Preparation: Quality and Diversity

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Introduction

The ntral theme of this publication and the 1980 Detro.. conference has been diversity; the major goal has been quality. It seems worthwhile to examine each concept and the relationship between the two. Anderson's (1980) review of previous professional conferences was helpful in putting this particular conference in perspective. Those earlier conferences asked what is the best way to prepare a person to teach physical education in schools and resulted in the development of standards for professional preparation programs. Here, however, a broader question is addressed: What are alternative ways to prepare physical educators for a range of professional responsibilities? The emphasis has been upon understanding each of the models rather than upon identifying and endorsing the best way to accomplish the task. Anderson anticipated that some would react with frustration to this diversity and lack of national unity. However, NASPE's decision not to endorse a program model for professional preparation of the physical educator does not indicate the absence of a policy. It is a visible, forceful statement of commitment to pluralism.

Pluralism is more than the passive tolerance of differences, more than a reluctant admission that compromise is impossible. It is a strong commitment to the fact that diversity is desirable, that diversity does not merely lead to progress, but that diversity *is* progress. Ellis (1980) has described rather convincingly the strengths of pluralism in responding effectively to client needs and to changing social conditions. Sociologists have suggested that the building of knowledge does not proceed in linear fashion but involves struggle between alternative paradigms or world views followed by sometimes sudden shifts in basic perspective. (Ritzer, 1975) In addition to this pragmatic belief that diversity builds knowledge, our ability to embrace those different from ourselves is perhaps the deepest and most significant expression of our assessment of the unique qualities of each human being. A true commitment to pluralism indicates that our goal is not unity but dialogue. NASPE's willingness to publicly affirm alternatives rather than a single standard approach to professional preparation is an important step.

Our commitment to pluralism does not diminish our need for coherence, our need to make sense of it all. Many of us are searching for a comprehensive program design which can accommodate the preparation of professionals who provide physical education for a variety of clients in a range of settings. Declines in enrollment in teacher education programs were followed by band-wagoning for "non-teaching" options. (Considine, 1979) Such options often were tacked on to existing programs without careful consideration of the total program. After an initial flurry of activity, more thought is being given to the search for a coherent design for the whole program.

There are both practical and philosophic reasons for this search. In an era of limited resources, it is not feasible to develop a separate program for each professional speciality. In most universities the same basic program must accommodate all of the options. For the student this has the advantage of permitting more flexibility and perhaps simultaneous preparation for more than one professional role. Such multiple preparation maximizes employment potential and responsiveness to future trends in the job market.

This search for program coherence is originating at the local, not the national level; that is, it is not important nor desirable that there be national agreement upon some common program design. At the local level it is more necessary and more realistic to identify a coherent program philosophy and to develop a program consistent with it. The faculty at any institution are certainly a diverse group, but they share a common context and common concerns and they have the opportunity for the prolonged deliberation necessary to build a consistent, logical program model which effectively provides preparation for physical education professionals who will serve a range of client populations.

The Four Models

Each of the four models presented could serve as such a comprehensive program design. Each could presumably be expanded to include preparation of teachers and other professionals regardless of whether the presentors have done so. It should be noted that the absence of such an extension does not reflect neg-

ligence on their part. Each group was requested to describe a model in its current state and not to explore possible extensions of the model. They have thoroughly well-performed this task. Yet it may be helpful to us to explore the viability of each model as a comprehensive program design.

Bruce Joyce (1975) has discussed various conceptions of human beings and of education and has analyzed the implications of these conceptions for teacher education. He proposes that teacher education was built around a prevailing industrial conception of education oriented toward efficient attainment of outcomes, particularly literacy and occupationally-related skills. Against this backdrop, Joyce identified four major reform movements which have had some impact on teacher education in this century:

1. The Progressive Movement
   Education—knowledge emergent from group process
   Teacher—problem-solver group leader
2. The Academic Reform Movement
   Education—induction into practice of the discipline
   Teacher—practicing scholar
3. The Personalistic Reform Movement
   Education—provision of diverse, growth-inducing environments
   Teacher—self-actualized person, "gentle guide"
4. The Competency Orientation
   Education—system to provide for assessed needs
   Teacher—systems engineer with repertoire of skills

Although Joyce's analysis was limited to teacher education, it seems applicable to the preparation of professionals who deal with physical education in settings other than schools.

The competency-based model (Engberg, Harrington, and Cady, 1980) described at this conference can be easily categorized. Joyce describes the competency orientation as a logical extension of the industrial conception of education with its emphasis upon efficiency and accountability. However, the sought outcomes have expanded beyond literacy and occupational skills to include a broad range of human needs. Cybernetic analogies, systems analysis, and improved technology have made delivery systems much more sophisticated and have permitted individualization of the content, rate, and mode of learning.

The competency-based program described here addressed only teacher education but it could be used as a model for a comprehensive program. Expansion to include professional roles other than teaching would require a process similar to that used in the development of a teacher education program. The positions for which students are to be employed would be selected and a team of university faculty and persons currently employed in such positions would identify the competencies needed to perform the role. Any competencies identified as essential for all physical education professionals would constitute a core program. Program components would have to be added to develop any competencies not currently provided by the teacher education program. One of the practical difficulties with this approach is that each new option requires a new planning committee to integrate new competencies with the existing programs which is a difficult task. However, an advantage of the competency-based approach is that its reliance upon modular learning would permit small numbers of students to pursue specific alternatives through independent learning.

Both the cross-disciplinary (Morford, Lawson, and Hutton, 1980) and the kinesiological sciences (Husman, Clarke, and Kelley, 1980) models seem to exemplify the academic reform movement. The teacher (or other professional) would become a practicing member of the discipline who would subsequently induct students/clients into the discipline through either deductive learning or inductive process-centered learning (Joyce, 1975). In both programs, a core of kinesiology or kinesiological science would precede any preparation for a professional career. The primary differences between the programs are the use of a broad fields approach in the cross-disciplinary model and the differing role of performance courses. Performance mastery in specified number of courses is viewed as essential knowledge in the cross-disciplinary model while in the kinesiological sciences model, activity courses are taken merely to provide background for theoretical analysis.

Professional skills and knowledge would be developed subsequent to the completion of the core. The student, having become a practicing scholar in kinesiology, would now begin professional study. In the cross-disciplinary model a broad fields approach is again emphasized. Generic professional courses applicable to teaching and to other physical education professions examine issues from a scholarly perspective. A practical advantage of such generic courses is that small numbers of students with a particular speciality can be absorbed into the program with little extra expenditure. The generic approach may also increase the student's professional flexibility.

The kinesiological sciences model as described has no professional mission although some of its liberal arts graduates were cited as having accepted professional positions. If the model were extended to become a comprehensive design for the total program, course work needed to acquire professional skills and meet certification requirments would be added to this required core. In contrast with the cross-disciplinary model, students would generally be sent to other academic units to acquire necessary professional skills, i.e., to education, business, journalism, etc. Few additional resources would be needed to offer a wide range of professional options because the resources would be available in other academic units.

One practical problem may be the total number of hours required to complete both the kinesiological sciences program and the professional preparation requirements. The recommended solution was a fifth year for professional preparation. Another issue relates to the responsibility for the professional qualifications of liberal arts graduates who are employed in professional positions without professional training. The responsibility for evaluating professional qualifications has shifted from the university to the employer. In situations without certification or licensure requirements, e.g., exercise centers, private schools, etc., neither the government nor the profession currently has influence upon these decisions.

It is more difficult to place the subject-matter centered model (Locke, Mand, and Siedentop, 1980) into one of Joyce's classifications. The learning resource center employs the technology common to the competency-based approach. The continuing seminar with it emphasis upon camaraderie between faculty and students suggests the personalistic reform movement, but the collegial relationship is also consistent with induction into a community of scholars. Upon close examination the emphasis seems to be upon education as induction into the discipline, but the discipline has been defined as activity-centered rather than concept-centered. The definition of play activities as the subject-matter of physical education and the identification of mastery of subject-matter and increased engagement in subject matter as the primary purposes of physical education are clearly consistent with the principles of the academic reform movement.

The subject matter-centered model would presumably continue to use physical education activities as the organizing centers in the preparation of a physical education professional. Since the activities in the entry core were selected because of their appropriateness in articulating activity with the knowledge base, there would seem to be no need to modify this core if the program were expanded to prepare professionals other than teachers. The subsequent activity sequence which is representative of the subject matter of physical education and of client interest might require some modifications if a wider range of professionals were being prepared. In addition, appropriate new modules would be added to the learning center and relevant internships would be arranged. However, the basic structure of the program would remain unchanged. Relatively few added resources would be needed because of the reliance upon the learning resource center. This individualized delivery system would also permit offering options with low enrollments because there would be no concern about minimum class sizes.

One word of caution—the lines I have just added to the drawing of each of these models are my lines. The presentors might not agree with my extrapolations. I have taken the risk and proceeded with my speculation because of the urgency I feel about handling the program coherence. Each of these models has an internal consistency which could provide the basis for comprehensive and coherent programs and for research regarding the professional preparation process. To build a body of knowledge about any subject it is necessary to frame one's research questions in the context of a theory. Although each of the proposals begins with a value judgment of what ought to be, each also contains hypotheses which could be empirically tested. Research comparing the effectiveness of the models is of limited value because they are not aiming at the same goals and therefore share no common criterion of effectivenss. But the components of each model can and should be evaluated. Perhaps each institution has the obligation not only to develop and justify a comprehensive professional program, but also to conduct both program evaluation and professional preparation research.

It is interesting to note that three of the four models presented seem to fit into the discipline/subject matter-based category. Does this reflect the direction in which we are headed or merely the biases of the planning committee? Are there models of progressive or personalistic professional preparation programs in physical education?

One of the clearest descriptions of the application of the progressive philosophy to physical education has been the work of Rosaline Cassidy. The chapter in Cassidy and Caldwell (1974) on the development of units of instruction portrays the teacher's role as the leader in a group planning process. This recent work also reflects a strong influence by Maslow, Combs, and others associated with the personalistic movement. Don Hellison (1978) has been a major spokesperson for the personalistic approach in physical education. He describes the teacher as a helping, caring person whose role is to assist students to clarify and attain their own goals. It is uncertain whether there are existing professional preparation programs which utilize these approaches. The absence at the conference of models exemplifying the progressive and personalistic movements and the heavy representation of models from the academic reform movement is significant as is the increased presence of college and university faculty other than teacher education specialists. The emphasis in colleges and universities upon scholarship and disciplinary study appears to be having a dramatic impact upon our perceptions of professional preparation.

One issue raised in the preceding papers concerns the definition of the discipline: Is the substance of physical education best defined in terms of movement activities or in terms of scholarly perspectives used to examine movement? That issue may be of little interest or consequence to those whose commitment is to the progressive, personalistic, or competency orientations since none of these approaches uses the structure of the discipline as the basis for program development. These models instead advocate the selection and struc-

turing of curriculum content around student needs and goals. The academic reformists object to this instrumental use of the content area which they see as intrinsically valuable and worth knowing for its own sake. The apparent lack of discussion of this issue could indicate a growing acceptance of the intrinsic value position, the non-attendance of the instrumentalists, or a failure to recognize the significance of this fundamental difference in positions.

One question persistently asked is whether it is possible to be eclectic without being contradictory and inconsistent. I have become increasingly convinced that the answer to that question is no. Such a denial of eclectism does not imply that there are not elements common to more than one program model. Individualized modular instruction or problem-solving methodologies could be used to develop competencies, to acquire disciplinary knowledge, or to reach personal or social goals. Information about the mechanical analysis of skills could be identified as a necessary competency for teaching, as an essential component of the body of disciplinary knowledge, or as information with personal meaning to the student or students. There will be common program components but the principle for determining what is to be included differs in each program. With the exception of the progressive and personalistic movements, those principles for program development seem mutually exclusive. Development of a comprehensive, coherent program design requires a commitment to one alternative. The process of selection and implementation of a model will involve both examination of models and clarification of personal values.

What is the role of a professional association in this process? How does NASPE contribute to the overall quality of professional preparation and professional practice? Historically AAHPERD and later NASPE disseminated standards which were prepared and approved by leaders of the professional organization. Although compliance with standards has been voluntary, NASPE's increased involvement in the NCATE accreditation process is anticipated. How does one reconcile the desire for standards to guide practice with a commitment to diversity? My suggestion is that NASPE's role is twofold. Clearly one responsibility is to provide a forum for debate and deliberation. Perhaps the most potent force for quality in education is the need for public justification of one's ideas, one's program. Dialogue and debate not only subject one's work to critiques by others but the process of explaining and justifying often leads to clarity and understanding of one's own assumptions.

The other role of a professional organization is political. Anderson raised questions regarding the degree to which a conference such as this would improve teacher education and subsequently public school physical education programs. He cautioned us about expecting a conference to have a marked effect on what is conducted in the gym. I wish to take this caution one step further and say that to attempt to cure the woes of public school physical education by increasing the competence of the individual teacher may be a sophisticated example of blaming the victim. If only the teacher would get better and try harder, school physical education would be saved! My observation is that our new teachers already have more skills and knowledge than permitted to use. What needs to be cured is the system and not just the individual teacher. Given reasonable class sizes, administrative support, and relief from the domination by athletics, many teachers can teach! We need to be prepared to participate in the political process necessary to effect these changes. We need to be prepared at every level (NASPE, the university, the individual teacher).

How does NASPE fulfill this political role? One major approach may indeed be the dissemination of standards. Standards are not the mechanism to create quality innovative programs. But standards may be an effective political tool to influence administrators to allocate adequate resources so that a quality program can be developed. Standards are the responsibility of a professional organization, but program development remains the responsibility of faculty at the specific institution. When standards are viewed as a political tool it is easier to write them in such broad terms so that they will accomodate any one of several program philosophies. Dissemination strategies must bring standards to the attention of administrators; the planned involvement with NCATE seems to be an effective political strategy.

AAHPERD's political strength would seem to be greater than that of NASPE. In depth discussion of innovative programs may require a conference just for physical educators. However, our political survival may require maintaining our alliance with health, recreation, and dance. This will involve thoughtful consideration of issues resulting from our broadened vision of physical education as more than school programs. Many of the new professional positions do not fit nicely into our present classification scheme. Who should prepare the person employed by an industrial firm to conduct exercise programs, to lead seminars on wellness, lifestyles, and stress management, to teach racket sports and swimming, and to manage the employee recreation programs? Although immediate reactions tend to be territorial, the more logical response seems to be a revamping of the hard lines of demarcation developed during an era of identity-crisis. This thought process seems to have begun at the local level in some institutions although it is not yet visible at the national level.

Professional organizations cannot be expected to be innovative and risk-taking. Such organizations are inherently bureaucratic and reactive because they must respond to and represent a widely varying membership. Maintenance of this broad coalition provides a base for political power but it necessitates an eclectic,

middle ground approach to program issues. Innovation and excellence will depend upon the development of model programs by small groups of dedicated professionals and upon an organizational structure which provides mechanisms for the sharing and examination of our diverse efforts.

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Textures

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Introduction

Wedged somewhere within the many fine comments made in the two opening papers were several statements which bear directly on my analytical and synthetic task. Both, in their own way, were warnings. The first warning (Ellis) was that we sensibly ought to find our way between knee-jerk optimism and destructive pessimism. The second warning (Anderson) was that we had best not yearn for unity and that we resist the temptation to try to create a false vision of unity by pretending that all these diverse points of view can be neatly fitted together into some grand design.

Now, of course, both of the warnings must be heeded, at least by you, the reader. What I want to do is ignore the warnings. I am going to stress optimism; I am going to try to fit together what are thought to be diverse views. It will be for you to determine whether or not my approach is a knee-jerk or pretentious.

My plan is as follows. There are two parts to this paper. First, I will say a few words about analyzing these papers, in which I will not analyze, myself. Second, I will say many words about synthesizing the papers, in which I will synthesize, myself. The synthesis will depend upon the simple idea of what I will call texture. And texture, in turn, will be discussed in the three manifestations of pretext, context, and the text itself.

Some Words on Analysis

Please remember that each presenting team was requested to encourage the conference participants and readers to clearly understand the position their program endorses with respect to professional preparation in physical education. It is my guess that the written explanation and charting more than adequately meets this stipulation.

It is also my guess that each of these approaches to physical education undergraduate preparation, by now, has gone under the analytical knife. Although some of this is destined to be with well-polished but blunt knives, for the most part most of the poking, cutting, shaving, slicing, and whittling was with a sharp and incisive knife.

I will offer a few suggestions which we must always keep in mind when making a legitimate effort to understand projects such as these:

1. Attend closely to the stipulated assumptions given in each program. It is here that we must think close and hard, for if assumptions are given, conclusions are difficult to deny.
2. Try to think of some assumptions which have not been stipulated in advance. You might ask yourself: "What have they assumed to be true in order for their position to ring true?"
3. Try to stick to the content of the paper and not to the background or personalities of the team presenting them. Nobody gets anywhere by using the tactic of arguing "to the person".
4. Try not to condemn these teams for failing to answer questions they did not ask.
5. Do not criticize them for posing questions they admittedly cannot answer. They should be thanked for posing the question and for being candid enough to admit that they don't know the answer.
6. Perhaps you can see other possibilities for their approaches they have not seen. In other words, *given their assumptions*, there might be some equal or better alternatives they have not considered.
7. Please be generous enough to know that even if you can show them to be in error, you have not thereby shown that your approach is right. The burden of proof remains with you to show how your alternative improves the world.
8. Maybe there are some disadvantages to their proposals that they have not seen? Identify them for yourself. Maybe there are some advantages they have missed. You are obligated to point them out as well.
9. Look carefully to see whether or not, in your mind, the prescriptive program meets the descriptive state of affairs. In other words, does their approach solve the problem with which they are grappling?
10. Finally, remember that practice ought to be the consequence of thought. Ultimately, the genuine test of some of these ideas will be to try them out.

I think that these teams are to be sincerely congratulated. They have each conjured up an approach which issued from reason and which they ultimately know must appeal to logic. Of course, the papers are not unassailable, nor are they entirely clear given their occasional lapses into jargon and mystification. But they have been created and presented with the good

intentions of giving substance, choice, and work to be done. Although the individual commitment to their approaches must not be underestimated, they have all presented their views in the best spirit of disinterested scholarship. For this, we express thanks.

Many Words on Synthesis

Taken individually, these approaches are quite worthy of our continued reflective attention, criticism, and experiment. Taken collectively, these papers may be cause for some quiet celebration. Indeed, I think the basic conference theme (Progress through Diversity) has not only been satisfied in these papers, but in fact extended one step to the theme for my synthesis: Likeness in Diversity. We are, as a field, becoming textured. In my opinion, it is both good and true that this is so.

Texture is that which has structure or body. The word is commonly used in reference to an aspect of material objects, such as hair, bread, or a fabric. When so used, we mean that the object has more than one dimension to it, or that it has a feel or a certain quality not present when the same object is untextured. For example, if we speak of a textured ceiling, we mean that it is of a given character or pattern, that it has undulations, or that it is in some way thicker than ordinary ceilings.

It is somewhat dangerous to use this word when speaking of a non-material object, such as a field of study. There is a certain meaning the word brings forth which helps me in seeing the similarity between diversities to which I have referred.

It is appropriate to speak of the texturing of a field in this way because *it is the form not the content which makes the field textured.* Even with the texturing of the material objects, texture results more from the way the strands are woven, or the way the paint is plastered on the ceiling, than from differences in the strands or pigments themselves.

Reflect back for a moment on the working definitions of the subject matter put forward in each of the four approaches to undergraduate study in physical education.

1. (CBTE)[1] ". . . Physical education (is) the study of human movement phenomena, including the play element in our culture."

2. (SMCM)[2] "Play activities in the form of sport, games, dance, exercise and outdoor activities are the subject matter of physical education."

3. (CdDM)[3] "kinesiology will be used as the subject matter explored . . . ," involving various factors associated with the status and ability of the individual to engage in physical and ludic activities, the role of these activities in culture, and the contribution of these activities to individual development.

4. (InDM)[4] ". . . human movement and sport (are) the subject matter core of kinesiological sciences . . . and the program was designed to impart to the student a scholarly understanding of the human being as an individual engaging in the motor activities of daily life which serve as an expression of his/her physical and competitive natures."

Essentially, these are the answers each team would give to our question concerning *what* we are to be busy about. One does not have to ponder over these working definitions very long to discover that they are far more alike than diverse. Except for the turn of a phrase or two here and there, maybe preference for more or less specificity, and an occasional difference in word choice, these "whats" are quite alike; our subject matter is (for the sake of economy and convenience) motor play activity.

If there is likeness here, then what is diverse? Well, the *what* may be largely shared; the *why* and *how* are the causes for diversity. These approaches differ on reasons for studying our subject matter. They differ on how that subject matter is to be studied. Regarding the why: some say because we are to be teachers of it we had better know it to excel at teaching it to others; others say because the study of it will lead to a career of one kind or another in addition to teaching; others suggest we study it because it is there to be studied and that is good in itself regardless of what comes of it. Regarding the how: some say that we ought to experience it first and foremost, and thereby study its nuances; others want us to intellectually master it, yet at the same time such mastery will be enhanced if we experience it too; others suggest that we ought to largely sit still and measure or think over this subject matter. In short, the whys are both instrumental and

[1](CBTE) refers to the Competency-Based Teacher Preparation paper. Presentation of program at Washington State University, Mary Lou Enberg, Wilma Harrington, Lillian Cady, Chicago, IL, Nov. 6, 1980.

[2](SMCM) refers to the Subject-Matter-Center Model, "The Preparation of Physical Education Teachers; A Subject-Matter-Centered Model," by Lawrence Locke, Charles Mand, and Daryl Siedentop, presented in Chicago, IL, Nov. 7, 1980.

[3](CrDM) refers to the Cross-Disciplinary Model, "Undergraduate Physical Education: A Cross-Disciplinary Model," by Robert Morford, Hal Lawson, and Robert Hutton, presented in Chicago, IL, Nov. 7, 1980.

[4](InDM) refers to the Interdisciplinary Model, "A Disciplinary Model for a Curriculum in Kinesiological Sciences," by Burris Husman, David Clarke, and David Kelley, presented in Chicago, IL, Nov. 6, 1980.

intrinsic; the hows are both dramatic and discursive. These whys and hows make up the form of the field; it is the form, not the content that renders it possible to speak of texture. Let me be even more specific.

Everybody has probably studied, at one time or another, Henry's (1964) paper. Indeed, many have referred to this piece as a classic. What if there is another way to see this notion of what, exactly, constitutes a discipline? If this were so, there might be good reason to reevaluate the gist of our modern literature (the last twenty or so years) and the significance of what meaning it has for us. In brief, it might be that it has only been in appearance that we have been steeped in earthquake-like spasms which are said to be rending open the field leaving a fault line into which we will all tumble, being swallowed up like so much sand and silt. The rumblings may be far more, in reality, perhaps like the orogenic behavior associated with the birth of mountains (or at least small terraces), from which more, not less of the world, enters our vision.

What I am wondering is whether or not we have the right notion of the nature of a discipline in our collective heads. Henry did not put it in our heads all by himself, of course. We were ready for it. We have kept this notion of what constitutes a discipline before us for all these years. It is taken for granted, by Henry and by most of us as well, that a discipline is (in his words) "an organized body of knowledge which may be acquired without an eye to application". He goes on to say that the content is "theoretical and scholarly as distinguished from technical and professional". In other words, the notion of a discipline is that it is content-specific.

But what if a discipline is form-, not content-specific? Such an outlook goes against our normal thinking about what constitutes a discipline. Indeed, much literature outside the physical education field, even the normal and popular use of the word discipline, points to the content-specific meaning of the word: the body of knowledge (organized, preferably). If the original meaning of the word, *discipline*, is reviewed one wonders how it came to be used the way it is. Instead of being concerned with academic or abstract theory, discipline actually has more to do with practice or exercise. Discipline means the instruction of disciples. It refers to a course of training or instruction. It means something that is a process or act of a learner. It does not refer to that which is taught, so much as it does to the fact that it is taught or the form in which it is taught. What is the antithesis to discipline is not the profession, but the *doctrine*. It is the doctrine which is taught. Doctrine is what is possessed by the teacher. Although doctrine may be a body of instruction, it is generally taken to be that which is laid down as true concerning a subject. The word doctrine is closer to the meaning ordinarily given to the word discipline, it being the system of principles or tenets. Thus, the doctrine is the subject matter; the discipline is the form in which the subject is approached or given to the learner.

I may not have advanced the reader very far with this distinction. One could say that I have simply substituted the word discipline for the word profession, and in place of the ordinary use of the word discipline I have chosen to use the word doctrine. Thus, one might say, we are still left with the original problem of theory versus practice only couched in different terms. Then we would speak of our "new doctrinarians" and our "old disciplinarians!"

But it does seem to me, at least, that this way of seeing things does make an interesting difference, and in at least two ways. First, if what I have noticed to be true about what these four undergraduate approaches to physical education largely agree upon (the *what* we are to study), then instead of being at war over discipline/profession matters at the expense of the field, they in fact (noisy though they may be) are cooperating (perhaps unknowingly) in creating the disciplinary texture of the field, all of them, to a one. They hold the doctrine, the subject matter, in common. What are considered perverse in each other's scheme of things actually are only diverse disciplinary forms spawned by the inherent nuances of the doctrine or subject matter. In other words, they are friends, not foes.

Second, this way of looking at the noting of what constitutes a discipline also suggests the possibility that it is by giving form to the doctrine that the doctrine comes to be at all. It may be that content is only a phantom or ghost until it becomes embodied in a form. Sometimes we get the idea that there is this "body" of knowledge sitting around somewhere, someplace, having been created by us but stored in some tidy location to be served up at will. If, by a body of knowledge, we mean ideas, or facts, or judgments then we surely ought to know better. It is in giving expression to ideas and facts that they become manifested. Visions of reality are given by means of an expressive act: a word; a movement; a gesture; a piece of music; a novel; a proposition; a dance. We give that vision a body. Hence, in giving shape or form to a doctrine (let us say, the subject matter of our field) we are expressing it. The expression of it may take a variety of forms. Until it is expressed, it does not exist. In a way then, it is true to say that until such time that there are competing disciplinary forms giving expression to a doctrine or subject matter, the doctrine is not embodied and access to it is denied us.

The mere fact that there are thought to be diverse ways of obtaining access to our subject matter, some discursive and some dramatic, and that there are a number of some intrinsic and instrumental explanations which make access to it desirable or necessary, are illustrative of a present conditioin in physical education which calls for celebration, not despair. As we discover and elaborate different ways or modes of knowing our subject matter, we are discovering and elaborating the doctrine itself. In the physical

education field, as in most others, our answering defines our questioning.

Please don't think that I am underestimating the quite real differences between the approaches to undergraduate study in physical education. No doubt many of the people representing these different approaches think each other are twits, and that the respective approach for which they are singing is mere twittering. This is possible because there are fundamentally different answers being given about our question. For example, there are differences with regard to:

- whether and how to prepare teachers and coaches;
- whether knowledge learned discursively (by mind) necessarily matters in teaching motor play skills;
- whether research in the so-called basic areas will ever improve the just-as basic realm of the teaching act itself;
- whether the basic research should even be expected to improve the practice of teaching;
- whether the teaching act itself is in need of special research attention or is merely a technique picked up along the way, preferably in the department of education;
- whether thinking and doing are reconcilable;
- whether there is in thinking a special kind of doing, in doing a special kind of thinking;
- whether there are any number of differences regarding time, method, vocation, skills, and the like.

What I am suggesting is that these differences are with regard to form, not the content. In exploring these four approaches (and others in existence or presently being conceived) we are discovering features of our content we scarcely knew existed twenty and more years ago. The word diversity, after all, means something like a turning, strictly speaking, a driving about. More literally, we take it to mean something which has multi-forms. The multi-forms for the ways in which ludic activity (in the largest of senses) manifests itself, have a shared likeness because of the shared doctrine. We can see the likeness if what is implicit in these proposals and programs is examined. In making the implicit explicit, we find this similarity appearing in at least three ways. These are the pretext, the context, and the text itself.

Pretext

These four approaches to undergraduate study are alike insofar that they reject pretext. Remember that pretext means, figuratively, a *weaving before*. Making pretext is to adorn. It sometimes means having an ostensible reason for something, such as using the pretext of playing chess in the middle ages to get into the bed chamber of a lady or a man, the modern version of which is the invitation to come on up and "see my etchings". In these papers pretext is shunned with regard to two important themes.

First, each team is wise enough to allow their approach to be no more than it appears to be. In this they have cautioned the readers or listeners to look and see for themselves, to study the assumptions and the limitations, to realize that the approach in question will not satisfy everyone, to understand that there are a host of contingencies associated with the approach in question, to understand the problems the particular approach is aiming to solve, and so on. Further, they have not made the mistake of giving us an either or situation. They each seem to acknowledge the possibility of an excluded middle, and they appear to know that their differing approaches are not mutually exclusive—contrary, but not necessarily contradictory. Thus, even though these teams are quite committed to their models and some are publicly or privately betting on their way "for our continued good health", none of the teams have attempted to weave before, they are not twits in the older sense at least, which meant a creating of weak or thin places in an uneven spinning of the yarn. They do not appear to be trying to spin the whole fabric by themselves which would inevitably result in thinness, i.e., fabric without texture.

Second, they are not "weaving before" the ultimate character of the doctrine itself. We have not witnessed in these papers the workings of true believers, of fanatics who, as Santayana has said, redouble their effort after forgetting their aim. Quite the contrary. The candor with which the field is spoken about can be annoying. There is nothing here of the child's confidence in the infallibility of their parents. These teams have their eyes wide open. They see things as they are. Gone are the days when we could (or would) claim more for our field than we could demonstrate to be true. I would not say that we are looking coldly at the field, but we are looking more carefully. We appear to be trying to discover for ourselves what is or is not the case with respect to ludic activity. Even if we intuitively understand that there is something rather special about this human inclination to play, we are apparently, and finally, patient enough to find out what it is precisely. Even if we think play might be an Amtrak to heaven, these approaches ascertain that we have not mounted a donkey. In this regard, these four approaches are shunning the pretext of being more than they are known to be; they are creating forms in which the field will be all it can be.

Simply put, what is alike in these proposals is that in their collective refusal to "weave before", they have placed both their proposals and the nature and significance of the subject matter *in front of us, not behind us*. These lively disciplinary forms by which we may obtain access to the subject matter depend upon what is awaiting us. For so long the tendency has been to imply that the studying had already been completed and that all we really needed were capable technicians, managers, or salespeople. No more. The real studying has yet to be done. In these approaches, what is taken for granted is simply not taken. And what is granted is

that which is not taken for granted. Pretext does not satisfy. For those of you familiar with our history, this is indeed a significant and powerful turn.

Context

If pretext is a "weaving before", context is a weaving together or a joining together of what is. The context is the general climate or environment surrounding the text itself. It is that which sheds light on or gives meaning to. We are all familiar with the situation in which what is said is "taken out of context". We mean that standing by itself the word or phrase does not mean the same thing as when it appears with its kin in context. We need to put the part into the whole to catch its intended and full meaning. Thus, it is better to be in, not out of, context.

In examining these papers with a slight squint (shutting out the direct light; looking laterally) I think there is, again, a likeness in their diversity with regard to the context into which their program alternatives are thought to fit. You will not find that what follows is explicitly laid out in any of the proposals. There are some strong and frequent signs in all of these papers that share a common idea of what education properly ought to be about. Someone, it seems to me, should say something about what that larger context appears to be.

The signs I am thinking of, by the way, which encourage me to look for a proper context for these papers are such things as: the learning centers; the seminars; the independent study projects field work; internships; systemic influencing; self-paced learning; the variety of modes of encouraged study; etc. So, I ask, on the one hand, given these signs, what kind of climate would make these approaches utterly senseless? On the other hand, into what context might these programs nicely weave?

I suggest that each of these proposals largely rejects the characteristics of schooling and largely endorses the characteristics of educating. Indeed, the fact that it is the educating context which is implicitly endorsed in these papers provides further reason for celebrating the variety of suggested disciplinary forms.

Schooling Context (Sketch)

1. Schooling is *obligatory*.
2. Being obligatory, others are frequently telling students what they must learn and when and how they must learn it. Hence, it is easy for schools to be *coercive*, manipulative, exploitive.
3. Schooling emphasizes *having*, e.g., getting a degree, having an A.B., possessing skills and techniques.
4. To have an education, one must be there to obtain it. Thus, *attendance* is the chief evaluative criteria.
5. Schooling is a passive *process*, like being pasteurized. It is done to one; it is external.
6. Being a process, it produces *products*.
7. Oftentimes, schooling is a *system*, a technically efficient organization with various units, departments, and divisions.
8. Inevitably, persons are *made* to learn.
9. Schooling is by its very nature *competitive*.
10. Schools, again by design, *routinize* (bells, schedules, hours, credits, courses, curriculum, exams, recitations, etc.).
11. Schools often discourage, prevent, and sometimes even punish a product for thinking (products *without heads or hearts*).

Educating Context (Sketch)

1. Educating is *self-chosen*.
2. Being self-chosen, educating is at best, *freedom* (freeing from ignorance, freeing for knowledge, wisdom).
3. Educating emphasizes *being*.
4. Educating stresses *knowing*; knowing how or knowing what or that.
5. Educating is an *active searching out*, unhampered discovery, something one participates in, internal.
6. Allows for growth and unfolding of *persons*.
7. Educating thrives in a *community*.
8. Educating is a shared project of *helping*, not making.
9. Educating is characterized by *cooperation*.
10. Ferrets out diversity, looks for the unexpected, encourages *creative exploration*, nurtures surprise, wonder, astonishment.
11. Based upon hope that each individual will trust no one in matters of thought, will *think* for oneself, will question, probe, disturb the peace, all of which would be guided by one's courage, logic, and love.

In my perusal of these papers, I am convinced that there is a definite similarity among them regarding the preferred context into which our programs ought to fit. It is genuine educating they advocate. It is educating each paper will help provide. It is educating which provides the larger context into which they are woven. In this idea of educating, there is a true liberating spirit, for us and our students.

I think E. Trueblood (1959) said it best. In his words there is a wisdom to which each and every proposal we have examined these last few days is testimony. Trueblood says:

> "Few contemporary developments are more disquieting than that represented by the cult of mediocrity. The heart of this mediocrity is deliberate limitation of achievement. It is a terrible and frightening thing when it appears in industrial establishments, but it is far more frightening when it appears in educational establishments.
>
> It makes little difference how advanced our technology is if the ideal of excellence is lost in our civilization. When it is lost, men and women habitually settle for what is passing; they put in the time they hold the job. The shame, then, is that they have nothing in their experience of which they may be justifiably proud. There are many ways in which civilizations decline, but this is one of the most obvious ways. If the colleges do not provide an antidote to mediocrity, it is hard to know where such an antidote will be found." (pp. 183–184)
>
> "There are many features which are involved in the production of a genuine college, but all of the other features are patently insuffient if there is not some true sense in which the entire college life is an introduction to the experience of greatness. A college is an institution which, because it recognizes that the enemy is the trivial, makes a deliberate attempt, not only to create the vision of greatness, but to create it habitually." (p. 182)

Furthermore,

> "Because education today is big business . . . it is easy to lose sight of fundamental goals. It is easy to concentrate upon the construction of buildings and efficiency of administration without serious searching for the purpose, apart from which these are nothing.

And what is the purpose?

> "Is it developing judgment in regard to literature, art or conduct?
>
> Is it producing creativity in science such that new discoveries will be made?
>
> Is it encouraging new imagination concerning the ways in which people can live together in peace?
>
> Do people come out of this community more compassionate and more unified in their lives than they were when they entered?
>
> Do they emerge with the desire to go on learning and reading as long as they live?" (p. 14)

Well, he says, these are embarrassing questions. But they are questions which we can afford to ask. The right questions may be more important than anything else. And I think our answers, that is, the four approaches outlined, clearly exhibit an attitude of mind which strives for the vision of greatness about which Trueblood speaks. In this, they weave together.

The Text Itself

I have thus far spoken of the idea of our field becoming textured, that this is a quite necessary and desirable feature of the field, that this texture develops in the weaving of various alternative forms (disciplines) through which our content (doctrine) comes to be, that all of these approaches appear to share a common subject matter, that they are alike in their refusal to "weave before" the subject is studied (pretext), and that they may also be similar in their idea of what educational features provide the proper context into which our particular subject matter may properly fit. Now it remains for me to say a few words about what is being written: the text itself.

The text is the doctrine. The doctrine has been taken in these various proposals to be what is called motor play activity, or in general, ludic activity. I am suggesting that this doctrine (what we know of it) is being written precisely through the variety of disciplinary forms by which it is manifested. And what is exciting about the writing itself is that we are witnessing the discursive and dramatic, the intrinsic, and instrumental. We are beginning to see that our subject matter admits of both, *being known* and *being understood*.

By being known I mean that the subject can be studied in more or less tidy ways. The results of this examination, whether of the element itself or of the process of helping others learn the element, can be reported in the form of propositions or statements. By being understood I mean that the subject can be studied in perhaps less tidy ways, but nonetheless really meaningful ways. Understanding the ludic element can be captured in such forms as painting, music, poetry, and literature, or in the doing of playful bodily activity itself. In the knowing we have truths abstract, in the understanding, truths incarnate. In the knowing we have truth progressive, in the understanding, truths responsive. In the knowing we have truths we repeat, in the understanding, truths we experience. In the knowing we have truths about, in the understanding true ways into. Both knowing and understanding weave together, clearly announcing to the world that we are a field genuinely in the service of truth no matter in which form it is given us.

I speculate that we are writing a novel text. If the ludic element (including such play forms as exercise, sport, game, dance, movement, and so on) is at the heart of the text, our protagonist so to speak, then we

are about to take seriously what until this time has only occupied our attention and the attention of others intermittently. Chiefly because the play element is considered by many to be frivolous, unproductive, and the proper domain of children, the serious study of this element and its motor forms has often been thought to be frivolous, unproductive, and childish.

As many of you know, there have been people from a wide variety of backgrounds and fields of study who have remained unperturbed about "what is thought" and have seriously searched after the ludic element. Whether they started out looking for play or came upon play while searching for something else, these thinkers have noticed the ludic to be a rich, exacting, and exciting subject for study. Knowing the nuances of play is a significant contribution to the ongoing struggle to understand ourselves.

Maybe we need some examples? As is well known, a variety of scholars have caught glimpses of this elusive and broad subject. Bronowski (1973, p. 432) surprises us all when he ends his study on the ascent of man with the observation that scientific thought, indeed all human thought, is a form of play. Arthur Koestler (1964) finds the nature of the creative act to be shot through with playful techniques. Kant, (1951/1970), von Schiller (1975/1934), and Santayana (1961/1896) tie the aesthetic act and aesthetic enjoyment to play. Edmund Husserl (1967/1913, pp. 280–281/57) often referred to the method of phenomenology as the free play of fancy. Eric Hoffer (1971, Chapter 1) suggests that play, being largely useless, may be our most useful occupation. Carl Jung (1933, p. 66) tells us that without the childlike playing with fantasy, no creative activity has ever come to birth. Lewis Mumford (1934) observed that the spirit of play enfranchised mechanical imagination . . . "engines are buckets and shovels dressed up for adults" (p. 101). Joseph Campbell (1959, pp. 21–29) points to play as the meaning-function of myth. Peter Berger (1970, pp. 57–60) has argued that play is a signal of transcendence. Herman Hesse (1969/1929) fictionalized the existence of a community of scholars held together by the notion of scholars as players, striving in play to achieve perfection, pure being, the fullness of truth and reality. Hugo Rahner (1972/1949) has described people at play as reaching out for a superlative ease in which the body, freed from its earthly burden, moves toward the effortless measures of a heavenly dance. Martin Heidegger (1971, pp. 165–186) even speaks of play as *the* mode of Being. Freeman Dyson (1979, p. 106) says we could solve our nuclear power problems if the accountants and managers would move out of the way and assemble a bunch of enthusiasts to tinker and play. Iris Murdoch (1978, p. 266) and Joyn Updike (1975/1966, p. 39) both take their craft of writing to be close dangerous play with unknown forces, an act of willful play. There are those, as most of you know, who even suggest that the teaching act itself is play, or must at least be given play to achieve its purpose.

These few instances of scholars' thoughts concerning play serve to suggest that at least those who trouble themselves to uncover the secrets of play appear to hold play in the highest regard. Moreover, there is no surprise that play is manifested in various fields of study. Because play appears in different modes, epochs, and regions of human experience, it necessarily transcends the often crudely-cut boundaries of typical scholarship. To this extent, descriptions of the nature and significance of play often sound rather pretentious, e.g., play as the gate to the root of the world, play as a glimpse of paradise, play as the clarifying and speculative metaphor of the world, and so on. Then again, play may be beckoning these thinkers. *Praetendere*, after all, does mean "to stretch forward".

If we are permitted this stretch forward, we can also catch a glimpse of the ultimate significance of the text of our subject. These suggestions put forth by thinkers refer to play as a meaningful embodied action as well as to our tinkering with ideas which play before us. These may be little more than illustrative examples of what Huizinga (1955/1938) pressed upon us in *Homo Ludens*. The very existence of culture is to be viewed as *sub-specie ludi;* without the play element or spirit, culture wanes. As you will recall, Huizinga marched on to support his thesis by analyzing the various regions of human experience which arise from and as play, including such experiences as language, law, knowledge, poetry, philosophy, art, music, ritual, and so on. His view of culture appears to be similar to Edward Sapir's (1924, pp. 401–429) notion that the highest levels of culture have frequently been reached in the lowest levels of sophistication; the lowest points of culture have been plumbed in some of the highest. Civilization as a whole, he says, moves on; culture comes and goes.

Both authors stress the limitation and mastery of self as essential to the preservation and perpetuation of culture; that is, the self must reconcile its own searches and strivings with the general spiritual life of the community (limitation). Sapir also reveals that it somehow must strive within the restriction of our activity to locate a satisfying of one's spirit (mastery). For Huizinga and other solid thinkers, it is this play spirit which is necessary for achieving a delicate balance between limitation and mastery of self.

I think play, in this sense, is our creator. It not only serves to create those selves in whom the play element is introduced or in whom it lives, but it also serves to create the texture of the field in which it is studied. The creations which result from this play are natural expressions of what we live by and for what we live. Our text is about play but is written only to the extent to which we are willing to play on.

Were we to become the custodians of the play element of culture, were we to care and feed for the knowing and understanding of this ludic impulse, were we to help each other, ourselves, our students,

and those our students touch, learn more of the nuances of play, were we to explore, discover, and elaborate these and other approaches to undergraduate study in physical education, were we to realize that these forms of study are necessary in order for the text (the doctrine) to be written at all, were we to learn that in our very diversity there is likeness which makes us all a part; and were we to celebrate, not lament, the progress through diversity, I think we would in the truest and most original sense be a profession, a community of people who declare and place ourselves at the disposal of that very play element which creates, strengthens, and embodies the field, that is, which gives it texture. "For Christ's sake," says William Carlos Williams, "pull your bloomers down, everybody's looking at you. You're not ten years old any more." (1974, p. 34)

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PART V:

Responses with a View to the Future

Issues as Reflections

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As one of the participants at the Professional Preparation Conference held in November, 1980 in Chicago, entitled "Progress through Diversity", I was introduced in advance to the theme of the conference by casually examining four professional preparation models and finding the reading ponderous. When the conference opened, all that changed. I was filled with deep thoughts about what these models could and could not do. A stage was appropriately set for dynamic interaction between the presentors and the presentees. At the final wrap-up so elegantly done by Professors Bain and Harper, my mind could not rest because the real issues of professional preparation in physical education somehow kept bobbing up. No model held potential for solving these issues. I reviewed them all, studied them intently, and tried to placate myself that issues were not the theme; yet, it was many of these issues that contaminated the acceptability of most of the models.

One persuasive issue is the quality of our inductees. What professional stand can be taken to upgrade the product of professional preparation? Should we be as selective as coaches are for athletes. Can we be? Should NASPE recommend inductee qualifications to professional preparation institutions? What should these qualifications be? Scholarship? Skill? Personality?

Related to the inductee is the development of the ability to solve problems. No professional preparation program can possibly continue with the multi-variant settings that will fall heir to each young professional. It is of concern to me that the same problems that negate the quality we dream of in physical education still persist. Why no progress? Are we turning out inflexible, non-creative professionals?

Most teacher education-related programs are still preparing the teacher/coach. Can we go on? Must we go on? Evidence indicates that 3 out of 4 inductees are not really interested in teaching physical education: (Donald, 1980) Physical education is what you do so that you can coach. Given what we know about teaching styles, learning styles, goals setting, and so forth, can the myth persist that physical education and coaching are similar? Should it? If so how do we solve the problems of teacher burn-out from overwork resulting from coaching? Can and should the profession investigate this problem which is now also attacking the elementary specialist as secondary schools search for coaches?

Research has clearly pointed to the positive learning outcomes resulting from teaching behavior that is caring, helping, sensitive to student needs and committed. (Beane, Lipka, and Ludewig, 1980) Other than the Locke-Siedentop model, no professional preparation plan had a protocol or strategy to develop, focus, or promote these behaviors. Should we try? How? The need for such a caring and committed physical educator was never more apparent than in the four reports from students in the recent Fall, 1980 issue of *UPDATE*. (Mark, Glakas, Mitchell, and Brown, 1980)

A series of issues arise from the entire process of helping a professional physical educator to deliver, facilitate, transmit, or teach, if you will, the array of knowledge carefully packaged in any one of the four presented models. Again, given the evidence of student uniqueness and the positive relationship of teaching styles to student learning styles, can we go on promoting a "one best way" or provide practice within a narrow range of teaching approaches, to what extent is practice provided in teaching small groups and/or individuals? Even if we are enlightened and provide pre-clinical experiences to help the neophyte and be a virtuoso of diverse teaching approaches, how do we create or provide a supportive clinical experience? Is the reality of a non-university practice school worth the lack of on-site technical assistance? Clearly evidence has pointed to the impact of pre-service and in-service role modeling. Can we continue to tinker with clever "Turf Divisions" and "Course Arrangement Plans" in our professional preparation programs without facing the reality of the all too rapid eradication of the sum of professional preparation course work by the real world role models? Are we creditable? Are our programs creditable? If they are, why the gap between our theory and practice? Should we talk about it? Study it? Resolve it?

Even if we sigh and decide that "good wine needs aging" and with experience our intentions as professional preparators will indeed be reflected in our students as practicing professionals, we should reflect on the low percentage of students who seek graduate work and who are often not even in the physical education discipline. Do you know why? Is it related to working all day as teachers and all night as coaches? What about the low percentage of physical educators who are members of a physical education association? Illinois has one of the largest State Associations in the country, to which belong less than 75% of the practic-

ing physical educators. Why? Should we be concerned? What do we do about it?

And finally, one last issue concerns the student who graduates with an "LAS in Physical Education". Should no ultimate profession for that person be assumed? What will they do? Can we go on employing them as graduate teaching assistants without preparation to teach? To what extent do we do this? Is it a problem? Should we be concerned?

Obviously I came away from the NASPE Professional Preparation Conference stimulated, and yet bewildered. Thank you CUPEC, thank you Tom Loughrey, Hal Lawson, and Linda Bain. When will we have another that addresses these issues?

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Undergraduate Preparation: Marching to Different Drummers

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A Musical Fable

Dissonance, in a musical sense, may be defined in two ways: a simulateous combination of tones conventionally accepted as being in a state of unrest; a mingling of discordant sounds so out of harmonic relation as to give beats. These definitions will provide a basis for this reflective monologue about stimulating dialogues engaged in at professional preparation conferences.

In attending professional preparation conferences and sessions for the past two decades, I've heard the same old tunes but being led by different drummers. This same observation was experienced in attending the most recent National Professional Preparation musical held in Chicago, Illinois.

As in previous conferences, the professional educator's glee club gathered and vocalized the familiar melodies asking the musical questions: Who are we?; What are we all about?; What should our product be?; What is the best process or approach?; Can a degree of consonance be established between student, educator, and real world expectations relative to undergraduate preparation?

In response, opposing melodies were played by a number of duos and trios. Since each was driven by a different drummer there were variations in syncopations ranging from the traditional four-beat to avant-garde accents.

At the conclusion of the concert, a new form of dissonance was heard when the assemblage sang out in harmony an old Roman marching song, "Quo Vadis—Whither do we go?"

In retrospect, the responses to the earlier questions posed at the conference did not greatly differ from previous conferences I attended. (*JOPER*, October 1979, p. 18) My initial reaction was characterized by a quote, in one of the presentations, of a recent *Time* article. The quote indicated that the response of educators to the present educational crisis is analogous to "shifting deck chairs on the Titanic".

Whether this analogy was applicable by the presentation of alternative, substitute, and modified undergraduate preparation models or whether these programatic thrusts were being proposed as attempts to "raise the Titanic" was difficult to determine. Only time, the extent of model implementation, and an assessment of their impact, will be valid determinants.

A capsule review of the various conference presentations yielded high relationships between the models and the conference theme, "Progress through Diversity". The models either advocated a shifting of focus and direction in undergraduate preparation from a "Teacher" orientation to a "discipline" orientation or alternative approaches to teacher preparation and certification. They reflected varying emphases in and from the professional studies component, performance component, behavioral studies component, scientific studies component, humanistic studies component, and the general or liberal studies component. They were classified and described as a cross-disciplinary model, an inter-disciplinary model, a competency-based model, and a subject-matter-centered model. Their designs were based on different core requirements, such as, human movement phenomena, sport and play activities, kinesiological sciences, and disciplinary. They were designated as professional and non-professional preparation programs dependent upon the program objectives. They differentiated in program outcomes from a specific career preparation to a liberal arts preparation. They were permeated with philosophies ranging from a form of generic Realism to naivete Existentialism. Basically, they were examples of functional models designed for specific institutions or as prototypes that could be modified for other institutions including "Fantasy Island U".

At the conclusion of the presentations, my perceptions and reactions could have been described by another Titanic analogy. It is an apocryphal story attributed to John Jacob Astor, a passenger on the ill-fated voyage, who, after ordering from room service, exclaimed in dismay, "I ordered ice—but this is ridiculous!" However, at the risk of creating a semi-frivolous bullfight with some sacred cows, I shall attempt to be more specific as to my personal observations and professional conclusions relative to the current status of undergraduate preparations as reflected by this conference.

In introspect, is there professional unity through diversity? Have we made progress through diversity? It is evident that the term, "physical education" is not widely accepted as a global name for describing who we are and what we do. This is reflected by the variety of specific subdiscipline role designators, such as, kinesiologists, exercise physiologists, pedagogists,

etc. It seems to me that we are making "progress through diversity" from "unity through diversity" to "proliferation through diversity". We are not a corporate power group for effecting change.

There are still philosophical and theoretical differences in defining what we are all about. We agree that there is a body of knowledge; we cannot agree as to its content, focus, emphasis, and name.

Therefore in prospect I propose, that it is time to eliminate personal and professional ego biases and with unanimity resolve that we are physical educators preparing physical educators. Our concern should not be in changing a name, but we need to invest our time in changing the physical educator's image and singular role perceived by the general public and academic colleagues. This can be accomplished by student selectivity and quality control programs that infuse or diffuse an inter-disciplinary core of studies with cross-disciplinary, multi-disciplinary, pan-disciplinary, track, option, ad hoc, integrated, subject matter- and competency-based approaches that would be the "best fit" for the resources of an *accredited* institution. The student would be identified as a "physical education major" with areas of specialization and competency determined by the uniqueness, emphasis, and integration of subject-content and applied experiences that are added to the inter-disciplinary core.

Furthermore, we must initiate, with the support of our professional organizations, a public relations campaign that creates a positive image that describes the "New Physical Educator", a physical educator who is educated and trained to be a fitness clinician, stress testor, exercise physiologist, kinesiologist, preventive cardiology technician, sport writer and broadcaster, sport sales person, resort director, agency and sport club director, health club manager, industrial fitness director, sport sociologist, sport psychologist, sport historian, researcher, teacher, or coach.

These recommendations are predicated on a definitive group commitment to identify the basic concepts and principles that would constitute an interdisciplinary core. We have the expertise to investigate, identify, refine, and synthesize subject matter from the sciences in our domain (motor learning, motor development, sport and play, kinesiology, biomechanics, and exercise physiology). We can add to this core, parastically and synergistically, those applicable concepts and principles from allied sciences and other disciplines. This same process can be used to identify and match competencies with subject content and training for specialization areas.

In conclusion, this panacea that I am prescribing for the ills that pervade our profession is not a new prescription. It will not be totally accepted and it may (in all probability) compound the problem of diversity. However, we can no longer afford to disregard the visible critical signs and symptoms. Our academic dialogues and consultations need to result in professional concurrence as to diagnosis, prognosis, and remedy, or we may be marching to one drummer playing . . . a funeral march.

A Professional Allegory

"A pervasive solipsism may account for the need to go around periodically rediscovering the wheel.

The business of forgetfulness and rediscovery may be part of a vast dialectic sifting and refinement by which history discovers, and interminably rediscovers, whatever is worth keeping."

Lance Morrow, "The Endless Discovery of the Wheel." *Time*. December 15, 1980.

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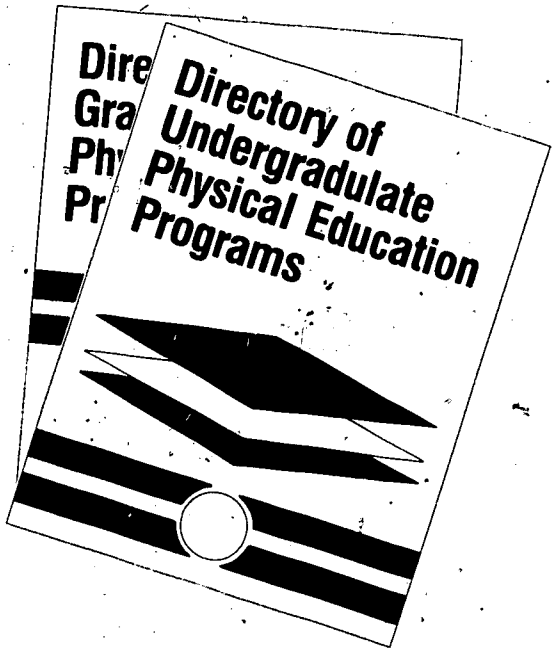

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