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AN ANALYSIS OF EARLY CHILDHOOD TEACHER EDUCATION
PROGRAMS IN MASSACHUSETTS

A Dissertation Presented

By

JAMES G. THOMPSON

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

September 1987

SCHOOL OF EDUCATION

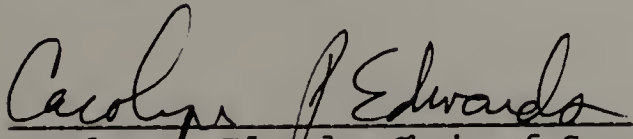
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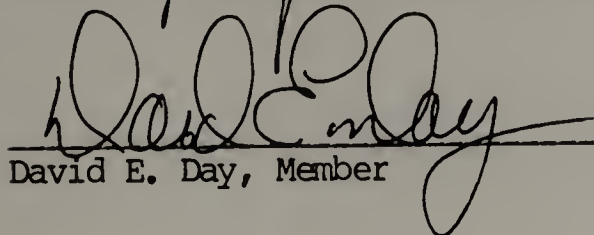
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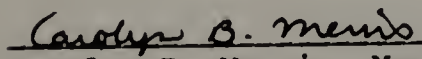
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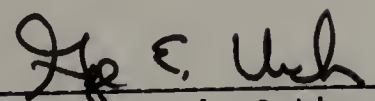
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This dissertation represents the completion of a graduate career comprised of years that have been filled with curiosity, excitement, and growth centered on child development-related concerns. A period of years of such personal and professional development could never occur alone, and I am particularly fortunate to have known and worked with very insightful, dedicated, and caring people while at the University of Massachusetts.

Carolyn Edwards has been the chair of each of my committees since I have been a student in the School of Education. The influence of her work was instrumental in allowing me to focus on questions that relate to early childhood programs. Her support and thoughtful critique of my work was invaluable, and her faith in my ability to work independently carried a message that I will continue to hear for years. David Day has also been on my various committees since I began this phase of graduate study. His insight into the ecology of childhood and his dependability as a critic and as a friend have influenced my thinking immeasurably. Carolyn Mervis has unselfishly served as the outside reader of my dissertation. Over the years since we have known each other, she has been both a friend and a good editor of my professional thinking as well as of my writing.

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ABSTRACT

AN ANALYSIS OF EARLY CHILDHOOD TEACHER EDUCATION
PROGRAMS IN MASSACHUSETTS

September 1987

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In this study, the early childhood teacher education programs of the 26 college and universities in Massachusetts with state-approved programs in early childhood education were analyzed. Information from each program was collected from documentary sources, and the overall program requirements were described with referene to the early childhood teacher certification standards established by the Massachusetts Department of Education (DOE).

An examination of the general education requirements led to three related findings. First, a high percentage of the total requirements for graduation is comprised of coursework that is specifically required by colleges and universities in order to meet the certification requirements established by the Department of Education. Second, much of the required coursework may be completed through electives. Third, the program emphasis in general education rests primarily in the humanities and the social/behavioral sciences.

The professional education requirements of the programs that were studied revealed a wide range of coursework and field experience de-

mands. A high percentage of the required coursework is concentrated in pedagogical study and practicum requirements. In addition, coursework in the field of child development, the foundations of education, and early childhood curriculum studies was common. There was a striking contrast between the lack of flexibility the programs allow in fulfilling requirements in the area of professional study when compared to the flexibility allowed in completing the requirements in general education.

The potential for identifying program types also was developed in this study. Five program types were identified and their characteristics defined. While the delineation of program types discussed is speculative, it does suggest the possibility of using this approach as a means of classifying different models of teacher education. The clear differences in emphasis between the programs also addresses a number of questions that have been raised by the recent critiques of teacher education.

The implications of each of these findings were discussed in relation to the existing literature concerned with the reform of teacher education, the trends in teacher education research, and the characteristics of early childhood programs.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iv
ABSTRACT	vi
LIST OF TABLES	x
LIST OF FIGURES	xi
CHAPTER	
I. INTRODUCTION	1
Statement of the Problem	2
Background and Rationale for a Study of Early Childhood Programs	4
II. REVIEW OF THE LITERATURE	8
Issues in Teacher Education: Reform and Research	8
Educational Reform	8
Studies of Teacher Education	19
Characteristics of Teacher Education Programs	23
General Education	24
Professional Education	27
Early Childhood Education	33
Early Childhood Education Programs	35
Early Childhood Teacher Education	43
III. DESIGN OF THE STUDY	49
Population	50
Design	51
Materials	51
General Studies	51
Professional Studies	52
Data Collection and Analysis	54
IV. RESULTS AND DISCUSSION	55
Institutional Characteristics and Overall Program Requirements	56
General Education Requirements	60
Humanities	61
Social and Behavioral Sciences	64

Natural Sciences and Mathematics	66
Health and Physical Education	67
Professional Education Requirements	67
Methods of Instruction	71
Practicum Requirements	72
Foundations of Education	75
Early Childhood Curriculum	77
Special Education	77
Child Development	78
Other Prepractica Coursework and Field-Based Studies	78
Program Types	81
 V. GENERAL DISCUSSION	 93
General Education Requirements	94
Professional Education Requirements	104
Diversity of Programs	112
Directions for Future Study	114
 APPENDICES	
A. Massachusetts Department of Education Standards for Teacher Certification: Common Standards and Early Childhood Teacher Standards	115
B. Coding Sheet	119
C. Department of Education Approved Programs in Early Childhood Teacher Education	129
D. Coursework Required by Approved Early Childhood Programs to Meet Certification Standards	131
E. Program Characteristics of Five Program Types Identified Through Cluster Analysis	142
 REFERENCES	 148

LIST OF TABLES

1.	Early Childhood Certification Age and Grade Level Classifications	45
2.	Institutional Characteristics of Early Childhood Teacher Education Programs in Massachusetts	57
3.	Characteristics of the Typical Early Childhood Teacher Education Program (Median Values of Major Features)	59
4.	Major Subdivisions of the General Education Course Requirements	62
5.	Course Components in the Humanities Requirement in Early Childhood Teacher Education	63
6.	Course Components in the Social/Behavioral Science Requirement in Early Childhood Teacher Education	65
7.	Course Components in the Natural Science/Mathematics and Health/Physical Education Requirements	67
8.	Components of the Professional Education Requirements for Programs in Early Childhood Teacher Education	70
9.	Characteristics of Practica Requirements	74
10.	Practica Placement Design	76
11.	Characteristics of Field-Based Pre-Practica	80
12.	Characteristics of an Early Childhood Teacher Education Program from the Type III Cluster	85
13.	Characteristics of an Early Childhood Teacher Education Program from the Type II Cluster	86
14.	Characteristics of an Early Childhood Teacher Education Program from the Type I Cluster	88
15.	Summary of the Major Emphases of Five Program Types	90

LIST OF FIGURES

1. Tree Diagram of Program Clusters 83

C H A P T E R I

INTRODUCTION

The state of public education in the United States has been the focus of considerable discussion in recent years. Most of this discussion has centered on problems related to the level of student academic achievement, and on the perceived inadequacies of the nation's schools. Although a wide range of factors have been implicated as potential causes of these alleged deficiencies, some critics have claimed that they result in part from the presence of inept teachers in classrooms and the lack of accountability in educational circles. For the most part, such criticisms have found their way to higher education as well. Teachers are believed by some to be ill-prepared for their task by education departments and as a result, education departments in some colleges and universities have been forced to adopt defensive postures while they attempt to address questions concerning their involvement in solving this "crisis" in the schools.

However, a great deal of the commentary about inadequacies in teacher education occurs in abstract terms, with critics often having nothing more constructive to contribute than a demand for "better" prepared teachers. There is a noticeable lack of any substantive critique of the current preparation program. Indeed, there is often no evidence that the current program is examined at all.

Thus far, most of the criticisms leveled against teacher education have been directed primarily toward secondary education, and most

reform proposals have focused on questions of quality at the secondary level. However, it is important for educators of teachers of young children to recognize the presence of such criticisms. In view of the potential impact of these claims on early childhood teacher education programs, early childhood teacher educators need to develop a clear explication of, and a rationale for, their program emphases.

Statement of the Problem

For a number of reasons, recent years have brought about an increased recognition and concern for the early childhood period. Much of this concern is related to the plethora of claims about the benefits to children and society that follow children's involvement in high-quality early childhood programs. Other concerns are related to the perception that changes are likely to occur in the nature of the traditional characteristics of curriculum for the kindergarten and early primary grades. There are many reasons to believe that the need for early childhood programs will continue to develop, and that these programs will become more established in the mainstream of American education. As early childhood programs become more common, claims for the educational and social benefits of these programs will be further scrutinized, and debate about specific emphases in the curriculum for preschools, kindergartens, and the primary grades is likely to increase. As these changes occur, it will become important for early childhood teachers to have the ability not only to organize

effective programs, but also to be able to discuss their program's rationale and philosophy with a larger and more sophisticated public. During this time, early childhood teacher educators will need to prepare teachers for these changes. Increasingly it will become important to understand the impact of programs to prepare teachers so that they may provide the most meaningful experience for prospective teachers.

As with teacher education at all levels, it is critical for early childhood teacher educators to become more aware of the variety of characteristics included in different programs in the field. Without this knowledge, it will not be possible to articulate with any confidence that programs in early childhood teacher education are attempting to provide an effective knowledge base for prospective teachers. Further, without this knowledge it is not even possible to begin to examine the question of whether or not differences in program emphasis lead to differences in teacher effectiveness in early childhood classrooms.

This dissertation addresses the need for documenting the content of early childhood teacher education programs by providing an analysis of the characteristics of early childhood education programs in Massachusetts. In addition to the descriptive analysis that provides this documentation, the study establishes a framework for studying the effects of differing program emphases on the classroom behavior of early childhood teachers.

Background and Rationale for a Study of Early Childhood Programs

Twenty years ago, discussion about the educational needs of young children centered on two factors. First, the work of developmental psychologists encouraged a heightened awareness of the value of early childhood programs (e.g., Hunt, 1964). Second, demographic changes in the labor force increasingly led families to make demands for programs to serve their young children (Kindergarten Study Committee, 1967). During the last two decades, many different early childhood programs, funded through both public and private sources, have emerged in the United States. Although this development has indeed been rapid, from the perspective of public policy the field of early childhood education is in its infancy. For example, in Massachusetts, kindergarten was not universally available until 1974. In addition, the Department of Education did not issue an early childhood teaching certificate until 1983, and a legislative mandate enabling the Department of Education to begin to develop its role in the education of children younger than the age of five only occurred in 1985.

The wide variety of programs that have served young children has sparked debate about the scope of public involvement in early childhood education. Needs for ensuring the consistent quality of programs and for developing increased stability in programs are related to efforts to increase public involvement in these programs. Initially, proposals to address these questions were found in attempts to develop comprehensive child development policy at the federal level. This

legislation proved to be very controversial, and its history of failure even to approach implementation reflects fundamental political constraints that are not likely to be overcome soon at the level of national policy (e.g., Bronfenbrenner, 1979; Pizzo, 1983; Steiner, 1981). As federal subsidies for these programs have been declining, greater emphasis has been placed on the role of individual states to provide for children's needs out of undefined block grants (Heintz, 1983). This may be only one reflection of a larger conceptualization of the role of the federal government in domestic affairs, but decreased levels of federal support for well-defined programs has only aggravated the unresolved questions our society faces about policy directed toward programs for young children.

In response to this lack of federal involvement, demands for planning early childhood programs have begun to find expression at the state level. As state initiatives develop, it is becoming clear that there is a different set of controversies than those that arose in debate at the federal level. At the state level, argument is focused on logistical issues such as cost/benefit analyses of state funded pre-kindergarten programs, the feasibility of all-day kindergarten, the development and implementation of appropriate curricula for young children, and debate about teacher education and certification requirements.

While each of the issues that have come to dominate argument at the state level reflect important and unresolved concerns, the question of teacher education and certification requirements is central

to current debate about early childhood programs. Differing emphases in teacher education programs embody differing perspectives toward each of the other questions, and further, different program emphases provide a conceptual base for examining the philosophy and practice of early childhood education. Numerous studies have suggested that positive benefit to cost ratios are at least partially determined by the presence of well-qualified teachers (e.g., Ruopp, Travers, Glantz & Coelen, 1979; Weikart, 1984). In addition, structural considerations, including recognizing and developing the appropriate spatial requirements for an effective classroom, understanding children's needs during the course of an all-day program, and developing appropriate curricula for young children are all tied to the knowledge and orientation that individual teachers bring to the classroom and the school environment.

Early childhood educators often disagree about what age ranges of children are within their charge. However, a number of individuals and organizations recently have established what has become a standard when thinking about the age range covered by programs in early childhood education. They have suggested that programs in early childhood education can most fruitfully be seen as serving children from birth through age eight (e.g., Early Childhood Advisory Council, 1986; NAEYC, 1986; Spodek & Saracho, 1982). This age range is wide, and currently there is considerable variation in the educational requirements demanded to teach children at different ages within this level. However, recent trends toward the expansion of early childhood pro-

grams within public school settings stress the importance of addressing questions relating to the impact of alternative emphases in college-based teacher education programs. For this reason, a study of the curriculum in early childhood teacher education programs may provide a useful base of information for teacher education programs designed to prepare teachers for kindergarten to grade 3, as well as those aimed at preparing teachers of younger children.

The purpose of this dissertation is to examine the characteristics of the program requirements of the 26 colleges and universities in Massachusetts with state approved programs in early childhood education. These programs were studied through an examination of pre-practicum coursework requirements, pre-practicum field-based requirements, and the design and scope of their final practicum requirements. These analyses allow for the assessment of the relative emphasis that individual programs give to specific components of the student's preparation. In addition to these analyses, characteristics of the institutions with these early childhood education teacher education programs are described. Finally, an attempt is made to provide a description of program types that is based on salient characteristics of the individual program requirements.

C H A P T E R I I
R E V I E W O F T H E L I T E R A T U R E

Three related areas of inquiry are relevant to this study. The first concerns issues that are focused on the recent demand for educational reform; the second concerns research into the content and process of teacher education; and the third concerns the characteristics of early childhood teacher education and early childhood programs. The remainder of this chapter examines each of these issues.

Issues in Teacher Education: Reform and Research

Educational Reform

In recent years, discussion about the perceived failures of public education in the United States has dominated both professional and popular literature related to educational issues. This discussion, with its demand for educational reform, has been followed closely by a demand that teacher education programs be reformed and strengthened as well. Cornbleth (1986) recently pointed to the similarities between the demands made at the level of the public school and those made at the level of teacher education. She states:

There are striking similarities in the language expressed, problems identified, and solutions recommended in school and teacher education reform reports. Crisis and urgency, exhortation and hope are dramatically communicated in language intended to shape belief and mobilize action. For example, in addition to "a rising tide of mediocrity" and

"an act of unthinking, unilateral educational disarmament" from A Nation at Risk (National Commission on Excellence in Education, 1983, p. 5) and "a real emergency is upon us . . . our national defense, our social stability, and our national prosperity . . . depend on our ability to improve education" from Action for Excellence (Task Force on Education for Economic Growth, 1983, p. 4), we are warned that "nothing in American education is in greater need of reform than the way we educate and certify classroom teachers" (Feistritz, 1984, p. 54) and that "At stake is not the present status of teachers but the future of the nation" (National Commission for Excellence in Teacher Education, 1985, p. vii).

(Cornbleth, C., 1986, p. 6)

As Cornbleth notes, the implicit message in these statements critical of contemporary educational practice is that the schools and teacher education together are seen as both "a national disgrace and as a prime source of national salvation" (1986, p. 6). The complexity of this attitude about public education is echoed in comments included in a recent publication by the Holmes Group, a consortium of deans of schools of education who have set for themselves the joint tasks of reforming both teacher education and the teaching profession. Their report begins with the statement that:

Many commentators admit that no simple remedy can correct the problems of public education, yet simple remedies abound. Most are aimed at teachers: Institute merit pay; eliminate teacher education; test teachers to make sure they know eighth grade facts. Paradoxically, teachers are the butt of most criticism, yet singled out as the one best hope for reform.

(Holmes Group, 1986, p. 1)

Further, this report argues that while "teaching must be improved . . . plans for improving teaching also must be improved" (1986, p.

1). The Holmes Group report does suggest that achieving these improvements can only result from a multidimensional effort that involves "changing the universities, the credentialing systems, and the schools themselves. The functions of these institutions cannot be regarded as independent of one another" (p. 23).

Other reform-minded groups recently have approached the task of improving teacher education with similar emphases. The work of the Carnegie Forum on Education and the Economy (1986) provides an additional perspective. They state that:

Teacher education must meet much higher standards. The focus must be on what teachers need to know and be able to do. Raising standards for entry into the profession is likely to give the public confidence that the teachers they hire will be worth the increased salary and worthy of the increased autonomy we advocate. These policies will most certainly fail, however, if the education of teachers is not greatly improved. Otherwise, new teachers may be unable to perform up to the new expectations.

(1986, p. 69)

In recent years, the most controversial attempts to address questions of educational reform have been seen in these reports of the Carnegie Forum and the Holmes Group. Together, these efforts have been influential on the thinking of educators throughout the United States, and their recommendations have dominated the tone of discussion concerning educational reform. (See Harvard Educational Review, 1986; and especially, Teachers College Journal, 1987 for examples of this dominating influence.) Because these two efforts have been so crucial in the thinking of many educators, the major recommendations

of each will be examined below.

The Carnegie Forum report, A Nation Prepared: Teachers for the 21st Century, is the result of an attempt to provide solutions to the problems posed in A Nation at Risk, published a year earlier. In A Nation Prepared the focus of the Carnegie Forum is on the economic needs of the United States and the role of the schools in preparing people for a life in productive society (1986). Indeed, the rationale for following this political agenda is explicitly stated in the executive summary of the report. This summary argues that:

If our standard of living is to be maintained, if the growth of a permanent underclass is to be averted, if democracy is to function effectively into the next century, our schools must graduate the vast majority of their students with achievement levels long thought possible for only the privileged few. The American mass education system, designed in the early part of the century for a mass-production economy, will not succeed unless it not only raises but redefines the essential standards of excellence and strives to make quality and equality of opportunity compatible with each other.

(1986, p. 3)

In order to provide the means to attain realization of such an encompassing goal, this report provides a number of specific recommendations that may be seen through an examination of three related themes.

First, the report emphasizes the need for increasing the professionalization of teachers. This may be seen in their call for the creation of a National Board for Professional Teaching Standards to develop standards for teachers and to provide for the certification of teachers. This emphasis for increased professionalization is seen

further in the report's call for public schools to provide such things as a more autonomous role for the teacher in the management of the classroom, more of a leadership role for teachers in the design and administration of the schools, and the need for making teachers' salaries and career opportunities competitive with those in other professions. The second theme of this report stresses the need for teacher educators to become more active in their attempts to prepare an increased number of minority students for teaching careers. Third, the report calls for major modifications in the process of educating prospective teachers. The first of the recommended changes needed to begin to move in this direction is for prospective teachers to hold a bachelor's degree in the arts and sciences as a prerequisite for professional study in teaching. In addition, a second recommendation calls for the development of a new professional curriculum in graduate schools of education leading to a Master of Teaching degree. Although all of the recommendations suggested by the Carnegie Forum are related and relevant to questions about the form and content of programs of teacher education, the remainder of this discussion will center on the recommendations most directly focused on the process of educating prospective teachers.

The Carnegie Forum is clear in its basic orientation and recommendations about teacher education programs. As mentioned above, the report calls for the elimination of the undergraduate education degree and the institution of a Master of Teaching degree. The rationale for such a major restructuring of teacher education programs is provided

by statements like the following:

Four years of college education is not enough time to master the subjects to be taught and acquire the skills to teach them. The undergraduate years should be wholly devoted to a broad liberal education and a thorough grounding in the subjects to be taught. The professional education of teachers should therefore take place at the graduate level . . . College graduates going on to professional graduate education should have a rigorous undergraduate curriculum that embraces a common core of history, government, science, literature and the arts.

(1986, p. 73)

It is important to note that the report is addressing not only the context of coursework requirements in schools of education in this call for reform. It also suggests that too many graduates of teacher education programs complain about all aspects of their education. As a result, the report emphasizes the role of faculty members in the arts and sciences as well as those in schools of education in achieving educational reform.

The Holmes Group report, "Tomorrow's Teachers" is a three-part proposal for a major restructuring of teacher education and the profession of teaching. The goals of the Holmes Group are:

To make the education of teachers intellectually more solid; to recognize differences in teachers' knowledge, skill, and commitment, in their education, certification, and work; to create standards of entry to the profession--examinations and educational requirements--that are professionally relevant and intellectually defensible; to connect our own institutions [universities] to schools; and to make schools better places for teachers to work, and to learn.

(1986, p. 2)

As the authors of the report note, these goals have implications that go well beyond the province of schools and departments of teacher education. Still, the first of these goals is clearly relevant to an analysis of the process of teacher education. Additionally, the second and third goals have implied tasks and they present questions that may at least be addressed by teacher education programs.

The first goal set by the Holmes Group directly addresses the content of teacher education programs by suggesting that such content should be rigorous and wide-reaching, with students achieving broad competence in the academic disciplines as well as in the theory of teaching. The second goal implies that the educational needs of novice teachers must continue to be addressed through the provision of meaningful continuing educational programs that provide for a realistic basis for career growth within the teaching profession. The third goal suggests that certification requirements and testing programs must be based on a sound foundation of relevant knowledge and skills assessment, and not on arbitrary minimal levels of achievement.

To carry out this agenda in a realistic manner, the Holmes Group proposes three levels of teacher preparation. These include the Instructor, the Professional Teacher, and the Career Professional. Although these levels are not critical dimensions for the discussion that follows, a short summary of the thinking that led to this three-tiered conception of the teaching profession is useful in understanding some of the recommendations of the Holmes Group's proposal. The level of Instructor is conceived as a temporary licensed position,

where the Instructor would be allowed to teach only under the direct supervision of a fully certified professional. This level could be attained by college graduates who have passed a written examination in each subject area that they will teach. According to the proposal, this temporary licensing examination would be aimed at evaluating the prospective teacher's understanding of the ". . . basic structure of the discipline, and tenets of a broad liberal education. They should additionally pass a general test of their reading and writing ability, and a test of the rudiments of pedagogy" (1986, p. 10). The teaching certificate for the Professional Teacher, in contrast, would be granted only to teachers who have completed a master's degree in teaching. The degree requirements for this master's level teacher would include "continued study in the candidate's major or minor academic field, studies of pedagogy and human learning, work in classrooms with children who were at risk, and a full year of supervised teaching" (p. 11). Finally, the Career Professional represents the highest level in teaching. This designation would be granted "to Professional Teachers whose continued study and professional accomplishments revealed outstanding achievements as teachers, and promise as teacher educators and analysts of teaching" (p. 12). Most important for the present discussion are the changes in the undergraduate curriculum that would be necessary in order to achieve a satisfactory transition to the three-tiered profession that is envisioned by the Holmes Group. The rationale established to achieve the first step in this transition phase is clear. The report states:

First, the undergraduate education major must be abolished in our universities. For elementary teachers, this degree has too often become a substitute for learning any academic subject deeply enough to teach it well. These teachers are certified to teach all things to all children. But few of them know much about anything, because they are required to know a little of everything. No wonder so many pupils arrive in high school so weak in so many subjects.

(1986, p. 15)

The proposal continues by stating that the simple elimination of the undergraduate education major would not be sufficient in and of itself to remedy the current state of affairs in education, and that this move must be accompanied by major strides in the improvement of the pedagogy within the university as a whole.

Paralleling the Carnegie Forum proposal, the Holmes Group report suggests that as the major in education is eliminated, the undergraduate curriculum in general education needs to be strengthened. In order to accomplish this, the report proposes that colleges and universities need to begin to value teaching more than they do currently. Apart from the obvious benefit of valuing teaching, the report argues that this will allow "future teachers [to] study the subjects they will teach with instructors who model fine teaching and who understand the pedagogy of their material" (p. 17). In addition the report suggests that academic course requirements need to be reorganized so that students are better able to see the "intellectual structure and boundaries of their disciplines, rather than taking a series of disjointed, prematurely specialized fragments" (p. 17). Along with the changes that need to occur in the general education

curriculum, change will be needed within schools and departments of education. The Holmes Group argues that universities need to devise programs that encourage more advanced study in pedagogy. Although the report does not attempt to provide a specific plan for how this advanced study would look, it does provide a few directions that indicate the areas that need to be examined most closely. The report states:

One important and large line of work must focus on the pedagogy of specific subjects. Generic undergraduate "methods" courses must be replaced with subject matter-oriented studies of teaching and learning. This work should be based on the best understanding--from academic research and clinical studies of practice--of good teaching and learning in specific subjects. Such studies can build on recent research on human cognition, on older lines of research in subject matter-specific teaching and learning, and on recent research on teaching. A second important line of work should focus on teachers' learning. Here we must bring to the study of teachers' acquisition of skill and knowledge the intelligence that social scientists and practitioners have applied to the study of children's learning.

(1986, p. 18)

In a later part of the report, a more detailed position on the components of the professional studies program is suggested. It states:

A program of professional studies must integrate at least five components to qualify as a comprehensive plan for teacher preparation. The first is the study of teaching and schooling as an academic field with its own integrity. The second is knowledge of the pedagogy of subject matter--the capacity to translate personal knowledge into interpersonal knowledge, used for teaching. A related third component is comprised of the skills and understanding implicit in classroom teaching--creating a communal setting where various groups of students can develop and learn. The fourth consists of the dispositions, values and ethical

responsibilities that distinguish teaching from the other professions. Finally, all these aspects of professional studies must be integrated into the clinical experience where formal knowledge must be used as a guide to practical action.

(1986, p. 56)

Thus, the Holmes Group focus on undergraduate teacher education programs suggests that one set of solutions to the current "crisis" in education will be found in both the academic disciplines and the professional education schools. This claim of joint responsibility may be seen in the following statement:

Our own professional schools are part of the problem. But what of the many badly taught and often mindlessly required courses that our students, like all undergraduates, must take in the various departments of arts, sciences, and humanities? Is the weak pedagogy, the preoccupation with "covering the material," the proliferation of multiple-choice tests, and the delegation of much teaching to graduate students--increasingly, students who cannot speak English very well--not full of messages about the nature of knowledge and standards for acceptable teaching? Can we expect many good teachers to come from universities that teach their undergraduates in these ways?

(1986, p. 3)

Perhaps the most important argument in both the Carnegie Forum and the Holmes Group reports is tied to the claim that more cooperative work is needed among faculty members from the liberal arts disciplines with those in education.

The Holmes Group asserts that it is aware of the challenge and complexity of reforming undergraduate education. In spite of this, the optimism shared by its members for reaching this goal is seen throughout the report. For example, the report states that, "regard-

less of the problems, it is essential to change the course selection patterns and class content encountered by prospective teachers during their preprofessional studies" (p. 55).

Although the proposals of both the Carnegie Forum and the Holmes Group present many positive and compelling images of the potential for quality education programs, both are weakened by one serious omission. Missing from the reports of both groups is any evaluation component that would be relevant to improving teacher education programs, either those that currently exist or those that are envisioned in these proposals. This omission is important because effective plans for improving teacher education need to start with the recognition that little is known about the effects of different emphases on the performance of prospective teachers. In fact, little is known about the characteristics of teacher education programs themselves. This lack of knowledge places all attempts to improve teacher education through program reform on rather unstable ground. A more well-established base of what is known must take place before any substantive attempt at program reform should be made.

Studies of Teacher Education

The limitations of much of the available research are easily seen through a review of relevant studies. Several studies have attempted to address the general question of the impact of teacher education on the classroom behavior of both student teachers and certified classroom teachers (e.g., Evertson, Hawley & Zlotnick, 1985; Fullan, 1982;

Locke, 1984; Sweitzer, 1982). Unfortunately, analysis of the results of these studies reveals equivocal findings. For example, while Collins (cited in Evertson et al., 1985) found preservice effects in the behavior of student teachers and Adams (cited in Evertson et al., 1985) found that such program effects could be sustained, Fullan (1982) and Locke (1984) found that teacher preparation often is not transferred to the teacher's classroom behavior. Some researchers have claimed that a substantial portion of these mixed results are related to such things as the difficulties in conducting educational research (reviewed by Koehler, 1985), and the relatively recent emphasis on questions of teacher education (Egbert, 1985; Hall & Hord, 1981). In addition, Hall and Hord (1981) suggest that the ambiguity in interpreting the results of these studies may be related to the limitations that follow from viewing teacher education programs as a unitary phenomenon. Hall and Hord argue that the most relevant research question cannot be as simple as one that asks whether teacher education has value. Rather, they suggest that a more fruitful question would be one that attempted to describe the characteristics of different teacher education programs and that examined whether such alternative program emphases were evident in the classroom behavior of teachers with these differing backgrounds.

As a result of the equivocation in studies of the effects of teacher education, some researchers argue that a new agenda of teacher education research is needed. For example, Hall and Hord (1981) describe one potential direction for research on teacher education.

Their proposal includes two major areas of emphases. First, they suggest the need to develop a descriptive base that specifies the components of programs in teacher education and an appraisal of potential emphases for future program content. In addition, they argue that there is a need for an analysis of the teaching/learning process that examines the impact of teacher education programs on the behavior and effectiveness of classroom teachers.

Over the past decade, a few conceptualizations of research on teacher education programs have addressed these concerns. Doyle (1977) attempts to focus attention on the importance of the classroom context in order to evaluate the effects of specific program differences. For example, his work suggests that programs of teacher education should emphasize the need for student teaching experiences to be congruent with the demands that commonly occur in classrooms. Based on this work, Doyle suggests that programs that are radically different from the usual classroom may prove to be learning environments that are not too meaningful for student teachers. This type of experience may result in less carry-over of learning to the teacher's initial assignment than occurs in programs that incorporate more typical classroom features into their teacher education model. Similarly, Warren (1985) argues that some programs of teacher education have become too distant from the actual conditions of teaching. To Warren, another consequence of this is that many teachers leave teacher education programs unprepared for the wide variety of professional responsibilities that they will need to confront. Warren includes teacher

responsibilities such as the demand to analyze curriculum development and to help formulate educational policy. Indeed, these components of teacher education programs often do not receive a great deal of attention.

In contrast to the suggestions of Doyle (1977) and Warren (1985), Alverman (1981) has proposed that dissonance between preparation "ideals" and practical "reality" might be utilized as a source of strength to new teachers who have strong pedagogical philosophies. Citing one beginning teacher's experience of professional growth, Alverman argues that "teachers new to the field . . . need to examine ideas that contradict their philosophies, and unless they have some fairly strong beliefs, it will be easy to substitute what is for what could be" (p. 25). Similarly, Gehrke (1981) has argued that beginning teachers with high self-esteem and a high sense of competence are able to teach with a student-focused based and thus not succumb to institutional pressures. Gehrke suggests that the development of an interactive model of teacher socialization is needed, and she argues that not all beginning teachers are as helpless as some educational researchers (e.g., Cuban, 1984; Sarason, 1971) have claimed. A final illustration of contemporary educational research that represents an encouraging new focus is that of Shulman (1984, cited in Doyle, 1985). Shulman has explored ways to use grade transcripts and course syllabi to create "intellectual histories" that trace how students in different teacher education programs come to understand subject matter and techniques for teaching.

The examples of research provided above are meant to convey a feeling for the range of questions about teacher education programs that remain essentially unanswered. In each case, these researchers are suggesting that the crucial variable in teacher education is not whether the teacher was educated in a teacher education program, but rather the specific characteristics of the program's requirements.

The claim that an examination of the effects of differing emphases in teacher education programs may provide insight into the quality of teaching has been accompanied by a new conceptualization of the process of teacher education. From this point of view, one sees teacher education as a process on a continuum ranging from preservice training to induction into the profession to inservice teaching (Hall & Hord, 1981). Although this proposal is focused on the preservice component, each of these stages eventually need to be further explicated through research, and the relations among them need to be delineated. The next section will discuss some of the characteristics of preservice teacher education programs.

Characteristics of Teacher Education Programs

There is no single model of teacher education upon which teacher educators agree. Because of this, teacher education programs initially may be conceptualized only in the two broad components of general education and professional education.

General Education

All colleges and universities that provide teacher education incorporate a general or liberal arts education into their curriculum. Although this component has a fairly long history in teacher education practice, in recent years it has become the focus of lively debate. The background of this debate has been traced by Cruickshank (1985), and his summary provides a useful characterization of the current issues.

In 1945 the Harvard Committee on General Education introduced the term "general education" to curriculum debate. This group posited that general education should be designed to give students the means to critically examine their lives, and to overcome the capacity for provincialism. According to the definition of general education that was adopted by this committee, a college curriculum that would contribute to these goals would include the social sciences (in order to develop an understanding of the social environment and human relationships), the humanities (to develop an understanding of the nature of human activity and the differing modes of human thought), and the natural sciences (to develop an understanding of the physical environment and humans' relationship to it). Positions on the role of general education in teacher education have seen a great deal of debate in the years following the Harvard Committee on General Education's report. Conant (1963) has been an influential advocate for increasing the role of general education in the education of teachers. He described a general education as one that emphasizes the ability

to think and act rationally and that tries to produce an informed and inquiring mind. One reason that such an emphasis is important in teacher education, Conant argues, is because if a teacher is to be considered a learned person in the community, the teacher should be prepared to discuss a variety of topics outside of his or her area of specialization. Van Doren similarly argued that teachers need this type of background in order to understand not only what they are teaching, but why they are teaching it (1959, cited in Cruikshank, 1985). Carbone (1980) has argued that the knowledge and intellectual tools that are furnished through liberal studies are a vital supplement to a teacher's methodological skills and expertise in subject area material. He suggests that this general education component allows the teacher to put the everyday classroom activities into a broader framework of educational values and goals. Further, Carbone suggests that such knowledge may be seen as the basis for true professionalism in teaching. He argues that without the ability to fully understand the basis of their teaching practice, the teacher can only be seen as having technical knowledge of the field.

Each of these comments are similar to a recent (1982) proposal of the National Council for Accreditation of Teacher Education (NCATE), in which they argue that:

For the teacher, however, being well-educated is a necessity. Without it, the teacher cannot interpret any field of knowledge in its proper relationship to the whole of society, and without it, the teacher will not be respected by a society which is itself becoming increasingly well-educated . . . Being a well-educated person is so essential

to the satisfactory performance of the functions of a teacher at all levels as to justify an emphasis on liberal education at the preservice level.

(cited in Cruickshank, 1985, p. 8)

The NCATE Standards for the Accreditation of Teacher Education describe a general education as including studies in languages, communication skills, linguistics, mathematics, logic, and information theory; natural and behavioral sciences; and humanities. Further, the NCATE proposal suggests that such studies should constitute a minimum of one-third of the total coursework of future teachers. At times, the need to emphasize the general education component of prospective teachers has had even more absolute proponents. For example, in one recent educational reform proposal, the Paideia Proposal, Adler (1982) argued that a general education should be the sole criterion for entry into teaching, and stated "the hell with courses in pedagogy and educational philosophy" (cited in Cruickshank, 1985, p. 12).

Alternatively, not everyone has been enamored with the growing emphasis of general education in teacher education programs. Smith (1980) provides a commentary on potential limitations of this perspective. He states:

Schools of pedagogy no less than the nonpedagogical schools and departments have been, and continue to be, possessed by the magic of the expression "general education." The referent even in the most stringent definitions is elusive. Its meanings are as numerous as the points of view regarding what education is all about. To some it means dipping into a number of disciplines, tasting general courses here and there . . . As a result of preoccupation with the notion of general education, a considerable proportion of the prospective teacher's academic program, sometimes

amounting to half of the credit hours, has been distributed over a large number of fields from which the student has acquired only very superficial knowledge.

(cited in Cruickshank, 1985, p. 11)

Saunders (1985) concurs with this conclusion. He perceives the general education component as a weak emphasis because it often is comprised of disjointed and fragmented coursework, which for the most part is confined to survey-level courses.

From these different perspectives it may be seen that while most teacher educators agree that teachers should be well educated, there is considerable disagreement over the role of a general studies education in fulfilling this task.

Professional Education

Certification requirements and accrediting agencies generally have mandated a professional education curriculum to be included in the education of teachers. For example, according to NCATE,

The professional part of a curriculum designed to prepare teachers should be distinguishable from the general studies component. The general studies component includes whatever instruction is desirable for all students regardless of their prospective occupations; the professional component covers all the attitudes, knowledge, and skills required of a teacher.

(cited in Cruickshank, 1985, p. 17)

Professional education coursework has comprised a substantial part of teacher education program requirements since the early nineteenth century when pedagogy emerged as a distinct field of study.

In spite of this long history, there continues to be considerable disagreement about whether or not teaching may be considered a profession. Cruickshank (1985) has argued that one of the factors standing in the way of teaching becoming viewed as a profession is the lack of consensus among educators about a specialized body of knowledge that defines and delimits professional expertise. Further, Cruickshank has argued that in order for this component of a teacher's education to be taken seriously, a definition and evaluation of what currently exists needs to take place.

Only a few studies have attempted to provide a characterization of the overall professional education curriculum requirements of students in teacher education programs. In an examination of the program requirements for prospective elementary education teachers, Kluender and Egbert (1983, cited in Egbert, 1985) found that approximately 56% of the college program is spent in general education and the remainder in professional studies. According to Kluender and Egbert's analysis, 24% of the time in professional studies is spent in curriculum and methods courses, 11% in foundations and education-related science, and 9% in field-based experiences. Galambos (1985) found that approximately 50% of the program time for elementary education students was spent in professional education coursework. She found a considerable diversity in the program requirements, with a range of from 33 to 65 credit hours comprising the professional education coursework requirements. Conant (1963) noted a number of constants in teacher education program requirements. Most programs he studied required an educa-

tional psychology course, at least one methods course, one course on the relation of school to society, and a student teaching practicum. His study also emphasized the variability that exists in teacher education programs, with professional course requirements for elementary education majors ranging from 26 to 59 hours (cited in Cruickshank, 1959). Chandler et al. (1971) found that approximately 20% of the curriculum required for state certification of elementary education teachers is devoted to the study of pedagogy and practice teaching (cited in Cruickshank, 1985). Finally, Sherwin (1974) found that elementary education majors have background work in professional education courses that range from 26 to 35 semester hours.

Since virtually all teacher preparation programs include at least some coursework from the professional education component, most disagreements occur with respect to the specific nature and the amount of this emphasis. Egbert (1985) has argued that variation at this level is likely to provide the greatest evidence of differences among educational programs. According to Egbert's analysis, the professional education component may be divided into three parts: foundations and education-related coursework, curriculum and methods coursework, and field experience. NCATE has provided a similar delineation of the components of professional education. Although these models overlap, the NCATE categorization will be used to characterize the range of professional education requirements. The first of these is the "content for the teaching specialty" which is defined as the teacher's concentration or major. For example, the prospective sec-

ondary level history teacher studies the discipline of history. The second classification in the NCATE categorization scheme of professional studies is comprised of "humanistic and behavioral studies." This group includes courses in foundations of education and in those studies that complement educational theory. In general terms, this group of studies is intended to serve as a link between general education and pedagogy through an understanding of the humanities and the social sciences. Issues in education that are tied to such a fundamental understanding include such things as appreciating the aims of education and the organization and administration of schools. The range of courses that attempt to provide this information include such courses as philosophy of education, educational sociology, and the history of education (Cruickshank, 1985). Some educators (e.g., Taylor, 1965) feel that these studies allow students the ability to develop their own philosophy that can then be applied to the school setting.

However, there is controversy over the usefulness or the relevance of these foundations courses. Conant (1963) has described these courses as being usually worthless and a source of embarrassment for education departments. Since many students do not respond positively to these courses and consider them irrelevant, Howsam (1986) has argued that teachers of these courses need to become more involved with classroom practice and the problems of teachers in order to create an atmosphere that allows students to relate these courses to their experience (cited in Cruickshank, 1985).

The third category of professional studies is labeled "teaching and learning theory." Coursework in these areas is usually tied to instructional methods courses. For example, such courses as teaching of art and teaching of science are included here. In addition, this area includes courses in learning theory such as educational psychology. Since there has been a perception that most academicians teaching content courses are unaware of the needs of preservice teachers, many education departments have established their own methods courses that emphasize both the subject matter and the techniques of teaching the subject to others. However, the methods course component has been under frequent attack by both academicians and the general public as being devoid of intellectual content.

The teaching theory component has fared better in public opinion. NCATE has suggested specific curricula for education in the theory of teaching. This curricula includes such things as diagnosis and evaluation of student learning, organization and management of the classroom, goal and objective setting, and effective communication. To some (e.g., Smith, 1969), these components are crucial to teacher success. Smith argues that teachers need experience in analyzing specific classroom situations against a background of theory, and increasingly teacher education coursework has been reflecting the usefulness of this emphasis (cited in Cruickshank, 1985).

Learning theory has generally been covered outside of education departments, usually through courses such as general psychology. There are, however, some exceptions to this rule, where specific

emphases in learning theories are viewed as particularly relevant to the content of the teacher education program. For example, in the field of early childhood education, it may be argued that the work of Piaget has been so influential as to make this theoretical perspective a likely emphasis within education departments.

The final component of professional studies curriculum is field experience. Although questions about the nature and duration of field experience are subject to a great deal of disagreement among teacher educators, it is the area most often identified by new teachers as the most beneficial aspect of their preservice preparation (Evertson, Hawley & Zlotnick, 1985). In recent years the trend has been to increase the percentage of program time that students spend in these experiences. Along with a final student teaching practicum, many of the curriculum and methods courses, as well as many of those in foundations and education-related science also required substantial field experience. Based on findings like these, Kluender and Egbert (1983) conclude that field-based experience has become a significant component of the education of the prospective teacher. Heald (1983, cited in Egbert, 1985) reports that the average student teaching requirement for elementary education majors is about 300 clock hours, and that total field experience required by colleges and universities has been increasing dramatically in recent years. For example, a typical elementary education student in 1968 was required to spend 280 clock hours in field-based experiences, while by 1983, this average figure had increased to 420 hours. Such a regular increase in the number of

hours of field-based study reflects a continuing recommendation from educational leaders that such field study be increased (Cruickshank & Armaline, 1986). It further reflects those comments offered by pre-service teachers themselves who believe that their practice teaching experience was the most valuable part of their professional education.

In spite of these trends and the support that many educational researchers have offered to this tendency toward increasing the field-based experience of prospective teachers, there have been some dissenting voices here as well. Zeichner (1980) has pointed out that field-based experiences may have a conservative orientation and may socialize prospective teachers into established practices of education that are not in line with the rest of the program emphasis at the university. Griffin and his colleagues have found that little change occurs in student teachers' classroom behavior as a result of their field experience (Evertson, Hawley & Zlotnick, 1985). Thus, in large measure, the effect of different emphases on teacher behavior, even in field-based study, very much remains an unanswered question.

Early Childhood Education

Public and professional concern about the education requirements for teachers of young children have been changing in recent years. Just 15 years ago, discussion about the qualifications of early childhood educators centered on such questions as whether or not teachers should have children of their own before being considered qualified

to teach others' children, and whether or not teachers of young children really need any special training at all (Seefeldt, 1973).

Since then, regulations regarding teacher qualifications, and college-level programs leading to certification in early childhood education have become more common. Unfortunately, although many states now certify early childhood teachers, very little is known about the programs charged with their preparation for certification (Spodek, Davis & Saracho, 1983). In fact, a recent review of studies concerning the preparation of early childhood teachers did not identify any studies that specifically discussed program requirements of early childhood teacher education programs, although studies of teacher education at other levels were widely available (Spodek & Davis, 1982). The lack of information about early childhood teacher preparation programs has prompted some researchers to propose explanations for its absence. One line of argument is that this reflects the uncertain view of the role of early childhood education in the schools. Another has suggested that in spite of increased sophistication, there remains considerable confusion about what early childhood educators need to know in order to become effective teachers (e.g., Lamme, McMillin & Clark, 1983; Spodek & Davis, 1982). As such, questions about early childhood teacher education programs need to be developed. These questions should be directed at constructing a more detailed picture of the individual program components that may contribute to the development of effective teachers of young children.

Early Childhood Education Programs

The field of early childhood education encompasses points of view that reflect widely divergent theoretical positions about educating young children. Although educators at all levels need to consider the philosophical questions embedded in their educational practice (Kohlberg and Mayer, 1972), there is often vociferous argument among early childhood educators about curriculum philosophy.

These arguments may be characterized as focusing on the goals of education and the process of teaching that needs to occur to reach these goals. On the one hand, early childhood curricula is conceived in such a way as to facilitate successful adaptation to existing primary programs. This model usually is associated with a classroom dominated by teacher-initiated activity and teacher-established objectives that are highly prescribed and primarily tied to facilitating intellectual development. Alternatively, a child-centered experience is seen as providing an enriched, developmentally-based experience. From this point of view, curriculum planning begins with an analysis of children's developmental characteristics. The goals of education as seen from this perspective are more broadly defined than those in the teacher-centered classroom. These developmentally oriented programs attempt to promote intellectual, social, and emotional development through the child's active involvement with the curriculum (Evans, 1982; Headly, 1965). The two emphases are distinguishable in the classroom, and they represent pedagogical alternatives that are mirrored in the beliefs and attitudes of different early childhood

teachers (Schweinhart, Weikart & Larner, 1986). Since these curricular orientations embody a different set of philosophical underpinnings and a different set of expectations of the role of the teacher, it is likely that early childhood teacher education programs with these different orientations would approach their task using different means. For example, a teacher education program that emphasizes a teacher-directed approach might be characterized by a large percentage of methods and curriculum courses. A teacher education program with a child-centered approach may include a large percentage of courses directed at fostering an understanding of child development. In addition, the child-centered program may emphasize the perspectives from other disciplines that attempt to explain the behavior of children in social settings. For example, this type of program may require more coursework in the disciplines of psychology, sociology, or anthropology.

The teacher-directed approach may be illustrated by the model provided by Bereiter and Engelmann (1966, cited in Evans, 1971). In considering the needs of "underprivileged" children, they proposed a model of teaching that focused on strategies primarily aimed at fostering language development. The dominant strategy employed by teachers who have adopted this perspective relies on verbal presentations and demonstrations by the teacher, along with teacher-led question and answer sessions. As Evans (1971) has noted, the Bereiter-Engelmann program leaves nothing to chance. In this model, "goals are concrete, teacher actions are deliberate, and sequencing is predeter-

mined" (1971, p. 118).

Traditionally, programs in early childhood education have emphasized the child-centered, developmentally based model of education rather than the teacher-centered model. In fact, this emphasis is seen by many educators (e.g., Kamii, 1985) as representing a major contribution to educational thought. Many educators believe that as early childhood programs become more common in public awareness, that they may bring with them a wider acceptance of this educational philosophy which may influence curriculum in other grades in public school settings.

The characteristics of such a child-centered program may be illustrated by an early description of the space and equipment needs of the kindergarten, as reported by the New England School Development Council (1953, cited in Kindergarten Study Committee, 1967). Through a lengthy summary, this report points to the need for the kindergarten to have outdoor play areas that are responsive to individual children, art materials, easels, bookcases for pupil-made objects, sand tables, a wet-area, workbenches with carpenter tools, blocks, and dolls and stuffed animals. This description of materials in a developmentally appropriate kindergarten classroom provides a characterization that indicates the direction such programs were envisioned to follow. Statements from other observers during this early period reflect this child-centered emphasis as well. Hymes (1958) encourages teachers to "capitalize on the readiness to learn that is. Make the most of what children can do now, and boys and girls will arrive at their destina-

tions with skills sharpened, with wonderful souvenirs, rich memories, and a solid background" (p. 96). Hammond (1963) echoes this sentiment with the claim that "today the emphasis in the kindergarten is not on preparing the child for first grade or looking to the next year, but rather upon helping him to live richly and fully as a five-year-old" (p. 53).

Although many contemporary early childhood educators continue to hope for this influence to become more common at all early grade levels, many are concerned that programs for young children may be forced into changes that move away from this heritage. Schweinhart et al. (1986) report that as early as the 1960s effective preschool programs were becoming thought of as those that espoused a structured curriculum. He warns that this should be taken as a signal of the strength of the recent emphasis on moving early childhood education in the direction of becoming didactic programs. Others have noted this possibility as well. Rudolph and Cohen (1964) imply this prospect when they state that ". . . we are strongly opposed to proposals that kindergarten children start their preparation for advanced skills by handling specific aspects of the three R's at five" (p. 4).

Today, statements about the kindergarten and early years of primary education often express similar concerns. Kamii (1985) claims that:

It is almost impossible today to talk with teachers of young children . . . without hearing some complaints about having to produce higher test scores. Most teachers trained in the Child Development tradition believe, for

example, that some of their children are not yet ready to learn how to read. Yet, these teachers feel compelled to include phonics lessons simply because they are expected to produce acceptable test scores.

(p. 3)

Paley (1986) suggests that her experience as a kindergarten teacher reflected this phenomenon. She admits that:

In my haste to supply the children with my own bits and pieces of neatly labeled reality, the appearance of a correct answer gave me the surest feeling that I was teaching . . . I wanted most of all to keep things moving with a minimum of distraction. It did not occur to me that the distractions might be the sounds of children thinking.

(p. 122)

Martin (1985) also is critical of the trend toward viewing kindergarten as a preparatory year. She notes that kindergartens are not designated as preschools, and that the kindergarten rapidly is becoming an adjunct to first grade with workbooks replacing art materials, and formal instruction replacing child-initiated activities.

Compared to the description of the materials found in the kindergarten that is presented above (Kindergarten Study Committee, 1967), Martin's (1985) observation that the kindergarten day is filled with drill in numbers, letters, and phonics, and through coloring and filling in commercial workbook pages, points to a significant change in classroom activity emphasis, if not in educational philosophy. While this emphasis has not come to dominate the field of early childhood education, it is increasingly reported. A recent study of the public kindergartens in Chicago documented that:

Rooms looked more like first grade rooms than like kindergarten rooms; desks or tables were in rows and there were no interest centers, play areas, or places to gather the children together on the floor.

(Chicago's Government Funded
Kindergarten Programs, 1985, p. 5).

Analysis of time allocations in the Chicago study revealed consonant findings. In discussing the all-day kindergarten programs in Chicago, a researcher concludes that one advantage of having more time to teach is that now the teacher can include such things as art and music that have had to be given less emphasis in recent years. A recent description of all-day kindergarten classrooms in New York reveals that at least some of these classrooms share similar problems. A description of one classroom portrays kindergartners sitting at rows of desks in front of a blackboard that the teacher uses for lectures (Fiske, 1986). Some of these schools are unabashed about their stress on academics for young children. According to Fiske's report, one principal allowed that while this emphasis on academics does not leave as much time for playing and working on social adjustments, the increased number of children doing grade level reading more than justifies it (Fiske, 1986).

Lamme, McMillan, and Clark's review (1983) supports the conclusion that it is reached by these individual cases, and they claim that throughout the country, many are viewing the kindergarten's role as one to prepare students in the basic skills that will be necessary in the first grade.

These changes in the perception of the role of the kindergarten

indicates that a reasonable question for study would be one that dealt with the problem of how educational policy and curriculum orientation develop. An attempt to answer this question probably would emphasize such general factors as changing social concerns about children, reactions to calls for educational reform, and the implications of a changing population profile. The increased demand for early childhood programs incorporates elements of all of these, but response to this demand has been slow as the lack of social policies directed toward young children emphasizes. An outcome of this weak policy stance is that educational institutions have begun to focus attention at this young age level only very recently, and qualified early childhood teachers are often in short supply. With pressures to provide educational programs to prepare teachers of young children, some colleges may utilize program philosophies that typify other elementary programs and encourage teachers of young children to use materials and procedures with which they are familiar (e.g., workbooks and dittoes) even though they are materials suitable for older children. Coupled with ambiguity and debate about the role of programs in early childhood education, there is a very real risk that the educational beliefs that have come to characterize approaches used with older students may come to pervade these nascent classrooms. Martin (1985) warns that the current educational environment has the potential for reducing the spirit and scope of the primary level classroom with this emphasis on the need for a rigid academic curricula. In addition, she warns that this type of atmosphere may lead to an increased

perception of the teacher as a technician, and thus, to a decreased level of professionalism.

Similar concerns are felt by many who see increased public support for early childhood programs for even younger children as something that ultimately will be necessary (e.g., Usdan, 1981). Recent reports claiming the long-term effectiveness of high quality preschool programs (e.g., Schweinhart & Weikart, 1985) have an understandable appeal to many policy makers, parents, and teachers. However, in many cases that appeal is tempered by anxiety. For some, this anxiety is based on the assumption that early childhood programs in the public schools may adopt undesirable characteristics of the school structure. According to the National Black Child Development Institute (1986) this structure of the school is characterized by classrooms that attempt to "transmit facts and values [and have] children passively listening in large group settings . . . which are not set up to provide the young child with the opportunities to realize his or her developmental potential" (p. 21).

For all of the reasons discussed in this section, concern about the direction that early childhood programs will follow in coming years is beginning to characterize the agenda of many research and child advocacy groups. Recent research (e.g., Schweinhart et al., 1986) has suggested the long-term value of high quality developmentally-based early childhood programs. The National Association for the Education of Young Children recently has adopted a position statement that establishes guidelines defining the nature of develop-

mentally appropriate educational practices for four- and five-year-olds, and is planning to promulgate arguments defending its position to elementary school administrators, teachers, and teacher education institutions (NAEYC, 1986). Research and advocacy focused on ensuring program quality are necessary features for future policy emphases. In addition, defining the critical components in the education of prospective classroom teachers is another direction in which policy efforts need to be focused.

Early Childhood Teacher Education

As discussed above, much more work has taken place around the issue of the appropriate content of early childhood education than has been done on describing the characteristics of the programs that prepare early childhood teachers. The studies that have looked at early childhood teacher education thus far are limited in depth and are seen best as beginning steps to address the need for this type of research.

One of these beginning studies (Lamme, McMillan & Clark, 1983) was designed to assess the status of early childhood teacher certification throughout the United States. Among other questions, this study attempted to answer the following questions: (1) What age or grade levels constitute early childhood certification in the states? (2) May teachers with only elementary certification teach at the early childhood level? (3) If additional course hours are required in early childhood education to supplement the elementary certificate, how many

hours are needed? Responses from all 50 states indicated a wide variety of age/grade level classifications. The types of certification and the number of states employing each type may be seen in Table 1.

Thirty-two states permit teachers who have elementary certification to teach at the kindergarten level without any further preparatory coursework, although there appears to be a trend toward requiring additional coursework for such a transition to occur. Lamme and her colleagues found that states fell into two general categories in their requirements for such additional coursework. Some states require the completion of an approved program in early childhood education and others require only a specified number of hours of coursework. On the basis of responses to their survey, Lamme et al. conclude that there are wide differences in the interpretation of the early childhood certificate by the various states, and they argue that these differences reflect the confusion that exists about the role of early childhood education.

Another study (Spodek & Davis, 1982), conducted through a survey design, attempted to examine some of the characteristics and the admission/retention requirements for early childhood teacher education programs. In this study, Spodek and Davis found that the primary criteria for admitting students were grade point average (67%) and standardized test scores (68%). Criteria cited most frequently for the retention of students were grade point average (90%) and evaluation of practicum performance (83%). More than one-half of the programs reported that over 60% of their students came to them directly

Table 1
 Early Childhood Certification
 Age and Grade Level Classifications

Age/Grade Level Classification	Number of States*
Birth to age 4	1
Birth to K; birth to age 6	2
Birth to age 8	2
Pre-K; ages 4-5	3
N/K; ages 3-6	7
N-3; ages 2-8 or 3-8	9
Grades N-6	1
K only	5
Grades K-3	13
Grades K-4	1
Grades K-6	4
Grades K-8	4
No description received	3

*The 50 states plus the District of Columbia are included. One state, Ohio, offers two types of certification at the early childhood level. (From Lamme, McMillan & Clark, 1983; p. 44.)

from high school. Spodek and Davis used these findings to address the question of the selection criteria of students entering early childhood programs as a source of quality control in teacher education. Referring to the work of Pugach (1981), they suggest that selective admission may be needed in order to dissuade potentially poor teachers, since teacher education programs traditionally have a low failure rate. Importantly, they also note that the arguments against establishing rigid selection requirements are also powerful, because the field of early childhood education has traditionally valued the richness that has resulted from diversity among the teaching staff.

A more detailed study conducted by Spodek and his colleagues (Spodek, Davis & Saracho, 1983) attempted to provide an illustration of the actual content of early childhood teacher education programs. This study examined the changes in early childhood teacher education programs that resulted from new state certification demands. As a result of certification standards, teacher education programs required a broader base of general education coursework, an increase in the amount of professional education course work, and an increased number of hours of required field experience. Field experience requirements also reflected an increased concern with providing a variety of settings for students including the preschool, kindergarten, and primary levels. The majority (90%) of programs required that students have fewer than 50 clock hours of field experience during their freshman year, while 91% required sophomores to have 100 clock hours of field

experience. The field experience placements were split between kindergarten (26%), nursery settings (25%), and day care (20%). During student teaching, however, the kindergarten (33%) and the primary levels (31%) were most commonly used, with nursery (19%) and day care (12%) levels used less. Two placements were required during student teaching by 75% of the programs, with each placement requiring 160 to 240 clock hours of student teaching; programs that required only one student teaching placement require 240 to 360 clock hours.

While very few studies have been conducted that examine the content of early childhood teacher education programs, it is clear that the issues faced at this level are consistent with those faced at the more frequently studied elementary and secondary levels. Further, while the research that has been conducted thus far is limited in terms of the conclusions that may be drawn, they generally have adopted the strategy of attempting to identify and understand the impact of different program characteristics. However, detailed examinations of a more limited number of early childhood teacher education programs needs to occur in order to characterize this component more fully.

The issues raised in this literature review form the basis for a study of teacher education programs in early childhood education. Recent proposals aimed at the education requirements for prospective elementary and secondary teachers have raised serious questions about the nature of teacher education in general. At this point, work that is focused on understanding teacher education programs even at these

levels is far from complete, and it is important to note that many of the criticisms faced by these programs are similar to those that early childhood programs will need to confront in future years. The current proposals for reform in teacher education at all levels need to be informed by an increased understanding of the nature of the fundamental characteristics that comprise teacher education programs.

CHAPTER III

DESIGN OF THE STUDY

In Massachusetts, the Department of Education (DOE) allows students to meet teacher competency standards through the completion of an approved institutional program in the field for which the certification is sought. The standards which form the basis of the DOE institutional evaluation and program approval procedure may be found in Appendix A. Since the program characteristics that were studied reflect this state approval process, some familiarity with both the Common Standards and the standards for the Early Childhood Teacher may be helpful in understanding the rationale for the design employed.

The documentation of program characteristics through institutional self-study is a required part of the process for a program in teacher education to be approved by the DOE. Within these self-study documents, the institution provides a detailed explication of the prepracticum and practicum requirements that they have established to meet the DOE standards for the early childhood teacher. For this reason, an institution's self-study report represents a major source of the information that is used by the Department's approval team in their attempt to understand the components of teacher education programs.

For the reasons outlined above, the documentary information provided by these institutional self studies was also a major source of data in this study. Although there are some limitations in this tech-

nique for studying the characteristics of teacher education programs, there are also a number of advantages. The value of studying an institution through its documentary records was stated elegantly by Hall-Quest (1925) in an early study of teacher education programs. His description of the value of this approach is worth quoting at length. He states:

It is a principle in law that circumstantial evidence is far more reliable than the testimony of an eye-witness. At first glance it would seem that a personal visit to a considerable number of institutions must be the only reliable method of ascertaining the policies and practices to which a particular teachers college is committed. Invaluable as such first-hand knowledge is, it cannot rightly be regarded as in all respects satisfying unless, indeed, the investigator has had the opportunity to remain a considerable length of time in each institution, and has had available every possible means leading to accurate information and sound conclusions. The ideal survey must not only gather data but reflect the spirit in which an institution works. The latter may defy scientific analysis, but, in so far as it is at all observable to an outsider, not a little may be revealed in the publications that the institution employs to represent its point of view. Catalogues and other documentary material may not set forth in complete accuracy what is done from day to day, or the modifications of policy and practice that are required in any truly democratic institution. They do serve as weather vanes, however, and if supplemented by other methods of inquiry will not lead one astray seriously in the effort to sketch in bold outline what is being done within an institution.

(Hall-Quest, 1925, p. 35)

Population

Each of the 26 colleges and universities with teacher education programs in early childhood education that are approved by the

Department of Education in Massachusetts were included in this study.

Design

The study was designed to provide a descriptive analysis of the content requirements of the early childhood teacher education programs. It was conducted through an inquiry into documentary sources of information about the programs. During the course of the study both college catalogues and institutional self-study documents were examined. The primary source of information about these early childhood programs were the institutional self-study documents described above.

Materials

In order to facilitate data collection, a general coding sheet was used. The coding sheet allowed for a standard approach for documenting the program characteristics. The coding sheet may be found in Appendix B. The questions that were used to generate the coding sheet and their relation to the general areas of inquiry are listed below.

General Studies

- (1) What is the total number of credits required for graduation?

- (2) What is the total number of credits required in general education?
- (3) What percentage of the total required coursework is comprised of general education studies?
- (4) What areas of coursework are included in the college's general education curriculum?
- (5) What is the number of credit hours that is required in each of the subject areas of the general education curriculum?

Professional Studies

- (1) What percentage of the total required coursework is comprised of professional education studies?
- (2) What areas of coursework are included in the professional studies curriculum?
- (3) What courses are included in the field of child development?
- (4) What is the number of required child development courses?
- (5) What courses are included in the field of special education?
- (6) What is the number of required special education courses?
- (7) What is the number of educational foundations courses that are required?
- (8) What courses in the area of teaching and learning theory are required?
- (9) How many "instructional methods" courses are required?
- (10) How much of an emphasis is there on coursework that is focused on pre-school age children?
- (11) How many courses in learning theory are required?
- (12) How many educational psychology courses are required?
- (13) How many hours of field-based pre-practicum experience are required?

- (14) How many hours of field-based pre-practica are required in observation?
- (15) How many hours of field-based pre-practica are required in direct contact with children?
- (16) How many hours of pre-practicum experience take place in a lab school?
- (17) How many hours of pre-practicum experience take place in a pre-school setting?
- (18) How many hours of pre-practicum experience take place in a public school setting?
- (19) How are pre-practicum experiences supervised/monitored?
- (20) How many hours of practicum experience are required?
- (21) How many days per week are students in the classroom?
- (22) How many weeks is the student in the practicum?
- (23) Is the practicum a single placement for the entire semester?
- (24) Is the practicum split between different settings?
- (25) Is the entire practicum in a public school setting with K-3 grades?
- (26) Is part of the practicum spent in pre-school?

The second aim of this study was to examine structural and demographic features of the institutions studied. A description of these institutional characteristics was included in order to be able to describe the institutions involved in the study, and to consider the variety of experience that prospective early childhood teachers may have during their education. Further, these characteristics may be associated with some elements of program characteristics, as is

discussed in reference to a cluster analysis presented in Chapter V. Information that will be examined in reference to these institutional characteristics includes:

- (1) What is the total enrollment of the college or university?
- (2) What is the total enrollment in the early childhood program?
- (3) What are the requirements for admission to the ECE program?
- (4) What are the average SAT scores of entering students?
- (5) What is the tuition of the college or university?
- (6) What is the institutional affiliation?

Data Collection and Analysis

Institutional self-study documents were examined on the premises of the Bureau of Teacher Certification, in the Massachusetts Department of Education. Coding of all program information was conducted using the materials described above.

The primary method of analysis is a descriptive account of major program characteristics. This account provides a portrait of the individual emphases as well as the range of overall components of the early childhood teacher education programs. In addition, an examination of program types was developed using a cluster analysis.

C H A P T E R I V
RESULTS AND DISCUSSION

The presentation of results is organized in three sections. The first provides a description of the institutional characteristics of colleges and universities in Massachusetts with approved teacher education programs in early childhood education, and a delineation of the overall program requirements. The second section includes a description of the general education and the professional education requirements. The final section provides a delineation of discrete program types that reflects an overall measure of program characteristics based on a cluster analysis procedure.

Throughout this chapter, the descriptive statistics that are used rely heavily on the range and the median to provide an accurate representation of the overall program characteristics. The mean values are also reported, however, in some instances the data were skewed and in those cases reliance on comparisons of means is not appropriate. In order to form percentages, the mean number of required credits of some of the individual components of coursework requirements are used as the basis for comparing these individual components with larger areas of study. To ensure an accurate understanding of the data, it is often necessary to consider both the percentages that are based on the mean values as well as the median values that are reported in the tables.

Institutional Characteristics and Overall Program Requirements

The 26 colleges and universities in Massachusetts with approved programs in early childhood teacher education may be seen in Appendix C. Fifteen are non-sectarian private institutions, seven are state colleges, and two are state universities. The mean, median, and range for major institutional characteristics examined are reported in Table 2. The degree of diversity among the colleges and universities that were studied is evident from these data.

Although the global characteristics of these institutions may have some impact on the quality of the prospective teacher's educational experience, the content of the education program presents a more valuable set of information concerning the student's development as a teacher. A detailed examination of this program content will be the focus of the second section of this chapter. Before turning to the details of the program content, an overview of program requirements will be provided.

In addition to being represented by a diverse group of institutions, the content of these early childhood teacher education programs is characterized by a wide range of specified requirements. Since the program approval process established by the Department of Education reflects the minimum competencies for teachers, individual programs may provide a range of experiences beyond the program requirements. However, following the logic of the methodological approach presented earlier, the analysis focuses only on the program characteristics

Table 2

Institutional Characteristics of Early Childhood
Teacher Education Programs in Massachusetts

	Median	Mean	Range
Total credit hours required by institution for graduation	128	126	120-132
Total credit hours required by early childhood program	100	101	60-140
Tuition	\$6,556	\$6,097	\$936-\$11,355
Total enrollment	2,113	4,343	524-19,600
Early childhood program enrollment	37.5	68.34	2-258
SAT (verbal) (entering freshmen)	460	471	396-606
SAT (math) (entering freshmen)	483	495	390-625

that are explicitly required to meet the competency demands. It should be noted further that throughout this analysis, the program requirements that are reported include both the institutional specifications for completion of the degree requirements (including all institutional general education requirements) as well as the professional education requirements established by the school of education and the department of early childhood education.

The data included in Table 2 indicate that the specified early childhood program requirements usually represent a lesser number of required credit hours than those of the overall institutional requirements. In these cases, electives in either general education or in professional studies comprise the additional demands for graduation.

Since the reported data represent a wide range of values on most program requirements, a "typical" program comprised of the median values of a number of major institutional characteristics and program requirements in general education and professional education is presented in Table 3. The provision of this typical program may be seen as an introduction to the nature of the early childhood teacher education program requirements and it serves as a focal point for examining the diversity of programs in early childhood teacher education. A complete listing of the course requirements for all of the programs that were studied may be found in Appendix D.

With this general overview as a background, the range of program requirement characteristics may be seen most clearly through separate examinations of the general education and professional education

Table 3

Characteristics of the Typical Early Childhood Teacher Education
Program (Median Values of Major Features)

Institutional Characteristics

Affiliation--private	
Tuition--\$6,556	
Total institutional enrollment--2113	
Total Early Childhood enrollment--37.5	
Admission to program requirements--no additional requirements beyond institutional acceptance	
SATV scores of entering students (institutional)--460	
SATM scores of entering students (institutional)--483	

Program Characteristics

General Education Requirements (median credit hours)

Total general education requirements	53.33
Humanities	19.00
Social/behavioral sciences	18.00
Natural science/mathematics	9.17
Health/physical education	.43
Other general education	.04

Professional Education Requirements

Total professional education requirements	48.33
Methods of instruction	12.11
Practicum	11.89
Foundations of education	6.83
Early childhood curriculum	3.75
Special education	3.22
Child development	2.17

requirements.

General Education Requirements

As discussed earlier, many critiques of teacher education over the past 20 years have alluded to the need for an increased emphasis on the general education component of programs that prepare teachers. Since the most current of these critiques of teacher education (i.e., Carnegie Forum on Education and the Economy, 1986; Holmes Group, 1986) have called for the elimination of the undergraduate teaching major in order to satisfy the need to expand the role of general education studies, a characterization of the program demands in general education is of considerable value.

Apart from the demands called for by these reform efforts, the documentation of the general education requirements of prospective early childhood teachers is important because study in this broad area is generally conceived to constitute the subject matter preparation of early childhood and elementary teachers. In Massachusetts, teacher certification standards for early childhood teachers do not require the completion of an academic major and prospective teachers generally take courses in each major academic division along with the required coursework in professional education. Eight programs require students to complete an academic minor. These minor requirements range from 12 to 36 credit hours.

Coursework requirements in general education are comprised of

four major subdivisions: humanities, social and behavioral sciences, natural sciences and mathematics, and health and physical education. Table 4 includes the median, the range, the mean, and the standard deviation of required coursework for each of these major divisions, as well as the number of programs that require coursework in each of these areas. In the following sections, each of the major areas of the general education requirement will be examined.

Humanities

The specific components of this coursework area, and the number of programs that require coursework in each of the components may be seen in Table 5.

Coursework in English is the most often required area of study in the humanities. Twenty-two of the programs require study in English and it accounts for 12% of the total general education requirement. Fulfilling coursework requirements in the humanities through a variety of electives accounts for the only other relatively large portion of the general education component that consists of humanities coursework. Together, the different electives described in Table 5 comprise 15% of the general education component.

None of the other components of the humanities requirement accounts for more than 5% of the general education coursework requirement. Although a significant component of the prospective teacher's educational background is accounted for by coursework in the humanities, there is considerable flexibility on the part of programs in

Table 4

Major Subdivisions of the General Education Course Requirements

	Number of Credit Hours		Number of Programs that Require Study
	Median (Range)	Mean (S.D.)	
General Education	53.33 (12-84)	51.75 (15.13)	26
Social/Behavioral Sciences	18 (6-48)	19.06 (8.29)	26
Humanities	19 (0-46)	20.98 (8.58)	25
Natural Sciences/ Mathematics	9.17 (0-15)	9.51 (3.48)	25
Health/ Physical Education	.43 (0-8)	1.92 (2.48)	12
Natural Sciences/ Humanities	.04 (0-4)	.26 (.96)	2

Table 5

Course Components in the Humanities Requirement
in Early Childhood Teacher Education

	Number of Credit Hours		Mean (S.D.)	Number of Programs that Require Study
	Median (Range)			
Humanities	19.00	(0-46)	20.98	25
English	6.25	(0-12)	6.42 (3.39)	22
Electives 1	.50	(0-12)	3.90 (4.48)	13
Electives 2	.14	(0-12)	2.64 (3.52)	12
Philosophy	.09	(0-12)	1.64 (2.86)	9
Electives 3	.24	(0-15)	1.40 (3.63)	4
Religion	.23	(0-8)	1.19 (2.62)	5
Foreign Language	.09	(0-9)	1.03 (2.60)	4
Speech	.06	(0-3)	.74 (1.26)	7
Art/Music	.09	(0-8)	.73 (1.90)	4
Language Study	.16	(0-8)	.31 (1.56)	1
Art	.12	(0-3)	.23 (.81)	2
Music	.12	(0-3)	.23 (.81)	2
Foreign Study	.12	(0-6)	.23 (1.17)	1
Intro. Hum.	.12	(0-6)	.23 (1.17)	1
Library Science	.02	(0-1)	.04 (.19)	1

Electives 1--Coursework primarily comprised of study in the humanities

Electives 2--Coursework in fine arts

Electives 3--Coursework in the humanities

providing direction to the course of study.

Social and Behavioral Sciences

The specific components of this coursework area, and the number of programs requiring coursework in the social and behavioral sciences may be seen in Table 6. Coursework in the field of psychology is the most often required area of study in the social and behavioral sciences. Nineteen of the early childhood programs require some coursework in the field of psychology, and it accounts for 15% of the required number of credit hours in general education. The areas of study in psychology reveal a clear orientation toward the study of issues related to child development. Along with the introductory courses in psychology, program requirements include such courses as child psychology, child development, infant development, advanced child development, developmental psychology, human growth and development, the child and society, children's learning and thinking, and social/emotional development. This list is not exhaustive, but it does provide a flavor of the typical required study in the discipline.

The other area of coursework in the social and behavioral sciences that accounts for a fairly large percentage of the general education requirement is represented by unspecified coursework that is required within any of the social or behavioral sciences. This type of loosely constrained elective is required by 19 of the programs, and accounts for 11% of the total amount of required general education coursework.

Table 6

Course Components in the Social/Behavioral Science Requirement
in Early Childhood Teacher Education

	Number of Credit Hours				Number of Programs that Require Study
	Median (Range)		Mean (S.D.)		
Social/Behavioral Sciences	18.00	(6-48)	19.06	(8.29)	26
Psychology	6.50	(0-36)	7.50	(7.99)	19
Electives 1	6.17	(0-12)	5.83	(4.29)	19
History	3.00	(0-11)	3.15	(3.30)	15
Sociology	.15	(0-8)	1.09	(2.17)	6
Electives 2	.09	(0-6)	.48	(1.45)	3
Geography	.04	(0-4)	.27	(.96)	2
Economics	.01	(0-3)	.21	(.77)	1
Political Science	.11	(0-5)	.21	(1.04)	1
Int. Soc. Sci.	.06	(0-3)	.16	(.58)	1
Anthropology	.06	(0-3)	.12	(.58)	1
Resrch. Tech.	.04	(0-2)	.08	(.39)	1

Electives 1--Unspecified social/behavioral science

Electives 2--Coursework primarily in history

Specified coursework in history is required by 15 of the early childhood education programs. For the programs in the state colleges, these requirements generally represent the institutional need to fulfill the state mandate for students to study U.S. history and the constitution. In addition, there are coursework requirements that represent a limited set of electives that are comprised primarily of the study of history. Together, the required coursework in history accounts for 7% of the total number of credit hours in general education.

Additional specified areas of study in the social and behavioral sciences include geography, economics, anthropology, research techniques in the social sciences, introduction to the social sciences, and political science. These areas of study account for a very small percentage of the required credit hours, and they do not provide a very meaningful addition to the overall representation of the early childhood teacher education programs studied.

The total number of specified course requirements in the social and behavioral sciences is approximately equal to that in the humanities. Further, requirements in this area of study similarly may be characterized as having a fairly wide range of options for their fulfillment.

Natural Sciences and Mathematics

The specific components of this coursework area, and the number of programs requiring coursework in the natural sciences and mathe-

matics may be seen in Table 7.

Twenty-five of the programs require some coursework from among these areas. In contrast to the number of required courses in the humanities or the social and behavioral sciences, the number of required credit hours of study in natural sciences and mathematics is relatively small. Coursework in the physical or life sciences is the most common area of required study, although it accounts for only 6% of the total number of required credit hours in general education.

Electives from courses that are dominated by required study in science, mathematics, or computer science account for another fairly large part of the total general education requirement. Together, these electives account for 8% of the total number of required credit hours in general education.

Health and Physical Education

Course requirements in health and physical education comprise the final component of the general studies curriculum. The median, the mean, and the range of required credits as well as the number of programs requiring coursework in these areas may be seen in Table 7. Together this coursework accounts for 4% of the total number of credit hours of study that are required in general education.

Professional Education Requirements

In addition to the previously discussed call for the expansion

Table 7

Course Components in the Natural Science/Mathematics
and Health/Physical Education Requirements

	Number of Credit Hours		Mean (S.D.)	Number of Programs that Require Study
	Median (Range)			
Natural Sciences/ Mathematics	9.17 (0-15)		9.51 (3.48)	25
Physical/Life Sci.	2.83 (0-8)		3.15 (3.26)	14
Electives 1	.44 (0-12)		2.64 (4.40)	8
Mathematics	2.83 (0-6)		1.91 (1.91)	14
Electives 2	.15 (0-8)		1.27 (2.49)	6
Electives 3	.12 (0-6)		.35 (1.29)	2
Computer Science	.04 (0-3)		.19 (.69)	2
Health/ Physical Education	.43 (0-8)		1.92 (2.48)	15
Physical Education	.43 (0-8)		1.62 (2.17)	12
Health	.13 (0-8)		.31 (.92)	3

Electives 1--Coursework in science or mathematics

Electives 2--Coursework primarily in science or math

Electives 3--Coursework in computer science or math

of the role of general education coursework in the education of prospective teachers, critics often cite the weak academic nature of the course requirements in the area of professional education study. For both of these reasons, the recent emphasis on teacher education reform has included a call for the elimination of undergraduate teacher education programs. However, in none of these major reform works are there any substantive critiques of specific course requirements. Indeed, there is a clear absence of any attempt to provide for the delineation of these requirements. Many of the competencies that are required of students in early childhood education by certification demands currently are met by completion of coursework in professional studies. For these reasons, it is important to understand the nature of the emphases given to the individual components of this professional training.

Coursework requirements in professional education are comprised of six major subdivisions. These areas include: foundations of education, early childhood curriculum studies, methods of instruction, child development, special education, and practicum requirements. The components of each of these areas, and the number of programs that require coursework in each of these components may be seen in Table 8.

A recent report about the condition of teacher education in Massachusetts (Commonwealth of Massachusetts, 1986) stated that "elementary education majors often take up to 60 semester hours of Education (far too much) with the result that there is too little time for liberal arts courses." The report argued that the Massachusetts

Table 8

Components of the Professional Education Requirements
for Programs in Early Childhood Teacher Education

	Number of Credit Hours				Number of Programs that Require Study
	Median (Range)		Mean (S.D.)		
Methods of Instruction	12.11	(0-25)	13.55	(5.71)	25
Reading	4.04	(0-12)	4.17	(2.65)	22
General Teaching	.14	(0-18)	2.56	(4.27)	12
Math	.14	(0-4)	1.60	(1.82)	12
Art/Music	.14	(0-6)	1.51	(1.84)	12
Science/Math	.12	(0-12)	1.12	(2.74)	5
Physical Education	.15	(0-5)	.65	(1.41)	6
Science/So. Studies	.20	(0-8)	.53	(1.72)	3
Health	.04	(0-3)	.45	(.99)	5
Science	.04	(0-4)	.33	(.98)	3
Classroom Management	.14	(0-3)	.10	(.87)	2
Social Studies	.08	(0-4)	.15	(.78)	1
Practicum	11.90	(5-16)	11.08	(2.26)	26
Educational Foundations	6.83	(0-16)	7.70	(3.67)	25
Early Childhood	3.17	(0-16)	4.44	(3.62)	21
General Foundations	3.50	(0-8)	3.27	(2.85)	17
EC Curriculum	3.75	(0-8)	3.77	(2.81)	19
Special Education	3.22	(0-12)	3.33	(3.02)	18
Child Development	2.17	(0-10)	2.32	(2.72)	14
Field Experience	1.94	(0-11)	2.76	(3.40)	15
Electives	.27	(0-20)	1.80	(5.02)	4
Educ. Assessment	.10	(0-4)	1.24	(1.63)	10
Educ. Seminar	.08	(0-8)	1.21	(2.09)	9
Educational Media	.09	(0-4)	.43	(1.11)	4
Organ./Planning	.19	(0-3)	.34	(.97)	3

DOE "should place a cap on the hours required for certification . . . [of] 36 semester hours of Education" (1986, p. 7). Although the report examined only the public sector of colleges and universities that provide certification programs, and the present study examined both public and private institutions, the overall mean requirement of 50 credit hours for early childhood teachers is considerably less than the 60 hours that are reported as being excessive.

Methods of Instruction

Without question, the professional education coursework requirements are most extensive in this area of study. Traditionally, schools of education have focused a great deal of attention on this type of coursework as the primary vehicle for instructing students about how to teach. The overwhelming emphasis in this area among the programs studied reflects this tradition.

Twenty-five programs require at least some study in this area, and this area of coursework accounts for the largest percentage (27.33%) of the professional education requirement. Specific coursework requirements in "methods" include the study of pedagogy focused on a number of specific topics. In the teacher education programs studied, this variety of demands may be seen by examining the extensive range of courses that comprise this category. Specified coursework requirements include methods of teaching reading, math, science, science and math, science and social studies, social studies, physical education, health, art and music, classroom management, and general

methods of teaching.

Consistent with the current emphasis given to concern about literacy, methods of teaching reading is required by 22 programs in early childhood education, and coursework in this area accounts for 8% of the total credit hour requirement in professional education. General teaching methods, which are essentially courses in pedagogy considered to be applicable to all early childhood subject areas, account for another 5% of the professional education curriculum. None of the other specific methods courses that are required account for a very large percentage of the required coursework in professional studies.

Practicum Requirements

Although the Carnegie and the Holmes reports suggest modifications to the manner in which the prospective teacher's student teaching experience is conducted, they both argue strongly for the necessity of this component in professional education. The Holmes Group suggests the need to establish Professional Development Schools which they envision as "the analogue of medical education's teaching hospitals, [that would] bring practicing teachers and administrators together with university faculty in partnerships that improve teaching and learning on the part of their respective students" (1986, pp. 62-63). The Carnegie Forum states that, "what is essential is a strong element of field-based preparation, emphasizing opportunities for careful reflection on teaching integrated with a demanding program of academic coursework" (1986, p. 76). As with the Holmes Group, the

Carnegie Forum also suggests that "'clinical' schools, selected from among public schools and staffed for the preparation of teachers, must be developed to make this successful. These institutions, having an analogous role to teaching hospitals, should be outstanding public schools working closely with schools of education" (1986, p. 76).

The practicum requirements that currently exist are probably not as refined as those suggested by the reports of the Carnegie Forum and the Holmes Group. However, they account for 22% of the total credit hour requirement within the area of professional education, and thus, they comprise a valued component of the curriculum of the institutions surveyed.

Reflecting the Department of Education requirements for teacher certification, practicum requirements for students in early childhood teacher education programs are present in all of the programs. The parameters established by the Department of Education for practica include the following:

. . . a practicum must be full-time for one semester, or half-time for two semesters, and include at least 300 clock hours at the practicum site(s). The candidate must take on clear instructional (or, if appropriate, counseling or administrative) responsibilities for at least half of this time, and the full responsibility of the role for a substantial period. More than half of a practicum must be in one assignment . . .

(1984, p. 5)

The number of required clock hours, the number of weeks of required practica experience, and the number of days per week that the student is expected to participate in the practicum are presented in Table 9.

Table 9
 Characteristics of Practica Requirements

	Median (Range)	Mean (S.D.)	Number of Programs
Clock Hour Requirement	300.52 (300-470)	329.42 (59.94)	26
Number of weeks	14.75 (10-30)	14.81 (3.46)	26
Days per week	4.93 (3-5)	4.85 (.46)	26

Seventeen programs report that they require the minimum of 300 hours although in many of these cases they state further that most of the students in their programs complete a practicum which actually exceeds this number. The other nine programs are more explicit in their reporting of the actual number of hours spent in the practicum setting. Twenty-three programs have practica which are designed for students to be at the placement site five days per week. Two of the programs require students to be on-site four days per week and one program requires on-site work three days per week. The program that requires only three on-site days per week is unique in that it requires students to be placed in the practicum site for two semesters, while the other programs require a single semester placement.

The degree of variability in the practicum requirements also may be seen through an examination of whether or not it is a single-site placement, and by the grade level at which it must take place. Table 10 describes features of the placement design that include whether or not the practicum occurs in one or more placements, the grade level at which students are required to participate, and the number of programs that employ the various options. Although a pattern is established here with fifteen of the programs requiring a single practicum placement at the K-3 level, there is considerable diversity among the remaining programs.

Foundations of Education

The area of educational foundations is comprised of coursework

Table 10
 Practica Placement Design

	Grade Level	Number of Programs
Single site	K-3	15
Split practicum (1/2 semester each)	K-3	2
	K-3/preschool	1
	K-3 K-3 or preschool	1
	Preschool or K Grades 1-3	2
Split practicum (1 semester each)	K-3	1
	Preschool-3	
Single site or split practicum (student option)	K-3 (if single site)	4
	K-3/preschool	

in the field of general educational foundations and in the foundations of early childhood education. These coursework areas are characterized by such courses as philosophy of education, foundations of education, cultural foundations of education, the early childhood educator, principles of early childhood education, and critical issues in early childhood education. Together, some type of foundations coursework is required by 25 of the early childhood teacher education programs, and they account for 16% of the total requirements in professional studies.

Early Childhood Curriculum

Coursework focusing on the study of early childhood curriculum issues is required by 19 programs, and this area accounts for 8% of the total requirements in professional education. Within this category are such courses as curriculum models in early childhood education, curriculum design for young children, and curriculum in pre-school education.

Special Education

Coursework in the field of special education is required by 18 of the programs, and it accounts for 7% of the total professional education requirement. In addition, coursework in the area of educational assessment (not special education assessment) is required by 10 of the programs, and accounts for an additional 3% of the total professional curriculum.

Child Development

Study in child development accounts for 5% of the total coursework requirements in professional studies. Since most of the coursework requirements in the field of psychology are related to child development issues, a total requirement in the areas of child development and psychology will also be reported here. Twenty of the programs require work in the area of either child development or psychology. Here the range of required coursework is from three to 36 credit hours (median = 9.0, mean = 9.82).

Other Prepractica Coursework and Field-Based Study

In addition to an analysis of these six fundamental areas of professional study, individual programs require a number of other education courses. These courses represent a variety of emphases, and their distribution will be examined below. These areas of study comprise 16% of the professional education curriculum, although none of them account for a very substantial amount of the total credit hour requirement.

In response to the certification requirements of the Department of Education, which state that ". . . at least three courses or the equivalent must include substantial field-based training" (p. 4), all of the programs require students to participate in some field-based study as part of their prepracticum experience. With most programs, these experiences are included as components of courses already described. For example, a field-based experience is often required in

conjunction with a particular methods course. In addition to this type of requirement, 15 programs require coursework under the heading of "field experience."

Since field-based requirements are located under a wide variety of course headings, it is difficult to characterize their presence in teacher education programs on the basis of credit hours alone. In fact, it is considerably more revealing to look at the number of clock hours of experience that different programs require, regardless of whether they are contained within courses labelled "field experience" or in other education courses that include field work as part of their requirements. The median, mean, and the range of total clock hour requirements as well as the number of programs that specify field-based pre-practica experiences in different settings are reported in Table 11.

Field-based experiences take place with a focus on both children in K-3 settings and with preschoolers in day care and nursery school settings. Unfortunately, it is impossible to accurately delineate how many hours in either of these settings students take the role of a teacher of young children, versus how much time they spend in the role of observer, assistant, or aide. These roles are usually not specified by the requirements for prepractica experience, and accordingly, the amount of time in each is left undefined. Presumably, the role of the student varies along such dimensions as the needs and wishes of the classroom teacher, the expectations of the faculty member responsible for the course, and the initiative of the student.

Table 11
 Characteristics of Field-Based Pre-Practica

	Median (Range)	Mean (S.D.)	Number of Programs
Total clock hours	211 (45-460)	210 (127.23)	26
K-3 setting*	76.5 (0-225)	101.95 (77.35)	20
Preschool setting**	57 (0-360)	88 (86.01)	21
Laboratory school	12.5 (0-225)	46 (70.26)	10

*Data from six programs are not reported since they provide no specific number of hours in this setting.

**Data from five programs are not reported since they provide no specific number of hours in this setting.

Program Types

In order to determine whether or not a number of coherent program types could be determined from the data, a cluster analysis was carried out using the dominant characteristics of the different programs as a basis for establishing groups of institutions. Cluster analysis is a classification scheme that is designed to create homogeneous groups. Although this type of analysis is often a useful tool for examining similarities among groups, it is not among the most widely used techniques in the social sciences or in educational research. For this reason, a short summary of the constraints in interpretation may be useful. Aldenderfer and Blashfield (1984) state that cluster analysis methods are best viewed as heuristics since they are not based on an extensive body of statistical reasoning. This is an important comment because of the fundamental task of cluster analysis methods. Simply stated, these techniques point out structural characteristics of data that are not readily apparent upon inspection of the data. Since the structure that the method imposes on the data has no underlying statistical or theory-based model driving it, it is critical for the interpretation to be based on a knowledge of the data to know whether groups are "'real' and not merely imposed on the data by the method" (1984, p. 16). Many different approaches for clustering data exist and since the technique employed often determines the nature of the clusters that are defined, a short description of the method used here is relevant. The procedure employed is that of the

BMDP2M cluster analysis of cases. This procedure begins by considering each of the cases under consideration as a separate cluster and then joins new cases in a stepwise fashion until all of the cases are combined into a single cluster. Following this, the procedure then uses the sum of squares between each pair of cases to create a set of each case and the case number of its closest case. After two cases are joined, a new point is formed by averaging the coordinates of each variable. "Distances" are then measured from this center point to other cases (or the center point of other clusters of cases) in the cluster.

In this analysis, eight different program variables were selected to group programs. These variables include the total number of credit hours required in the social and behavioral sciences, humanities, natural science and mathematics, foundations of education, methods of instruction, early childhood curriculum, child development, and special education. These variables were chosen because they represent the dominant program characteristics and thus, may best yield a picture of overall differences in program emphasis.

A diagram that has been reproduced from the computer-generated description of the cluster of programs may be seen in Figure 1. Results of the cluster analysis indicate that three clustered groups of programs exist. The group with the most coherence (Type I) includes five programs (10, 12, 16, 18, 23); a second group (Type II) is comprised of three programs (1, 4, 9), and a third group (Type III) of six programs (2, 3, 15, 19, 21, 22). In addition, the analysis

Amalg. Distance	1	9	4	26	7	24	5	25	70	10	12	23	16	18	3	22	15	21	19	2	8	11	10	6	17	13	
1.340	*	I	*	I	*	I	*	I	*	I	*	I	*	I	*	I	*	I	*	I	*	I	*	I	*	I	*
1.584	I	I	I	I	I	I	I	I	I	- +	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
1.626	I	I	I	I	I	I	I	I	I	- +	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
1.704	I	I	I	I	I	I	I	I	I	- +	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
1.707	I	- +	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
1.735	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
1.866	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
1.921	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
1.993	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
2.265	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
2.456	- - +	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
2.541	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
2.452	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
2.645	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
2.777	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
2.806	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
2.833	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
2.786	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
3.006	- - -	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
3.232	- - -	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
3.361	- - -	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
3.737	- - -	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
4.072	- - -	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
4.294	- - -	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
4.391	- - -	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

Figure 1. Tree Diagram of Program Clusters.

reveals that 12 of the programs do not share a coherent pattern with any other programs. These programs include 5, 6, 7, 8, 11, 13, 14, 17, 20, 24, 25, and 26.

Upon examination of the different groups, it seems possible to characterize them in the following manner. One group (Type III) has a program emphasis which resembles the typical program characterized in Table 1. The similarities in program requirements may be seen by comparing the hypothetical program in Table 1 with an actual program from this group in Table 12. Appendix E includes the mean number of credit hours in each of these subject areas for the six programs included in this cluster. With only minor exceptions, these program characteristics are very similar to the typical early childhood teacher education program presented in Table 1. The greatest variability among these six programs is in the social and behavioral science component, while variability on the other components is remarkably small.

In contrast to the typical characteristics of the Type III program, the Type II program may be characterized as having an emphasis on coursework in professional education. As may be seen in Table 13, this emphasis is present in the total professional education requirements and especially is evident in the methods of instruction coursework requirements. As with the data representing the Type III program, the data for the entire group follow this pattern of emphasizing the educational coursework component, and there is little variability among the programs on any of the components. The entire set of pro-

Table 12

Characteristics of an Early Childhood Teacher Education
Program from the Type III Cluster

Program Characteristics

General Education Requirements (mean credit hours)

Total General Education Requirements	55
Humanities	21
Social/behavioral sciences	18
Natural sciences/mathematics	9
Health/physical education	4
Other general education	3

Professional Education Requirements

Total Professional Education Requirements	54
Methods of instruction	9
Practicum	12
Foundations of education	6
Early childhood curriculum	3
Special education	3
Child development	3

Table 13

Characteristics of an Early Childhood Teacher Education
Program from the Type II Cluster

<u>Program Characteristics</u>	
<u>General Education Requirements (mean credit hours)</u>	
Total General Education Requirements	43
Humanities	16
Social/behavioral sciences	18
Natural sciences/mathematics	9
Health/physical education	0
Other general education	0
 <u>Professional Education Requirements</u>	
Total Professional Education Requirements	60
Methods of instruction	21
Practicum	12
Foundations of education	6
Early childhood curriculum	6
Special education	6
Child development	3

grams represented by this program type may also be seen in Appendix E.

The third group of coherent programs is the Type I program. This program-type emphasizes coursework in general education and has a particular strength in the social and behavioral science components. As may be seen in the example presented in Table 14, this program type is not only weighted heavily in the social/behavioral sciences, but it is also well represented by a professional education component. The means for the entire group may be seen in Appendix E. All of the programs in the group follow this pattern of emphasizing coursework requirements in general education. Coursework requirements for study in the area of professional education are well represented by the entire group as well.

The remaining programs did not reveal commonality with each other. Since none of these programs may be used to adequately characterize the others, they will not be reported by any individual examples. The coursework requirements for each of these programs may be seen in Appendix E. Although they do not form a coherent cluster, these programs do have general areas of emphasis. One set of these programs, Type IV (5, 7, 20, 24, 25, 26), tends to emphasize general education requirements, although within the area of humanities there is considerable variability. A large number of credits in educational foundations and methods coursework are also required by some of these programs, although there is a great degree of variability here as well. For the most part, these programs did not require very much work in the areas of early childhood curriculum, child development,

Table 14

Characteristics of an Early Childhood Teacher Education
Program from the Type I Cluster

Program Characteristics

General Education Requirements (mean credit hours)

Total General Education Requirements	62
Humanities	15
Social/behavioral sciences	28
Natural sciences/mathematics	13
Health/physical education	0
Other general education	6

Professional Education Requirements

Total Professional Education Requirements	52
Methods of instruction	11
Practicum	12
Foundations of education	6
Early childhood curriculum	5
Special education	3
Child development	2

or special education.

The remaining six programs, Type V, also tended to a characteristic direction. These programs, in addition to emphasizing the general education component, also emphasize coursework requirements in the areas of early childhood curriculum, child development, and special education. Since the variety of program type characteristics is so great, the major emphases of each are summarized in Table 15.

Data representing other variables for each of the programs were also examined in relation to the program-type distinction. Overall, these variables showed no relation to program type, with the program-type means for most variables approximately equivalent. There were, however, a few institutional characteristics that did provide some interesting distinctions among the program type extremes. The two clusters that were comprised of the most diverse sets of programs were the programs with the highest tuition (mean = \$7,153), in contrast to the tuition for the three more coherent program types (mean = \$5,145). The diverse groups also were characterized by having the highest SAT scores for entering freshmen (mean = 1003), in contrast to the SAT scores for the three coherent program types (mean = 938.83). Additionally, the diverse program type groups were characterized by lower early childhood enrollment figures (mean = 50.58) than the more coherent program types (mean = 84.93).

It is difficult to be certain whether there is a reliable explanation for these coherent/non-coherent group findings. A possibility that was explored concerns whether or not there are any differences

Table 15

Summary of the Major Emphases of Five Program Types

	Program Type				
	I	II	III	IV	V
Social/behavioral sciences	+	A	-	A	+*
Humanities	A	A	A	+*	+*
Natural science/mathematics	+	A	A	+	-
Educational foundations	+	+	A	+*	+*
Instructional methods	A	+	A	A	A
Early childhood curriculum	+	+	A	-	A
Child development	-	A	+	-	A
Special education	A	+	A	-	A

Key: + = program characteristic emphasized
 - = program characteristic not emphasized
 A = program characteristic at average level of emphasis
 * = high variability

in elements of institutional philosophy that might account for these trends. One feature of the programs that seemed to be relevant was the degree of flexibility that the institution provided for fulfilling course requirements. For the typical program type, the exemplar institution provides a description of course requirements that may be summarized as follows:

It is expected that all graduates will have deepened their understanding of the arts and sciences upon which human culture is based. To that end, 36 to 38 credit hours shall be completed in the following three divisions . . . Division I--Humanities . . . Division II--Natural Sciences and Mathematics . . . Division III--Social Sciences . . . The 36 to 38 credits should be distributed in the following manner:

Division I

Full year sequence in literature 6
Other Humanities courses 3-9

Division II

Full year sequence in laboratory science 6-8
Other Natural Science and Mathematics course 3-9

Division III

History 101 3
History 102 3
Other Social Science courses 3-9

(Salem State College, 1985, p. 42)

In contrast, the analogous statement of policy for one of the exemplars of the non-coherent programs is as follows:

Each discipline within the liberal arts framework offers students a valid perspective on the world's past, present, and future. Therefore, we recommend that students pursue studies in the major fields of knowledge . . . Literature . . . Natural science . . . Mathematics and analytic philosophy . . . The arts . . . A foreign language . . . Exer-

cise and sport studies . . . The diversity of student interests, aptitudes, and backgrounds, the range and variety of the curriculum and the rapidity of change in knowledge and ways of learning make it difficult, if not impossible, to prescribe a detailed and complete course of study that would implement these goals and be appropriate for every student. The requirements for the degree therefore allow great flexibility in the design of a course of study leading to the degree.

(Smith College, 1985, p. 14)

Clearly, these cases suggest that the institutional approach to the students' completion of course requirements may influence the factors that account for a program's overall coherence with other programs sharing a certain philosophy. The range of possible interpretations and uses that are suggested by this analysis are discussed in the following chapter.

C H A P T E R V

GENERAL DISCUSSION

The purpose of this study has been to examine the content of early childhood teacher education programs in Massachusetts. All 26 of the colleges and universities with approved programs in early childhood education were studied through an examination of the general education course requirements, the professional education course requirements, field-based experience and practicum requirements, and salient institutional characteristics. The description of program features seen in this study provides a delineation of the variety of ways that teacher education programs address the certification requirements established by a state department of education.

The results of the analysis also provide a perspective for addressing a number of issues that may be useful in the continuing debate concerning recent broad efforts to reform teacher education, as well as those issues directed at the more limited questions that arise concerning the nature of the curriculum included in early childhood teacher education programs. For each of these sets of questions, three areas of focus are useful for establishing a context for discussion. The first centers on the role of general education requirements in the undergraduate curriculum. The second is focused on the implications of the nature and strengths of the professional education component in teacher education. The third is concerned with questions that arise about the diversity of emphases among early childhood pro-

grams. The remainder of this chapter will examine these three areas and discuss their implications for both the broad question of teacher education reform as well as the more limited questions concerning early childhood teacher education programs.

General Education Requirements

Three characteristics of the program seem worthy of particular emphasis. First, a substantial percentage of the total requirements for graduation is comprised of coursework areas that are specifically required by colleges and universities in order to meet the certification requirements established by the Massachusetts D.O.E. The level of required coursework in general studies reflects what appears to be an attempt on the part of the institutions to be responsive to the perceived value of a broad general education background for the prospective teacher. Second, a high percentage of the required coursework specifications may be completed through electives. This approach has both strong advantages and strong disadvantages. Such an approach is capable of being responsive to individual student interests and needs, but as the range of options becomes large, the potential for the program to begin to seem incoherent increases. Third, the emphasis in general education is clearly on the humanities and the social/behavioral sciences. The coursework requirements in the natural sciences and mathematics are approximately one-half that of either of the others.

The data provided in this study concerning the role of general education in program requirements may be used as a basis for discussing the fundamental points raised by much of the recent educational reform literature. The reports of the Carnegie Forum and the Holmes Group have become the most widely cited sources of information that directly address the prospects for future developments in the curriculum requirements for programs of teacher education. In addition to these reports, there recently have been others that have dealt more broadly with perceived inadequacies of the undergraduate curriculum. Some of the themes that characterize these emphases are similar, pointing to the possibility that there may be underlying issues of fundamental significance for this reform debate.

Boyer (1987) has criticized the nature of college education with a particular focus on the state of the general education requirements. One of the major findings from his study points to what Boyer argues is the major area of weakness in the college curriculum. He claims that:

We found during our study that general education is the neglected stepchild of the undergraduate experience. Colleges offer a smorgasbord of courses, and students pick and choose their way to graduation.

(1987, p. 83)

Allan Bloom, whose book The Closing of the American Mind (1987) is currently among the most popular and controversial analyses of American thought and education, similarly pronounces that "it is becoming all too evident that liberal education . . . has no content,

that a certain kind of fraud is being perpetrated" (p. 341). In fact, Bloom's position has been reported in a fashion that sounds remarkably like the argument offered by Boyer. Hirschorn (1987) characterizes Bloom's position in the following manner:

The contemporary mindset, he [Bloom] says, has impeded the academic search for higher truths by imposing on us a cultural relativism, where everything is considered to be as good as everything else. We have, he argues, denied ourselves the right to judge what our reason tells us to be the truth. Universities, he says, do nothing to combat that failure, offering a pointless smorgasbord of academic offerings that leave students confused and without guidance.

(1987, p. 3)

These interpretations offered by Boyer and Bloom on the state of the general education requirements in the college curriculum are exemplars of the current emphasis within the reform movement in higher education, and they are relevant for a discussion of the reform efforts in teacher education as well.

Taken as a whole, data from the present study support the finding that Boyer's study reports and that both Boyer and Bloom decry. Indeed, while the number of credit hours of required coursework in general education is substantial, there is considerable flexibility for students to choose from among a wide array of coursework options in order to fulfill these requirements. The more important question that follows from this finding is whether or not, as Boyer and Bloom suggest, there would be educational advantages from a more constrained or standardized set of coursework requirements. A further question

concerns how such modifications would affect the process of teacher education and in turn, the profession of teaching.

Many of the recent critiques of higher education assume that educational advantages would be gained from a "tighter" undergraduate curriculum. Boyer implies his adherence to this position when he argues that "they [faculty and students] are caught up in a journey with a procedural rather than a substantive agenda" (1987, p. 84). The teacher education reform efforts have responded to college curriculum requirements in a similar fashion. The Holmes Group's plan for the improvement of teacher education includes the following recommendation for changes in the undergraduate curriculum. "The reform of undergraduate education toward greater coherence and dedication to the historic tenets of liberal education is thus essential to improving teacher education" (1986, p. 52).

Thus, the reform of general education has become the basis for a common argument. Further, it has led to recommendations with the potential for having a substantial impact on the process of teacher education. For example, the area of professional education programs has come under vociferous attack. As has been discussed earlier, the major reports that call for educational reform recently have taken this attack to the extreme by arguing for the need to eliminate undergraduate teacher education programs.

In order to examine the relevance of these claims to the current state of teacher education programs, it is necessary to recapitulate the goals of the reform movement in teacher education. Both the

Carnegie Forum and the Holmes Group ultimately are concerned with the quality of education that is provided to students at the elementary and secondary levels. Both groups agree that the "atmosphere" of teaching as a profession must change in order to reach this goal, and both suggest that in order for this to occur the public needs to perceive educators in a more positive light than they do now. In order to reach these positions, both groups agree on such things as the need to improve the working conditions of teachers, the need for increased teachers' salaries, the need to alter the division of authority that currently exists within the schools in order to allow teachers more control over their working conditions, the need to increase the diversity of backgrounds among elementary and secondary teachers, and the need to improve the educational preparation of teachers in order to provide them with a more solid base in subject matter preparation than the present system allows. This list of the means to the general goal of improving the nation's schools is long and has complex barriers that need to be overcome. It is not surprising that the components in this list of solutions have been discussed at length within the literature addressing the question of educational reform. However, it is the final element, the perceived need to improve the prospective teacher's base in subject matter preparation, that has received the disproportionate share of attention. There are a number of possible reasons for this and they have important implications for the future of genuine reform within the educational system. One possible explanation is that although making changes in the undergraduate preparation

of teachers is not a simple matter, it is at least under the province of a relatively small number of self-contained organizations of which the writers arguing for reform are intimately involved. In contrast, the reform of the workplace--of the basic structure of the school--affects individuals and organizations from a wide variety of interests and positions. Interestingly, the major voices representing the elementary and secondary teachers emphasized the need to alter characteristics of this latter component. For example, Mary Hatwood Futrell, the president of the National Education Association (and the only member of the Carnegie Forum to add comments indicating "support with reservations" to the Carnegie Forum report) has said:

Real reform must address the everyday, pedestrian realities of the learning workplace . . . Effective schools are schools in which teachers have the latitude and the authority to determine curricular content, craft discipline codes, define schoolwide objectives and goals, and help design standards of teacher certification that insure the integrity of our profession.

(cited in Evangelauf, 1987, p. 20)

Further, in her discussion of the Holmes Group report, she points to their description of the difficulties faced by all education reform efforts. She argues that:

What this analysis uncovers is the frustrating circularity that has thwarted so many reform efforts: Improving schools demands improving teacher education, but improved teacher education will make scant difference until schools improve--until, that is, teachers are empowered to make principled judgements . . . on their students' behalf.

(Futrell, 1987, p. 379)

Thus, the emphasis and the tone of her argument is quite different than that of many others concerned with educational reform.

Similarly, Albert Shanker, president of the American Federation of Teachers (A.F.L.-C.I.O.) is cited by Evangelauf (1987) as arguing that "placing better-trained teachers into schools as they now exist will not lead to great gains in student performance" (1987, p. 1). Further, Shanker has urged members of the Holmes Group to consider emphasizing the need for restructuring the schools in order to improve the quality of education. When examined together, the points raised by Hatwood and Shanker raise the possibility for a substantive role to be assumed by professional education coursework to provide prospective teachers with the background needed for taking more active control of their own classrooms.

With so many other features seen as necessary ingredients to the improvement of education, why has so much attention been paid to the suggestion to expand the general education curriculum and eliminate undergraduate teacher education? In addition to the possibility of reformers' desire to attempt change where they see themselves as having the greatest influence, two other possible explanations exist. The first is related to these concerns over impact, and it is based on the recognition of the inherent difficulties that have been present in all previous attempts to alter the structure of the schools. Even within the present organizational framework, schools are notoriously difficult to transform (Cuban, 1984; Sarason, 1972). Proposals that suggest altering the basic framework by allowing teachers more auton-

omy in decision making are inevitably faced with major stumbling blocks, particularly from those currently in control of such elements of the schools. Thus, it may be that focus on the undergraduate curriculum has occurred because it is seen as not only being susceptible to influence by others in higher education, but it may generally be perceived as being the simplest of the components to alter. While there probably is some degree of truth in both of these explanations, there is another possible, perhaps even more fundamental explanation. Since the call for educational reform has concerned all areas of undergraduate education, not only teacher education, it is possible that this call represents a perception that the loosened curriculum requirements of the past decades have been detrimental to the education of students, as well as a belief in the need to re-emphasize the traditional heritage of the university in order to achieve a new sense of cultural consistency (e.g., Bloom, 1987). Bloom's summary of his position provides a clear portrayal of this possibility. He states:

The crisis of liberal education is a reflection of a crisis at the peaks of learning, an incoherence and incompatibility among the first principles with which we interpret the world, an intellectual crisis of the greatest magnitude, which constitutes the crisis of our civilization.

(1987, p. 346)

If this explanation were true, then we should likely see similar arguments being made from within all areas of professional study. For example, Feinberg (1987) has argued that if liberal studies are in-

tended to provide the knowledge necessary for participation in public affairs, and that if this is the perception of the role of the university, then the recommendation that a liberal arts major be required makes sense for all students seeking any professional degree. In fact, some recent developments support this view. For example, the Boston Globe recently reported that the school of professional studies in engineering at M.I.T. has just instituted a requirement for its students to take three courses in liberal arts and to allow students to minor in academic disciplines (Tolstoy and the tech tools, 1987). Additionally, proposals that imply similar leanings may be seen in recent discussions about the educational needs for prospective business leaders. Responding to the "crisis" related to ethical issues in the business world, Royatyn (1987) has argued that perhaps businesses "should forget about the business schools and recruit the best young liberal arts students we can find" (1987, p. 12). Using language that sounds remarkably similar to that in the teacher education reform literature, Royatyn states that:

The most important function of higher education is to equip the individual with the capacity to compete and to fulfill his or her destiny. A critically important part of this capacity is the ability to critically evaluate a political process that is badly in need of greater public participation.

(1987, p. 12)

These proposals, and the controversy generated by each of them (see letters in the New York Times, 1987; and the Boston Globe, 1987) provide some support to this final possibility of education reform being

part of a more general desire to return to the "basics" of higher education.

The relation of the general education requirements to the needs of prospective early childhood teachers is complex. It is widely believed that these subject areas constitute the heart of the early childhood and elementary teachers' knowledge base, and thus are critical to their preparation. In addition, there is a belief that if teachers are well educated, they will always approach classroom instruction with a reserve that will enrich whatever subject they may be teaching (Cruickshank, 1985). In the programs that were studied, prospective early childhood teachers are required to study in a broad range of subjects, with a great deal of attention to coursework in the social sciences and the humanities. These areas are those traditionally associated with the needs of the teacher of young children, and the emphasis on study here is indicative of the programs' attempt to respond to these needs.

In the programs studied, an average of 52 credit hours in the area of general education was specifically required to meet program demands. In addition, an average of 24 credit hours of the total required for graduation were left completely unspecified. This number represents credit hours that could be completed by students outside of the area of professional studies, and thus may be seen as having the potential for raising the number of hours of general education study to 76. While it is impossible to argue effectively about the question of how much is enough, this figure does suggest the potential

for a quite extensive background in general education for students in these early childhood programs. Conant (1963), whose work as an advocate for increasing the general education component in teacher education was reported earlier, has suggested that 60 credit hours of general education coursework would adequately prepare students to assume the role of an effective teacher.

Perhaps more attention needs to focus on developing a means for providing integrated, coherent requirements in the area of the general education requirements, and less attention needs to center on developing the means to eliminating teacher education programs. Certainly in the absence of any real documentation of the need for their elimination, this seems to be a more prudent course for those interested in fostering educational reform.

Professional Education Requirements

The professional education requirements of the programs that were studied also are comprised of a wide range of coursework and field experience. The diversity of program emphases may be seen in almost every area of coursework requirements, as well as the different opportunities presented for the placement and clock hour requirements for field experience. In addition to the significance of the program diversity, three other findings are worthy of further comment. First, a high percentage of the required coursework is concentrated in pedagogical study. The finding that this area of study assumes such a

central position in the teacher education programs has important implications. In the current debate over the value of the education curriculum, it is one of the components of teacher education that often is criticized as a weak academic content area. Second, the practicum requirements comprise a high percentage of the required coursework. When the amount of time spent in the practicum is coupled with that included in the other field-based experiences, the programs generally may be characterized as including a high degree of opportunity for students to gain experience in the classroom. Third, there is a striking contrast between the inflexibility that the programs offer in the area of professional study when compared to the flexibility in the requirements in the general education. While the general education area allows for a high percentage of the required coursework specifications to be completed through electives, the professional education sequence is considerably more constrained.

As stated above, the educational reform literature has argued for the elimination of the undergraduate degree. A thorough analysis of the content of these professional education requirements may not be found in any of the reform documents, however. Although some of the coursework in departments of education has been variously described as weak and ineffectual, the lack of documentation and the desire to create a master's degree in teaching (i.e., Carnegie Forum, 1987) forces the belief that the prime motivation for this call to eliminate programs is more accurately the result of the perceived need to increase the number of required hours of study in general

education. The data reported in this study indicate that the professional education requirement currently makes up approximately 50% of the specified educational demands of the prospective early childhood teacher and it is useful to discuss some of these requirements specifically.

Prospective early childhood teachers in Massachusetts are required to take an average of 14 credit hours of study in methods of instruction. This area of study is one that has often been singled out as being a weak component in the teachers' educational background (Cruickshank, 1985), although from other perspectives it is seen as the means to allow the teacher to learn how children best learn in a given subject area. For example, Smith, Cohen, and Pear (1969) note that:

To be prepared in the subject matter of instruction is to know the content to be taught and how the content can be related to the interests and experience of children and youth . . . This kind of preparation will require courses oriented to the teacher's need for knowledge that can be tied in with the life of children and youth rather than discipline oriented courses.

(1969, pp. 121-122)

Derek Bok, Harvard University president and recent commentator on the condition of the professional schools, recently provided a generally scathing assessment of the performance of schools of education. In his assessment, however, he intimated support for an emphasis on this type of coursework. Bok warned that schools of education need to focus on the practical applications of research or risk assuming a

marginal position at the university. He stated:

Rather than imitate their colleagues in arts and sciences, they should strive to . . . come forth with challenging new ideas about better methods of instruction, better ways of assessing student progress, better ways of helping those who find it difficult to learn.

(cited in Higgins, 1987, p. 12)

Since the data from programs in this study reveal such a high percentage of credit hours in methods courses, it is clear that there is some consensus among early childhood educators that an emphasis on providing students with coursework in this area is an approach with merit.

The other areas of substantial requirements in the professional education curriculum include coursework in child development, foundations of education, special education, and early childhood curriculum. In addition, the programs in this study have strong field-based components that include the practicum as well as pre-practicum experiences.

The teacher education programs studied require a combined average of 10 credit hours of coursework in child development and in psychology courses that have a predominant focus on developmental issues. The strong emphasis on requiring study in this area indicates that the programs are acting on the belief that an important component of the prospective teacher's education is the acquisition of a broad base of knowledge of the developmental characteristics of children. Familiarity with the nature of child development has clear implica-

tions for the teacher's understanding of pedagogy and the implementation of curriculum as well. Understanding children's developmental characteristics allows teachers to plan curriculum with a focus that considers the promotion of intellectual, social, and emotional development. Of equal importance, the teacher's sense of security about this knowledge allows the teacher to effectively communicate curriculum intentions to parents and administrators. This is becoming more important as younger children increasingly are being tested and many administrators and parents have goals for children's education that may be related to pressures based on the demands of socially defined criteria.

Knowledge of children's development that is tied to this type of coursework may therefore be seen as providing teachers with the ability to more effectively take charge of their own classroom and to become more comfortable with planning and implementing curriculum that is more closely tied to their perceptions of children's needs than to demands that may exist beyond the classroom environment. The empowering capacity of this type of knowledge is necessary for teachers' ability to achieve a sense of autonomy in making decisions about how best to meet state and local educational goals for children. Interestingly, this is one of the goals proposed by the teacher education reform reports (e.g., Carnegie Forum, 1986).

In addition to this emphasis on the area of child development, the programs studied require an average of eight credit hours of coursework in the area of the foundations of education. This course-

work is generally intended to serve as a link between general education and pedagogy by using knowledge and methods of inquiry from the humanities and social sciences to achieve better understanding of the field of education (Cruickshank, 1985). Since the goal of this area of study is to familiarize prospective teachers with the broad problems of the profession as they relate to society, and to issues concerning the organization and functioning of the school as a social institution, this area too may be seen as providing teachers with a background that allows them to become active agents in defining the conditions within their schools.

An average of three credits in special education is required of students in the programs studied. Although this number of credits is not great, when coupled with the finding that 18 of the programs require such coursework, it indicates that serious attention is being paid to this area of knowledge in the education of early childhood teachers. The continuing emphasis on the value of mainstreaming and the current proposal in Massachusetts to combine the Early Childhood Teacher and the Teacher of Young Children with Special Needs certificates makes this finding particularly interesting. According to the intention of mainstreaming legislation, teachers should be able to incorporate children with special needs into their classrooms. Since most of the programs specifically require coursework in special education, there is at least the suggestion that programs of teacher education are attempting to address this need. Some of the programs require considerably more coursework in special education, indicating

that when this emphasis is made a priority for students, an even stronger background may be provided within the traditional teacher education program.

Field-based experience is an area of the prospective teacher's curriculum that has been emphasized as a necessary ingredient in teacher education by the teacher education reform literature. As discussed earlier, this field-experience component has been increasing in significance in recent years. The programs in this study required a substantial amount of time in such experiences.

An average of 11 credits is required for the final practicum. This represents 22% of the total professional education coursework requirement, indicating the evaluation that this experience is given by the programs studied. Teacher certification requirements that have been established by the Massachusetts D.O.E. stipulate a minimum of 300 clock hours be completed in the practicum. In the programs studied, this minimum was exceeded, with an average of 326 hours of experience required. As discussed in Chapter IV, the placement design and the grade levels chosen for the practicum vary considerably, reflecting different biases in how the experience may best prepare students for teaching.

Field-based pre-practica occupy a unique position in teacher education programs. They allow students to evaluate their interest in teaching at an early stage of their college study, and since they tend to be taken for relatively short amounts of time in a variety of programs, they provide the opportunity for students to see some of the

diversity that exists in programs for young children. The programs that were studied required an average of 210 clock hours in these early field experiences. Although there was a considerable range in the number of hours that were required among the different programs, it seems safe to assume that students achieve a fair degree of familiarity with the operation of schools long before their final practicum. In addition, most of these field experiences occur in conjunction with other coursework requirements, thus enabling students to have a firsthand opportunity to develop an understanding of the relation between theory and practice in the classroom.

Crossing all of the coursework and field-based requirements, there is a different sort of question that guided the early stages of this study. This question was concerned with how well the programs in early childhood teacher education serve the needs of prospective teachers in gaining knowledge and experience with children younger than kindergarten age. The early childhood certificate in Massachusetts is currently a K-3 certificate and it was assumed that most of the course work and field experience would be focused on children within this age group. However, it was also assumed that some programs might approach the study of early childhood education in a manner that emphasized the continuity of children's development. Such programs might demand attention to be paid to the characteristics of younger children as well. In order to address this question, the amount of field experience and the emphasis in coursework that currently is given to preschool age children was examined. In general,

the focus given to preschoolers' development was sparse. A number of programs clearly approach the curriculum with a child development focus that attempts to integrate information about development with children's educational requirements. However, most of the programs focus their attention on the age group covered by the current certificate. This is an important finding with implications for the changing views concerning the need to provide an increased number of programs for younger children. In Massachusetts, a new early childhood certificate has been proposed which would extend the range of ages covered by the early childhood certificate. This proposed certificate would cover the age range which is included in preschool through third grade, or approximately ages 3 to 8. Clearly, as this new era of the provision of educational services to younger children continues to expand, the emphasis in the prospective teacher's curriculum will need to change to include a wider range of developmental levels.

Diversity of Programs

The early childhood teacher education programs that were studied are a very diverse group. The range of characteristics on most of the variables examined was considerable, a finding that raises a number of difficult questions, for example: (1) If all of the programs are meeting the competencies established by the D.O.E., shouldn't they closely resemble one another? (2) Can we be assured of equivalent competencies among teachers with different backgrounds? (3) Are

there any differences in the teaching style of teachers from programs with these differing emphases?

In general, questions about the diversity of programs in teacher education do not have straightforward answers. Upon first glance, the diversity in program characteristics seems to demand immediate attention. However, the diversity among programs may indicate that individual programs are tapping their unique resources and biases in ways that would be undermined through increased standardization of the teacher education curriculum. At the core of these possibilities, the fundamental question is really, "Who is in charge of teacher education?" Advocates for a more standardized program of teacher education would probably call for a more active state D.O.E. that would not only establish competencies to be met, but would define the coursework needed to reach them. The alternative perception includes those who see the role of the college or university as one in which they are charged to meet competencies but are viewed as able to use their expertise in creating variable routes to satisfy these competencies. Traditionally, the program approval technique for allowing the certification of teachers has recognized the expertise of the college or university faculty in meeting state standards through style which reflect their expertise. The alternative, which would be to have decisions about curriculum made by people with limited familiarity of the resources that may exist at a college or university, or within a local community seems to be a weak alternative. In addition, currently there is no reason to assume the value of any particular pro-

gram emphasis. At best, this is an empirical question that has yet to be answered. The question of whether a diverse set of institutions may provide comparable educational backgrounds for prospective teachers is one which needs to be further pursued. At this point, however, there is no reason to abandon the current method of program approval to meeting certification requirements.

Directions for Future Study

Finally, the analysis which provided the distinction among programs into types has established a model for approaching the study of teacher education. This analysis allows a framework for classifying the educational experience of new teachers in a manner which will make study of their classroom behavior amenable to the questions posed in the previous sections, and will allow the development of a more focused attempt to address the question of identifying the components of teacher education programs that work.

APPENDIX A

Massachusetts Department of Education Standards
for Teacher Certification: Common Standards and
Early Childhood Teacher Standards

The standards listed in this section are used by the Department of Education Bureau of Teacher Certification to evaluate institutional programs in teacher education.

Classroom Teacher (Common Standards)

- (a) Standard I. The effective teacher is knowledgeable in the field proposed for certification. (The competencies required to meet this standard are listed under each classroom teaching certificate.)
- (b) Standard II. The effective teacher communicates clearly, understandably, and appropriately. To meet this standard, the candidate will demonstrate that he or she:
1. gives clear and concise explanations and directions
 2. frames questions so as to encourage inquiry
 3. uses appropriate metaphors, examples, and illustrations
 4. makes the goals of teaching and learning clear to students
 5. uses language appropriate to the age, developmental stage, special needs, and social, racial, and linguistic background of his or her students
 6. serves as an example of clear and effective oral and written communication
 7. listens to students
 8. communicates effectively with parents.
- (c) Standard III. The effective teacher designs instruction to facilitate learning consistent with the needs and interests of the learners and so as to maintain a sense of order and purpose in the classroom. To meet this standard, the candidate will demonstrate that he or she:
1. understands the needs and interests of his or her students and designs or adapts the curriculum to meet these needs and interests
 2. has clear goals for student learning
 3. relates the elements of instruction sequentially to each other, to other fields of knowledge, to students' experiences, and to long-term goals
 4. understands developmental psychology, and relationships between stages of growth

5. uses materials, media, and techniques appropriate to the age, developmental stage, special needs, and social, racial, and linguistic background of his or her students, both individually and as a class
6. uses materials, media, and techniques suited to the subject matter and to meeting the goals of instruction
7. teaches, as necessary, the basic academic skills (reading, communication, math) related to the goals of instruction
8. is aware of recent developments in teaching, particularly in his or her field(s) of knowledge
9. understands techniques of classroom management and how to maintain a sense of order in the classroom
10. makes effective use of appropriate resources in the community.

(d) Standard IV. The effective teacher uses the results of various evaluative procedures to assess the effectiveness of instruction. To meet this standard, the candidate will demonstrate that he or she:

1. uses evaluative procedures appropriate to the age, developmental stage, special needs, and social, racial, and linguistic background of his or her students, and corrects for any ethnic, racial, or sexual bias in evaluation
2. interprets the results of evaluative procedures, and uses these results to improve instruction both for the class as a whole and for individual students
3. identifies problems in reading which inhibit learning and works toward remedying these problems
4. encourages the involvement of students in evaluation of instruction
5. evaluates his or her own role, behavior, and performance in the classroom.

(e) Standard V. The effective teacher is equitable, sensitive, and responsive to all learners. To meet this standard, the candidate will demonstrate that he or she:

1. defends and encourages the exercise of students' rights to equal treatment and freedom of expression
2. responds to the needs of individual students so as to enhance their self-esteem
3. works toward a learning environment favorable to open inquiry and devoid of ridicule
4. encourages a positive atmosphere for all students, especially those with special needs
5. avoids and discourages racial, sexual, social, ethnic, religious, physical, and other stereotyping
6. makes allowances for biases and limitations in his or her own background which limit his or her responsiveness to students from other backgrounds.

Early Childhood Teacher (K-3)

(a) Requirements

1. completion of 36 semester hours of course work in the field of early childhood education as defined under Standard I, below
2. completion of a pre-practicum consisting of 21 semester hours of course work and other experiences as defined in common Standards II-V above
3. completion of a practicum, judged successful on the basis of Standards I-V, at least half of which must be in grades K-3 and the remainder of which may be in a pre-school setting

(b) Standard I. The effective early childhood teacher knows:

1. the stages and characteristics of normal child development in general
2. sensory, motor, social, emotional, and cognitive development in particular, and special needs within each of these areas
3. learning theory in general, and especially as applied to the acquisition of language and the development of logical abilities
4. the subject matter of early childhood education: reading, communication (oral and written), the arts, mathematics, science, social studies, health and physical education
5. curriculum design, and particularly as it concerns the integration of subject matter.

APPENDIX B

Coding Sheet

GENERAL STUDIES:

1. Total credits--
2. Total credits in general education--
3. Percentage general education--

- 4, 5, 6. Areas of coursework

Subject Area	Required Credit Hours	Notes
4. Social Sciences		
a. psychology		
b. sociology		
c. anthropology		
d. political sci.		
e. economics		
f.		
g.		
h.		
i.		
j.		

5. Humanities and Fine Arts

a. art

b. art history

c. music

d. dance

e. theater

f. eng. lit.

g. eng. comp.

h. classics

i. foreign lang.

j. philosophy

k. religion

l.

m.

n.

o.

6. Natural Science/Math

a. biochemistry

b. biology

c. botany

d. chemistry

e. comp. sci.

f. geology

g. mathematics

h. physics

i.

j.

k.

7. Total electives--

8. Minor required--

9. Minor credits--

PROFESSIONAL STUDIES:

10. Total credits in professional education--

11. Percentage professional education--

12-17. Areas of coursework

Subject Area	Required Credits	Pre-School Focus
12. Foundations		
a. principles of ed.		
b. educ. & the lib. arts		
c. foundations of ed.		
d. intro. to ECE		
e. educ. & the city		
f. educ. Black Amer.		
g. problems in educ.		
h. American educ.		
i. comparative educ.		
j. philosophy of ed.		
k. schooling in Amer.		
l. social issues in ed.		
m. sexism in educ.		
n.		
o.		
p.		
q.		
r.		
s.		

13. Curriculum

-
- a. children's lit.
 - b. curriculum in ece.
 - c. curriculum dev.
 - d. the reading process
 - e. intro. inst. media
 - f. kindergarten
 - g. social issues in ece
 - h. role of play in ece
 - i. curriculum models in ece
 - j.
 - k.
 - l.
 - m.
-

14. Child Development

-
- a. speech & lang. dev.
-
- b. infant dev.
-
- c. the child in mod. soc.
-
- d. cognitive dev.
-
- e. social dev.
-
- f. child growth & dev.
-
- g. human growth & dev.
-
- h.
-
- i.
-
- j.
-
- k.
-
- l.
-

15. Special Education

-
- a. child. w/spec. needs
 - b. child. w/spec. needs II
 - c. learning disabilities
 - d. education of the gifted
 - e. the hearing impaired child
 - f. mainstreamed classroom
 - g.
 - h.
 - i.
 - j.
-

16. Instructional Methods

-
- a. physical ed.
 - b. mathematics
 - c. reading
 - d. science
 - e. social science
 - f. language arts
 - g. art
 - h. music
 - i. creative arts
 - j. drama
 - k. classroom management
 - l.
 - m.
 - n.
 - o.
-

17. Psychology

-
- a. behavioral management
-
- b. intro. psych.
-
- c. abnormal psych.
-
- d. educational psych.
-
- e. cognitive psych.
-
- f. learning theory
-
- g.
-
- h.
-
- i.
-
- j.
-
- k.
-

18. Hours of field-based pre-practica--
19. Credits in field-based pre-practica--
20. Hours of field-based pre-practica/observation--
21. Hours of field-based pre-practica/participation--
22. Hours in pre-school setting--
23. Hours in K-3 setting--
24. Hours in laboratory school--
25. Hours in practicum--
26. Practicum credits--
27. Weeks in practicum placement--
28. Days per week in practicum placement--
29. Practicum placement setting--
30. Practicum placement design--

INSTITUTIONAL CHARACTERISTICS:

31. Total enrollment--
32. ECE enrollment--
33. Tuition--
34. Affiliation--
35. SAT (verbal)--
36. SAT (math)--
37. Admission to program requirements--

APPENDIX C

Department of Education Approved Programs
in Early Childhood Teacher Education

1. American International College
2. Boston College
3. Boston University
4. Bridgewater State College
5. Clark University
6. Eastern Nazarene
7. Fitchburg State College
8. Framingham State College
9. Gordon College
10. Lesley College
11. Mount Holyoke College
12. North Adams State College
13. Northeastern University
14. Pine Manor College
15. Salem State Collge
16. Simmons College
17. Smith College
18. Springfield College
19. Stonehill College
20. Tufts University
21. University of Massachusetts/Amherst
22. University of Massachusetts/Boston
23. Westfield State College
24. Wheaton College
25. Wheelock College
26. Worcester State College

APPENDIX D

Coursework Required by Approved Early Childhood Programs
to Meet Certification Standards

GENERAL EDUCATION

I. Social/Behavioral Sciences

A. Psychology

1. Psychology Elective
2. Psychology as a Natural Science Elective
3. Psychology as a Social Science Elective
4. General/Introduction to Psychology
5. Psychology of Learning
6. Principles of Research Design
7. Child Psychology
8. Child Development
9. Infant Development
10. Advanced Child Development
11. Developmental Psychology
12. Human Growth and Development
13. Learning and Development
14. Child and Society
15. Childhood Disabilities
16. Children's Learning and Thinking
17. Social and Emotional Development
18. Lifespan Development
19. Exceptional Children
20. Educational Psychology
21. Children's Language and Thinking

B. Sociology

1. Sociology Elective
2. Introduction to Sociology
3. Minority Groups
4. Social Institutions
5. Third World Studies

C. History

1. History Elective
2. U.S. History Elective
3. American Constitutional Government
4. American History to the Civil War
5. American History Since the Civil War
6. European History
7. History and the Constitution

8. Historical Foundations of Western Civilization
9. Massachusetts and U.S. Constitution
10. State and Local Government
11. World Civilization I
12. World Civilization II
13. Western Heritage

D. Electives

1. Electives from 2-6 courses in Social/Behavioral Sciences
2. Electives from 6-12 courses in Social/Behavioral Sciences
3. Electives from 13 or more courses in Social/Behavioral Sciences
4. Electives from 2-8 courses primarily in History
5. Electives from 9 or more courses primarily in History

II. Humanities

A. Philosophy

1. Philosophy Elective
2. Introduction to Philosophy or Introduction to World Religions
3. Philosophical Inquiry
4. Great Philosophical and Religious Ideas
5. Living Issues
6. History of Philosophy or Religion
7. Introduction to Philosophy or Ethics

B. Religion

1. Religion Elective
2. Bible Studies
3. Biblical History and Literature
4. Introduction to Religion
5. Biblical Foundations

C. Humanities

1. Introduction to the Humanities
2. Humanities Elective

D. Foreign Language

1. Foreign Language Elective

E. Fine Arts

1. Art Elective
2. Fundamentals of Art
3. Music Elective
4. Introduction to Music or Piano
5. Art or Music Elective

F. English

1. English Elective
2. Literature Elective
3. Composition
4. Structure of English
5. Traditional Grammar and Usage
6. Essentials of Writing
7. Introduction to College Writing
8. Modes of Writing
9. Language: Reading and Writing
10. English Literature
11. World Literature
12. Writing and Research
13. Developmental Reading
14. Literary Foundations (European Literature)

G. Speech and Communication

1. Introduction to Speech/Communication
2. Oral Communication
3. Basic Speech
4. Forms of Speech
5. Speech Communication
6. Verbal Expression
7. Fundamentals of Speech

H. Library Science

1. Introduction to Library Science

I. Foreign Studies

1. Foreign Studies Elective

J. Electives

1. Electives from 2-8 courses in primarily Humanities
2. Electives from more than 8 courses in primarily Humanities
3. Electives from 2-8 courses in primarily Fine Arts
4. Electives from more than 8 courses in primarily Fine Arts
5. Electives from unspecified Humanities coursework

III. Natural Sciences/Mathematics

A. Science

1. Science Elective
2. Natural Science Elective
3. Physical Science Elective
4. Biology or Chemistry Elective
5. Laboratory Science Elective
6. Biology, Chemistry, or Physics Elective

7. Biology: Basic Concepts
8. Biological Concepts
9. Epoch Making Events in Science
10. Natural Science Techniques
11. Natural Science Foundations I
12. Natural Science Foundations II

B. Mathematics

1. Mathematics Elective
2. Mathematics Elective (1 of 3 courses)
3. Introduction to Mathematics
4. Introduction to Modern Mathematics
5. Basic Mathematics
6. Structures and Systems in Mathematics
7. Mathematics: Theory and Application
8. Quantitative Techniques (Statistics)
9. Elements of Modern Mathematics
10. Essential Algebra

C. Computer Science

1. Computer Science Elective
2. Introduction to Computer Science
3. Basic Computer Literacy
4. Computer Science or Statistics Elective

D. Electives

1. Electives from 2-8 courses in primarily Natural Science/Mathematics
2. Electives from more than 8 courses in primarily Natural Science/Mathematics
3. Electives from Natural Science/Mathematics
4. Electives in Mathematics/Computer Science (2 of 13 courses)

IV. Health and Physical Education

A. Health

1. Health Elective
2. Personal and Community Health

B. Physical Education

1. Physical Education Elective

V. Social Science, Humanities, or Natural Science

- A. Elective from any area of study

PROFESSIONAL EDUCATION

I. Foundations of Education

A. General

1. Introduction to Teacher Education
2. Introduction to Teaching
3. Principles of Teaching I
4. Principles of Teaching II
5. Philosophical Foundations of Teaching
6. Philosophy of Teaching
7. Philosophical and Sociological Foundations of Education
8. Principles and Problems of Education
9. Foundations of Education
10. History and Philosophy of Education
11. Principles of Education
12. Introduction to Education and Other Human Services
13. Societal Problems and Education
14. Cultural Foundations of Education

B. Foundations of Early Childhood Education

1. Early Childhood Education
2. The Child and the Educative Process
3. Teaching in Preschool and Kindergarten
4. Early Childhood Foundations I
5. Early Childhood Foundations II
6. The Early Childhood Educator: Theory and Practice
7. Critical Issues in Early Childhood Education
8. Early Childhood and Elementary Education
9. Orientation to Early Childhood Education
10. Principles of Early Childhood Education
11. Issues in Pre-School Education
12. Introduction to Early Childhood Education
13. Introduction to Child Study
14. Dynamics of the Early Childhood Classroom or Dynamics Class, School, and Community
15. School, Family, Community
16. Family, School, and Community Relations
17. Schools in an Era of Change
18. Behavioral Sciences in Early Childhood Education I
19. Behavioral Sciences in Early Childhood Education II
20. Working with Young Children
21. Human Relations in Early Childhood Education
22. Teaching, Learning, and the Young Child
23. Young Children and You
24. Interpersonal Relations in Early Childhood Classrooms
25. Patterns of Culture I
26. Patterns of Culture II

II. Curriculum

A. Early Childhood Curriculum

1. Children and their Environment
2. Children's Literature and Creative Writing
3. Children's Literature
4. Literature for Children and Young Adults
5. Children's Literature or Sharing Literature with Children
6. Theories and Approaches in Early Childhood Education
7. Curriculum for Young Children
8. Curriculum I
9. Curriculum II
10. Curriculum Development
11. Curriculum for Young Children or Curriculum for Children in the Primary Grades
12. Early Childhood Curriculum
13. Curriculum and Models in Early Childhood Education
14. Curriculum in Pre-School Education
15. Curriculum in Elementary Education
16. Curriculum and Learning Environments for Children Aged 3-8
17. Curriculum Design for Young Children
18. Creative Experiences in Curriculum for Young Children
19. Curriculum and Instruction in Early Childhood Education
20. Curriculum and the Young Child
21. Kindergarten Theory or Planning Pre-School
22. Computers and Early Childhood Education
23. Basic Concepts in Reading and Language Curriculum

III. Organization and Planning

A. Early Childhood Education

1. Organization and Planning
2. Planning and Organization of Early Childhood Education
3. Organization and Administration of Preschool
4. Organizational Settings in Early Childhood Education
5. Day Care Programs for Children and Parents

IV. Development

A. Child Development

1. Child Growth and Development
2. Infancy, Human Growth, and Child Development
3. Speech and Language Development
4. Child Growth
5. Early Childhood Development and Education
6. Language and Cognitive Development

7. Language Acquisition and Development
8. Intentional Development in Young Children
9. Personal and Social Development

V. Instructional Methods

A. Reading and Language Arts

1. Teaching Basic Reading Skills
2. Reading: Theory and Instruction
3. Teaching Reading and Other Language Arts or Teaching of Reading
4. Teaching Reading to Children
5. Reading and Language Arts
6. Reading: K-6
7. Reading and Language Arts: Preschool to Third Grade
8. Reading and Language Arts in Early Childhood Education
9. Teaching Reading and Language Arts
10. Reading in Early Childhood Education
11. Curriculum and Instruction in Reading and Language Arts at the Early Childhood Level
12. Introduction to the Teaching of Reading
13. Field and Lab in Reading
14. Methods of Teaching Early Childhood and Elementary Reading and Language Arts
15. Success in Beginning Reading
16. Teaching Reading: Early Childhood and Elementary
17. Reading Through Children's Literature
18. Communication and Literacy I
19. Communication and Literacy II
20. Teaching Language Arts and Children's Literature
21. Methods and Materials in Early Childhood Language Arts
22. Language Arts for Children 3-8
23. Teaching the Language Arts in Elementary and the Middle School
24. Methods and Materials in Language Arts
25. Language Arts in Early Childhood Education

B. Mathematics

1. Development of Math Concepts in Young Children
2. Teaching Math to Children
3. Math for Teachers
4. Math for the Elementary Teacher
5. Teaching of Math
6. Field and Lab in Elementary Math I
7. Field and Lab in Elementary Math II
8. Curriculum and Methods of Teaching Math--Early Childhood and Elementary
9. Methods in Early Childhood Math
10. Teaching Modern Math

- C. Science/Mathematics
 - 1. Inquiry, Discovery, Health, and Measurement I
 - 2. Inquiry, Discovery, Health, and Measurement II
 - 3. Science, Math, and Social Studies in Early Childhood Education
 - 4. Curriculum and Instruction in Math/Science at the Early Childhood Level
 - 5. Early Childhood Curriculum and Materials in Science and Math
 - 6. Early Childhood Curriculum I
 - 7. Early Childhood Curriculum II

- D. Physical Education
 - 1. Motor Development and Learning
 - 2. Physical Education Curricula and Procedures
 - 3. Physical Education in the Elementary Schools
 - 4. Physical Education for the Elementary Teacher or Play Theory Through Play Environments
 - 5. Teaching Physical Education
 - 6. Physical Education for Preschool and Primary

- E. Health
 - 1. Health Education in the Elementary School
 - 2. Personal Health and Nutrition
 - 3. Health in Education

- F. General
 - 1. Individualized Instruction and the Integrated Classroom
 - 2. Creative Experiences in the Curriculum for Young Children
 - 3. Early Childhood Education: Methods and Materials Core
 - 4. Early Childhood Curriculum and Materials in Language Arts and Social Studies
 - 5. Methods and Materials in Early Childhood Education
 - 6. Creative Techniques for Teaching
 - 7. Issues and Techniques for Teaching Elementary and Early Childhood
 - 8. Methods: Early Childhood Education
 - 9. Curriculum and Methods for Elementary Education

- G. Art and Music
 - 1. Art, Music, and Movement
 - 2. Art and the Preschool Child or Teaching Music in Elementary Education
 - 3. Movement, Music and Drama in Early Childhood Education
 - 4. Fine Arts in Early Childhood Education
 - 5. Music and Movement for the Classroom Teacher
 - 6. Creative Arts and Education

7. Creative Arts
8. Art Education: Theory and Practice
9. Comprehensive Music for Educators
10. Teaching Art and Music

H. Science and Social Studies

1. Exploring Science and Social Studies Through the Environment
2. Science and Social Studies: Methods and Materials
3. Teaching Science and Social Studies

I. Classroom Management

1. Behavior and Classroom Management
2. Strategies for Classroom Management
3. Behavior Management

J. Other

1. Teaching of Elementary Social Studies
2. Teaching Science
3. Instructional Methods Elective

VI. Special Education

A. Special Education

1. Introduction to Special Education
2. Introduction to Children with Special Needs I
3. Introduction to Children with Special Needs II
4. Introduction to Children with Special Needs
5. Generic Special Needs
6. Teaching Strategies in the Mainstreamed Classroom
7. Individualized Instruction and the Special Needs Student
8. Educating Children with Special Needs in Regular Classroom
9. Children in Groups: Special Needs, Special Problems
10. Special Needs in the Preschool
11. Curriculum Development for Young Children with Special Needs
12. Curriculum in the Mainstreamed Classroom
13. Early Intervention
14. Education of the Exceptional Child
15. Introduction to Speech and Language Disorders
16. Psychology and Education of Handicapped Children/Youth
17. Analysis and Correction of Reading Problems
18. Learning Disabilities
19. Learning Disorders
20. Educational Assessment of Children
21. Psychological and Educational Assessment and Interpretations for Special Needs Children

22. Evaluation of the Young Child with Special Needs
23. Special Education Methods I
24. Special Methods for Math and Science
25. Field and Lab in Special Education

VII. Testing and Assessment

A. General

1. Tests and Measurements
2. Educational Assessment
3. Measurement and Evaluation in Early Childhood Education
4. Educational/Psychological Measurement and Evaluation
5. The Child and the Educative Process
6. Educational Psychology of Measurement
7. Tests and Measurements: Diagnosis

VIII. Other

A. Instructional Media

1. Educational Media
2. Audio and Visual Machine Operation
3. Educational Media and Techniques
4. Introduction to Instructional Media

B. Field Experience

1. Field Experience in Early Childhood Education

C. Seminar

1. Senior Seminar
2. Seminar: Recent Developments
3. Senior Seminar in Early Childhood Education
4. Early Childhood Seminar

APPENDIX E

Program Characteristics of Five Program Types
Identified Through Cluster Analysis

Type I

	Program Number					Mean
	10	12	23	16	18	
Social/Behavioral Science	18	18	15	28	28	21.4
Humanities	21	18	18	20	15	18.4
Natural Science/Math	13	12	9	12	13	11.8
Educational Foundations	7	11	11	12	6	9.4
Instructional Methods	10	13	12	12	11	11.6
Curriculum	6	7	6	4	5	5.6
Child Development	0	0	0	0	2	.4
Special Education	3	3	6	4	3	3.8

Type II

	Program Number			Mean
	1	9	4	
Social/Behavioral Science	12	21	18	17
Humanities	15	24	16	18.33
Natural Science/Math	11	11	9	10.33
Educational Foundations	7	7	6	6.66
Instructional Methods	25	21	21	22.33
Curriculum	3	8	6	5.66
Child Development	3	3	3	3
Special Education	12	9	6	9

Type III

	Program Number						Mean
	3	22	15	21	19	2	
Social/Behavioral Science	21	12	18	12	6	9	13
Humanities	24	24	21	18	18	18	20.5
Natural Science/Math	12	12	9	6	9	6	9
Educational Foundations	8	6	6	3	6	6	5.83
Instructional Methods	16	25	9	9	12	12	12.16
Curriculum	0	0	3	3	6	3	2.5
Child Development	4	3	3	6	6	6	4.66
Special Education	0	3	3	0	3	6	2.5

Type IV

	Program Number						Mean
	26	7	24	5	25	20	
Social/Behavioral Science	17	14	16	20	18	14	16.66
Humanities	30	24	36	12	20	33	25.83
Natural Science/Math	15	12	8	4	14	8	10.16
Educational Foundations	6	16	12	6	2	8	8.33
Instructional Methods	22	16	10	14	8	4	12.33
Curriculum	3	0	0	0	7	4	2.33
Child Development	3	0	4	0	0	0	1.16
Special Education	0	0	0	4	0	4	1.33

Type V

	Program Number						Mean
	8	11	13	6	17	14	
Social/Behavioral Science	28	24	21	26	12	48	26.5
Humanities	16	16	19	46	0	24	20.16
Natural Science/Math	12	8	11	4	0	8	7.16
Educational Foundations	0	12	9	12	12	4	8.16
Instructional Methods	20	0	16	20	12	12	13.33
Curriculum	0	0	8	4	4	8	4
Child Development	0	0	11	0	4	0	2.5
Special Education	4	4	5	4	0	0	2.83

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