CHARACTERISTICS OF TEACHER PREPARATION PROGRAMS AND THE ISSUE PERCEPTIONS OF TEACHER EDUCATORS IN DEAF EDUCATION

DISSERTATION

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ABSTRACT

This is a descriptive survey study that describes the overall nature of teacher preparation programs in the U.S. for prospective teachers of students who are deaf or hard of hearing (TEDHH programs). The specific purpose of the study was to investigate the nature of programs in the following three areas: 1) General Education, 2) Professional Education, and 3) Majors or Subject Matter / Content Education requirements. The study also focused on identification of factors impacting the current development of the programs; recommendations to resolve issues and problems are presented.

Teacher Education is a very delicate and complicated business, which involves multiple layers of stakeholders and participants. This study made such complications and the fragility of the programs apparent. Based on the results, the following four conclusions emerged. First, the study revealed significant similarities in the teacher educators' perceptions of issues in spite of the diversity of the programs. The results showed diversity among the current TEDHH programs in program, curriculum, and program evaluation characteristics. Yet, the teacher educators in such diverse programs expressed common concerns with program development, particularly regarding State Standards, Recruitment, and Administrative and Professional Support.

Second, the study demonstrated a disparity between the issues and problems identified in the literature and those emphasized by the teacher educators in Deaf
Education. For example, the literature places emphasis on the issues of national and state standards, shortages of teachers and teacher educators, and collaboration between general and special education teachers and teacher educators. The teacher educators agreed that these were pressing issues in the scale section of this study; however, when they were asked to respond to further follow-up questions, they revealed greater concerns with philosophical issues related to communication and language, specifically as related to the knowledge and skills required for teachers of students who are deaf or hard of hearing. In addition, the teacher educators expressed greater concern regarding administrative and professional support (i.e., funding issues caused by limited student enrollment, limited faculty numbers, etc.).

Third, the study revealed an unreasonable ratio between the number of faculty members involved in the TEDHH programs and the number of courses that they actually taught. Over 50% of the programs reported having fewer than three faculty members in their programs; therefore, it is evident that, on average, three or fewer faculty members taught at least 27 courses in the Professional and Subject Matter Education (Deaf Education) requirements. The ratio between the number of faculty members and the courses that they were required to teach was an unreasonable mismatch if the goal is a high quality of instruction.

Finally, it was apparent that the TEDHH programs kept high standards by receiving national and local accreditations. In Deaf Education, over 80% of the programs were nationally accredited and more than 90% were accredited by the respective states. Such results make it clear that the TEDHH programs maintain high standards in their
programs. In addition, in order to keep such high standards, over 90% of the programs had conducted or were in the process of conducting self-evaluations.

Based on the results of this study, four major recommendations and 16 specific research questions in three areas (teacher qualifications, recruitment of teacher candidates, and recruitment of teacher educators) are presented.
Dedicated to

my mother and grandmother
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TABLE OF CONTENTS

Page

ABSTRACT ........................................................................................................... ii

DEDICATION ........................................................................................................ v

ACKNOWLEDGEMENTS ................................................................................. vi

VITA .................................................................................................................... viii

LIST OF TABLES ............................................................................................. xiii

LIST OF FIGURES ............................................................................................ xvi

CHAPTERS:

1. INTRODUCTION ............................................................................................. 1

   Inclusion Trends and Collaboration of K-12 Teachers .................................... 2

   Teacher Preparation in U.S. ............................................................................ 5

   Teacher Preparation in Deaf and Hard of Hearing ....................................... 9

   Statements of the Problem .......................................................................... 14

   Purpose of the Study .................................................................................... 17

   Research Design .......................................................................................... 17

   Respondents ............................................................................................... 19

   Methodology ............................................................................................... 19

   Definition of Terms .................................................................................... 20

   Limitations ................................................................................................. 21
2. LITERATURE REVIEW

Areas of study in Teacher Education

Components of Areas of Study

General Education

Research on General Education

Professional Education

Research on Professional Education

Content / Subject Matter Education

Research on Content / Subject Matter Education

Background of Special Education

Inclusion and Deafness

Relationship Between Special Education and General Education

Issues in Teacher Education in Special Education

Critical Teacher Shortage

Certification / Licensure

Changes in Service Delivery

Collaboration

Evaluation of Teacher Education Programs

Purpose of Program Evaluation of Teacher Education

Issues and Problems in Program Evaluation

Accreditation and Evaluation of Programs

Research on Teacher Education in Special Education

Teacher Preparation in Deaf and Hard of Hearing
Importance of the Work.................................................................104
Statements of the Problem........................................................109

3. RESEARCH METHODS...............................................................112
Objectives of The Study.............................................................112
Variables of Interest.................................................................112
Research Questions...............................................................113
Research Design.................................................................114
Sampling Methodology.........................................................115
Instrumentation.................................................................118
Data Analysis.................................................................118
Reliability and Validity of the Study...........................................119

4. FINDINGS AND DISCUSSION..................................................121
Respondents.................................................................121
Research Question One..........................................................125
Research Question Two..........................................................137
Research Question Three........................................................150
Research Question Four..........................................................164
Conclusion.................................................................189

5. CONCLUSIONS.................................................................191
Summary.................................................................191
Program Characteristics........................................................192
Curriculum Characteristics......................................................192
Program Evaluation Characteristics......................................193
Perceptions of Teacher Educators Regarding TEDHH Program

Development .................................................................194

Conclusions .................................................................195

Recommendations and Implications ...................................199

Areas for Future Research ..............................................201

Teacher Qualifications ..................................................201

Recruitment of Teacher Candidates ..................................202

Recruitment of Teacher Educators .....................................203

Limitations of the Study ..................................................205

BIBLIOGRAPHY ............................................................206

Appendices

A Questionnaire ..........................................................223

B Cover Letter ..............................................................232

C Pre-mailing Post Card ..................................................234

D Non-respondent Post Card and Email Reminder .................236

E Second Mailing Cover Letter ........................................240

F Thank You Post Card ....................................................242
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Major problems associated with the criterion variables</td>
<td>79</td>
</tr>
<tr>
<td>2.2</td>
<td>Number of states requiring specific General Education components for</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td>elementary education teachers</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>Number of states requiring specific Professional Education components</td>
<td>96</td>
</tr>
<tr>
<td>2.4</td>
<td>Teacher Preparation Curriculum Studies in the area of Deaf and Hard-of-Hearing</td>
<td>97</td>
</tr>
<tr>
<td>2.5</td>
<td>Comparison of Teacher Preparation Curriculum Studies</td>
<td>107</td>
</tr>
<tr>
<td>3.1</td>
<td>Variables of the Study</td>
<td>113</td>
</tr>
<tr>
<td>3.2</td>
<td>Comparison of early respondents to late respondents</td>
<td>116</td>
</tr>
<tr>
<td>3.3</td>
<td>List of research questions, related items in the questionnaire, and statistical analysis</td>
<td>119</td>
</tr>
<tr>
<td>4.1</td>
<td>Regions of the program</td>
<td>122</td>
</tr>
<tr>
<td>4.2</td>
<td>Responses by region</td>
<td>122</td>
</tr>
<tr>
<td>4.3</td>
<td>Respondents’ demographics</td>
<td>124</td>
</tr>
<tr>
<td>4.4</td>
<td>Respondents’ demographics: Position distribution</td>
<td>125</td>
</tr>
<tr>
<td>4.5</td>
<td>Institutional term system</td>
<td>125</td>
</tr>
<tr>
<td>4.6</td>
<td>Program levels</td>
<td>127</td>
</tr>
<tr>
<td>4.7</td>
<td>Program levels by region</td>
<td>127</td>
</tr>
</tbody>
</table>
4.8 Minimum credit hours required to complete the program………………………129
4.9 Students enrolled in Deaf Education programs………………………………130
4.10 Students graduating from Deaf Education programs in 2004-2005…………131
4.11 Total number of faculty in the TEDHH programs……………………………132
4.12 Faculty members teaching in TEDHH programs……………………………134
4.13 Number of required courses in General Education for certification / licensure..138
4.14 Credit hours required in General Education for certification / licensure………139
4.15 Number of courses in Profession Education required for teacher certification /
licensure……………………………………………………………………………140
4.16 Credit hours required in Professional Education for teacher certification /
licensure……………………………………………………………………………141
4.17 Number of courses in Subject Matter Education required for teacher certification /
licensure……………………………………………………………………………142
4.18 Credit hours required in Subject Matter Education for teacher certification /
licensure……………………………………………………………………………144
4.19 Number of courses in Field-based Experiences required for teacher certification /
licensure……………………………………………………………………………146
4.20 Credit hours required in field-based experiences for teacher certification /
licensure……………………………………………………………………………147
4.21 Number of courses in student teaching required for teacher certification /
licensure……………………………………………………………………………149
4.22 Credit hours required in Student Teaching for teacher certification /
licensure……………………………………………………………………………150
4.23 What national organizations granted accreditations to the TEDHH programs?..152
4.24 Combinations of national accreditation held by the TEDHH programs ..........153
4.25 The last time the TEDHH programs conducted a self-evaluation.................156
4.26 How often the TEDHH programs conduct self-evaluation..........................157
4.27 Types of information found in the comments..............................................158
4.28 Organizations to whom the TEDHH programs report self-evaluations............159
4.29 How the TEDHH Programs Conducted Self-Evaluations............................160
4.30 Who were the Respondents to the Self-Evaluations?.................................161
4.31 What program evaluation strategies did the TEDHH programs utilize?.........162
4.32 Combinations of cross-classifications........................................................163
4.33 Most pressing issues in preparing teachers in Deaf Education ..................166
4.34 Moderately pressing issues in preparing teachers in Deaf Education ...........167
4.35 Less pressing issues in preparing teachers in Deaf Education ....................167
4.36 What recommendation would you make regarding Deaf Education in the United States today?.................................................................170
4.37 What recommendations did the TEDHH programs make?.........................172
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Is Field-based Experiences required prior to Student Teaching?</td>
<td>145</td>
</tr>
<tr>
<td>4.2</td>
<td>Is the TEDHH program nationally accredited?</td>
<td>151</td>
</tr>
<tr>
<td>4.3</td>
<td>Do the TEDHH programs have state accreditation?</td>
<td>154</td>
</tr>
<tr>
<td>4.4</td>
<td>Do the TEDHH programs conduct self-evaluation?</td>
<td>155</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

Teacher preparation programs in America have recently been required to take a new direction (Darling-Hammond, 2005), and the new requirements resulting from the federal legislatives (i.e., No Child Left Behind and Education for All Handicapped Children Act) have been especially significant for the programs for prospective teachers of students with disabilities. These programs have been encouraged to place more emphasis on collaboration between special education and general education personnel (Goodwin, Boone, & Wittmer, 1994; Kemple, Hartle, Correa, & Fox, 1994; Pugach, 1996; Pugach & Lilly, 1984; Sindelar & Kilgore, 1995).

After the Education for All Handicapped Children Act of 1975, Pub. L. 94-142, 20 U.S.C. § 1400, et seq. (P.L.94-142)\(^1\) introduced the concept of educating students with disabilities in the least restrictive environment, there has been an observable movement to include children with disabilities in general education classrooms (Afzali-Nomani, 1995; Bunch, 1994; Sindelar & Kilgore, 1995). However, P.L.94-142, later renamed the IDEA, has caused elementary teachers to feel ‘ill-prepared’ to teach students

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\(^1\) The Education for All Handicapped Children Act, 20 U.S.C. § 1400, et seq. (P.L. 94-142) was originally authorized in 1975, reauthorized and renamed in 1990 the Individuals with Disabilities Education Act (IDEA), and reauthorized in 1997.
with special needs due to the separate teacher preparation of prospective teachers of students with disabilities (Callahan, 1990).

Further, recent enactment of the No Child Left Behind Act of 2001, Pub. L. No.107-110, 115 Stat.1425 (NCLB) requires that teachers must be highly qualified by the 2005-2006 school year. The legislation defines a "highly qualified teacher" as a teacher a) holding a bachelor's degree, b) demonstrating mastery of subject content knowledge by passing tests in reading, writing, mathematics, and other areas of the curriculum that they will be teaching, and c) receiving full state certification (Cochran-Smith, 2003; Paulsen, 2005; Steffan, 2004).

Given the apprehension that teachers will be considered "ill-prepared" and the federal legislative requirements, teacher education programs, especially initial teacher preparation programs, have been required to make some serious decisions. With the increasing numbers of students with disabilities being served primarily in general education classrooms, the content of teacher education programs and requirements for professional licensure and certification have become important issues in special education (Sindelar & Kilgore, 1995).

The Inclusion Trends and Collaboration with the K-12 Teachers

The special approach has been the predominant structure of programs designed to improve educational outcomes for students with learning problems. At the heart of the special approach is the presumption that students with learning problems cannot be effectively taught in regular education programs even with a variety of support. Students need to be “pulled-out” into special settings where they can receive remedial services. Although well-intentioned, this so-called, “pull-out”
approach to the educational difficulties of students with learning problems has failed in many instances to meet the educational needs of these students and has created, however, unwittingly barriers to their successful education.

(Will, 1986², p. 412)

Through the passage of P.L.94-142, special education was supposed to have been improved in the following ways: (1) redefining of the concept and practice of individualized instruction, (2) redefining of the parental role in their children’s education, (3) making education possible for half a million previously unserved severely handicapped children, and (4) improving services for several million others (Will, 1986). When Madeleine C. Will, the former Assistant Secretary for the Office of Special Education and Rehabilitative Services at the U.S. Department of Education, delivered the above quoted speech in 1985, education for students with disabilities was provided mainly by the “pull-out” approach.

Will’s address has become known as the kickoff of the Regular Education Initiative (REI) - the movement to include students with disabilities in less restrictive environments. The REI led to rapid increases in the number of students being included in general education classes. In 1986-87, 27% of students with disabilities from ages 3 to 21 were taught in general education classes (U.S. Department of Education 1989). By 1991–92, the figure had increased to 36% (U.S. Department of Education, 1993), and, in 1998-99, 47% of students with disabilities between ages 6 and 21 spent over 80% of the day in general education classrooms (U.S. Department of Education, 2002). The current

² The article is an adaptation of her keynote address at the Wingspread Conference on “The Education of Special Needs Students: Research Findings and Implications for Policy and Practice” held in Racine, Wisconsin, in December, 1985.
trend in K-12 classroom education is to continue this shift toward mainstreaming and/or inclusion.

Nevertheless, although more and more students with disabilities have been placed in general education classrooms since the passage of P.L. 94-142 and following its reauthorization as the IDEA in 1990 and 1997, the relationships between special and general education teachers have not developed efficiently (Pugach & Johnson, 1995, 2002). Historically, relationships between special and general education teachers developed through a form of consultation, and then through collaborative consultation (Pugach & Johnson, 1995, 2002). However, the efforts made by the teachers appear to have been neither effective nor adequate (Pugach & Johnson, 1995). Less effective relationships create an inappropriate structure, which leads to difficult working conditions within a school.

There are varying reasons as to why such relationships have not developed sufficiently. Relationships may fail because they are based on the misconception that one group of teachers is a superior knowledge keeper/provider whereas the other can only be a receiver of knowledge. Some researchers suggest that cultural and linguistic differences between the two groups of teachers are the causes of such difficulties (Sindelar & Kilgore, 1995).

Sindelar and Kilgore (1995) argue that the two teacher groups share neither a common culture nor the same terminology. They also argue that the cultures of special education and general education conflict in terminology, values, beliefs, and practices (Sindelar & Kilgore, 1995). Because the culture of special education depends upon the dimensions of disability categories, degree of severity of disabilities, and age of students,
such teachers have a clearly positivistic, if not behavioral, perspective on teaching and
learning. On the other hand, because the culture of general education is based on distinct
content areas such as reading, math, language arts and age groups (elementary, middle
school/junior high, or secondary), its instructors’ practice tends to have constructivist
influences (Sindelar & Kilgore, 1995).

Such cultural and linguistic differences between special and general education
teachers need to be overcome in order to provide an appropriate education for all
students. Therefore, special education in the U.S. has been seeking a new way to deliver
its services over the past two decades. It appears to be leaning toward the concept of
collaboration (Johnson & Pugach, 1996; Dorow, Fisch, Uhry, & Elsworth, 1998).
Collaboration stresses the importance of educating students with disabilities in general
education classrooms. Several researchers have advocated collaboration through the
concerted efforts of education practitioners (Johnson & Pugach, 1996; Pugach &
Johnson, 1988a, 1988b). Although K-12 educational areas tend to blend the two fields by
including students with disabilities in general education classrooms, many teacher
preparation programs appear to have kept those programs separate but call for
collaboration among K-12 teachers.

One way to assist in blending the two fields is “to establish more collaborative
and integrated preparation at the preservice level” (Fader, 1996, p. 40). Fader (1996)
states that collaborative teacher preparation is necessary to challenge misinformation,
fear, and negative attitudes. This would prepare graduating teacher candidates to teach all
children including those with disabilities.
Teacher Preparation in U.S.

While there is no unitary, bounded knowledge base for teaching on which everyone agrees, the body of knowledge from which teacher educators can draw in formulating an effective curriculum is substantial and growing.  

(Barnes, 1989, p.13)

Scholars in teacher education have been discussing and attempting to identify the knowledge base for teacher education. However, as Barnes (1989) states, it seems to be difficult to capture such a body of knowledge in a single form. The American Association of Colleges for Teacher Education’s Committee on the Professional Knowledge Base defined the knowledge base as “the body of knowledge that people should possess and ultimately be able to apply in order to begin teaching” (p. xiii, Imig, 1996; Gardner, 1989). Shulman (1987) defines a knowledge base for teaching as “a codified or codifiable aggregation of knowledge, skill, understanding, and technology, of ethics and disposition, of collective responsibility” (p.4). Teacher education programs have tried to develop such an aggregation of knowledge, skill, and understanding for their preservice teachers.

The knowledge base for teacher educators has also been defined as a “body of work that encompasses opinions and information” to offer a way to approach their decision-making (Murray, 1996, p. xv). Teacher educators can rely on such a body of knowledge when they make decisions in the course of establishing programs and developing curricula. The most commonly agreed upon composites of the curricula of teacher education programs are the following three areas of study: General Education,
Professional Education, and Subject Matter specialization (Cruickshank et al., 1996; Dumas & Weible, 1984; Kluender, 1984). Although these three areas of study have been agreed upon by many experts as the areas that will prepare the preservice teachers to be capable professionals, the relationship among these three areas and the effectiveness of the areas as an approach to developing a knowledge base for teachers seems to be unclear (Evertson, Hawley, & Zlotnik, 1985).

There are the two important organizations that address the standards and requirements for teacher education programs: the National Association of State Directors of Teacher Education and Certification (NASDTEC) and the National Council of the Accreditation of Teacher Education (NCATE). NASDTEC maintains a current list of recommended standards for teacher certification and its standards address the acceptable standards of the qualities required for the certification of the teacher (Dumas & Weible, 1984).

NCATE offers similar guidelines for teacher education programs, but its standards govern the standards of teacher preparation programs (Dumas & Weible, 1984). Recently, NCATE has been attempting to reach agreements with forty states for cooperative approaches to teacher education program accreditation in some subject areas. For instance, for the teachers of Social Studies, NCATE requires the states to submit institutional portfolios to the National Council (a NCATE member organization) for approval based on the National Council standards (Dumas, Evans, & Weible, 1997). The two standards govern the teacher preparation programs at the national level.

State standards are considered to be minimum standards for the state education agencies, and these are different from the requirements established by teacher education
institutions (Dumas & Weible, 1984). Weible and Dumas (1982) mention that many institutions have lowered their expectations, especially their professional education requirements, due to limited budgets and shrinking faculty resources in higher education. These problems have caused a movement away from the standards approved by NCATE and NASDTEC (Dumas & Weible, 1984).

There has been a series of studies on state standards and institutional requirements for initial teacher certification in general elementary and secondary education. Kluender (1984) found that most of the teacher education programs generally have three parts: (1) General Liberal Arts Education, (2) Professional Education, including field experience and (3) Major and Minor fields of specialization. Kluender and Egbert (as cited in Egbert, 1985) reviewed college / university catalogs and programs descriptions from a stratified sample of 40 teacher preparation institutions. They found that the General Liberal Arts Education portion comprised around 40% of the total elementary or secondary Teacher Education programs; however, the portion of Professional Education courses varied between elementary and secondary education programs. The Professional Education courses in elementary education constituted about 44% of the total programs. However, only 21% of the sample of secondary education programs required Professional Education courses, including field experience.

A group of researchers conducted a series of descriptive studies to identify the nature of state standards for teacher certification, the standards from the professional associations, and the institutional requirements from teacher preparation programs in a specific subject area, social studies (Dumas, Evans, & Weible, 1990, 1997; Dumas & Weible, 1984, 1985, 1990, 1991, 1997, 1998). Over the past two decades, their studies
have provided an understanding of the nation-wide changes in the emphasis and goals of teacher preparation programs in the area of social studies.

For instance, Dumas, Evans, and Weible (1990) studied state standards for the preparation of elementary teachers in General Education, Professional Education, and Majors. They compared the results with those from the previous study of Dumas and Weible (1985). They found that despite reform efforts to enhance General Education for Elementary teachers, the General Education component of the standards remained unchanged.

However, Dumas, Evans, and Weible (1990) also found a trend in the states’ approach to the General Education requirements; the states tended "to leave the (G)eneral (E)ducation components to the judgment of institutions or the institutional program-approval process." (p. 4). On the other hand, the Professional Education component has changed during the past decade. Dumas and Weible (1985) analyzed the changes in the semester credit hours required by the states for each area of the requirements. Although the total amount of course work required remained about the same, field experience requirements had been substantially increased from a mean of 6.2 semester hours in 1985 to a mean of 8.4 semester hours in 1990.

Teacher Preparation in Deaf and Hard of Hearing

In “Who Will Teach? Who Will Serve?” concern also is expressed about “tremendous state-to-state discrepancies in the official standards that define ‘qualified’ special educator” (p.6). Tremendous state-to-state discrepancies in the competence of the teaching workforce would be greater cause for concern, but no evidence of such discrepancies exists. In fact, the entire area of certification and
accreditation is devoid of research findings, a fact that led Lilly (1992) to conclude that "licensure and state program approval… are predominantly political functions, and those who engage in such activities … depend little on research to inform their planning and actions.” (Sindelar & Kilgore, 1995, pp.157 – 158)

Although there have been numerous studies and findings regarding state minimum standards for initial teacher certification and the requirements of teacher preparation programs in general education, few studies have been done in the area of teacher preparation programs for the teachers of students who are deaf or hard of hearing (e.g., Garber, Garn, & Testut, 1984; Mason, 1995; Moulton, Roth, & Winney, 1983; Shroyer & Compton, 1992). Moulton, Roth, and Winney (1983) stated that “state certification standards for teacher(s) of the hearing impaired have received scant attention in professional literature” (p.490). This trend has not changed.

Moulton et al. (1983) studied the state certification standards for teachers of students who are deaf or hard of hearing. They focused on the aspect of deaf education and classified the standards into following three areas: (a) those calling for a specific number of credit hours in specified deaf education subject areas, (b) those mandating a specific number of semester hours in deaf education for an approved program but not indicating what the subject areas must be, and (c) those requiring teachers to complete the deaf education program of an approved college or university but not specifying semester hours or required areas of study. In addition, Moulton et al. found that there was considerable interstate variability in the state standards. For instance, more than half of the states required a minimum number of credit hours and completion of specific courses.
Although the states required a minimum number of semester hours in deaf education, they did not specify course requirements. This could lead to diverse interpretations of such standards. Moreover, the required semester hours in deaf education varied between the states. For example, in 1983, Delaware required 12 semester hours whereas Alabama required 39 (Moulton et al., 1983).

Garber, Garn, and Testut (1984) also studied the state minimum curriculum requirements for teachers of students who are deaf or hard of hearing. They classified those requirements into three categories: (a) foundational requirements relating to special education, (b) requirements that are curricula specific to hearing impairment and (c) certification requirements based on prior educational experience and background. They found the following foundational requirements relating to special education; 54% of the states required psychology courses, 16% of the states required human growth and development courses, and 14% of the states required assessment and diagnosis courses. Garber et al. (1984) found additionally that the state minimum requirements in specific courses for hearing impairment included: aural habilitation (64% of the states), audiology (54%), speech pathology (34%), audiometry and hearing aids (30%), teaching academic subjects to the hearing impaired (28%), education and guidance of the hearing impaired (24%), and oral, manual, and total methods of communication (10%). The state minimum requirements for prior educational experience and background included: a bachelor’s degree with a major in hearing impairment (66% of the states), practicum / student teaching (64%), certification in early and /or secondary education (38%), general college courses (22%), university recommendation (24%), teaching of reading and math (18%), professional education experience (16%), a general education component
included in the major (14%), a Teacher’s Examination prior to certification (12%) and competency guidelines based on the Council on Education of the Deaf (CED) standards (4%).

About a decade after these two studies, two additional studies were conducted. First, Mason (1995) studied 29 master’s degree granting programs for the education of deaf and hard of hearing students in North America to identify the following: (1) criteria for admission, graduation, and certification, (2) program content, and (3) the ratios of hearing students and professionals to their culturally Deaf, deaf, deafened, and hard-of-hearing counterparts in the programs. Second, Shroyer and Compton (1992) demonstrated how, at the University of North Carolina at Greensboro, courses in a second major and in liberal arts were added in order to expand the knowledge base of preservice teachers enrolled in the program for the education of deaf children.

In the United States, over one million preschool, elementary and secondary-aged children are assumed to have hearing loss (Fischgrund, 1995; National Center for Health Statistics, 1988). Among the over one million expected students, the 2003-2004 Annual Survey of Deaf and Hard of Hearing Children and Youth identified only about 39,000 students who had a hearing loss, and among them, about 36,000 students were in educational programs in the United States, including a little over 17,500 students in general education classroom settings (Gallaudet Research Institute, 2005). The low incidence of deafness seems to significantly impact educational prospects and causes a possible lack of awareness among regular and special educators, a shortage of

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3 However, 6% of the states listed no specific requirements for teaching the hearing impaired.
appropriately trained personnel, and a lack in the accessibility of necessary support services (Fischgrund, 1995).

The current requirements of "highly qualified teachers" in every classroom by NCLB federal legislative shook all teacher preparation institutions. Teacher preparation programs for prospective teachers of students who are deaf or hard of hearing have also been impacted by this requirement. A nationwide critical shortage of teachers has been reported in the literature, and this includes teachers for students who are deaf or hard of hearing (Johnson, 2004; LaSasso & Wilson, 2000; McLeskey, Tyler, & Flippin, 2003; U.S. Department of Education, 2002). Although the number of individuals who are currently teaching students who are deaf or hard of hearing without appropriate teaching certification / licensure is unknown, the U.S. Department of Education (2002) reported that about 10% of the individuals were teaching students with disabilities without appropriate preparation. Considering the current NCLB requirement of 'receiving full state certification,' the nationwide shortage of teachers, especially "highly qualified teachers," is a critical issue in teacher education.

The certification issues associated with the teacher shortage (i.e., alternative routes to certification, categorical vs. non-categorical certification, K-12 certification) can be seen as important contemporary issues in special education (Sindelar & Kilgore, 1995). In 1983, the Council on the Education of the Deaf (CED)⁴ was seeking a way to upgrade and narrow the range of quality existing among teacher preparation programs (Garber et al., 1984). In the fall of that year, an Ad Hoc committee of CED’s member

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⁴ In 1983, CED was composed of three member organizations: the Alexander Graham Bell Association for the Deaf, the Conference of Educational Administrators Serving the Deaf, and the Convention of American Instructors of the Deaf.
organizations had a meeting and proposed recommendations to clarify and change the CED standards for teacher education. One of the 13 recommendations posed by the committee was to provide the prospective teachers experiences through coursework at preschool, elementary and secondary levels in the area of hearing impairment. This recommendation seems to have been adopted by current teacher certification programs.

Current teachers of students who are deaf or hard of hearing obtain K-12 certification/licensure whereas teachers of general education are most likely to obtain one of the following: elementary, middle school/junior high, secondary education or all grades certification/licensure (NASDEC, 2000). In some states, the teacher certification for teachers of students with disabilities is distinguished by the students’ grade level, for example, K-8 and 7-12. However, this is not the case for deaf or hard of hearing students. Among the frequently mentioned issues surrounding teacher education in special education (e.g., the issues of categorical versus non-categorical, the critical teacher shortage in special education, attrition and retention of teachers, professional certification, etc.), the issue of the effectiveness and appropriateness of K-12 certification/licensure for teachers of deaf or hard of hearing students seems to be neglected. Unfortunately, with respect to teacher education programs for prospective teachers of students who are deaf or hard of hearing, not enough research exists to support a particular licensure range.

**Statements of the Problem**

Kemple et al. (1994) stated that “an advantage to collaborative preservice preparation is that future teachers can be informed of the convergent knowledge bases of the two fields before they develop a dichotomous view of the philosophies and practices
“[of the two fields]” (p.39). In their report on a unified Teacher Education Program in Early Childhood Education (ECE) and Early Childhood Special Education (ECSE), the researchers documented key factors in the development of such a program. The factors include external funding support, faculty awareness of the need for developing such a new program, and organizational support.

In contrast to those ECE and ECSE teacher preparation programs, the literature does not provide much information regarding the practices of teacher preparation in Deaf Education. The only reports to be found for the past fifteen years are the annual listings of the teacher preparation programs (i.e., *American Annals of the Deaf*) and reports of course contents (e.g., Mason, 1995; Shroyer & Compton, 1992).

Many researchers and teacher educators have discussed the collaboration of the K-12 teachers in special and general education and debated the benefits of such collaboration (Goodwin, Boone, & Wittmer, 1994; Kemple et al., 1994; Pugach, 1996; Pugach & Lilly, 1984; Stainback & Stainback, 1988). Such discussions include suggestions for unifying teacher preparation programs as one way to assist collaboration efforts (e.g., Fader, 1996; Stainback & Stainback, 1988). However, as Fader (1996) observes, the literature has not provided much information regarding studies examining the effectiveness of such practices.

In the area of the ECSE and ECE unified programs, Fader (1996) compared the course contents and field experiences in separate ECE and ECSE programs and ECE / ECSE unified teacher preparation programs. She found that although there were no major differences between students in the unified and separate programs with regard to course content and field experience, ECE separate students expressed concern about a
lack of knowledge about and experience working with children with disabilities. In addition, all participating students reported a lack of practical information but a strong emphasis on textbook knowledge in the course content.

Fader (1996) also found that there were noticeable differences between the unified and separate programs in regard to administrative barriers and collaboration. The unified programs seemed to have fewer barriers and more collaboration between faculty in different departments and programs. There were more similarities in their philosophical beliefs. For instance, in her study, she reported that the separate program faculty stated that there are philosophical differences which prohibit unification between ECE and ECSE teacher preparation programs. With respect to administrative barriers that hinder unification, several faculty members in her study reported time issues, organizational structure of the departments, budget constraints, and so on. In addition, state certification was pointed out as a major issue in determining whether to develop unified or separate programs.

Other than the study of program content for 29 master’s degree granting programs in North America done by Mason (1995), the recent literature does not provide any information regarding teacher preparation curricula for the prospective teachers of students who are deaf or hard of hearing. What is missing is investigation of the nature of the programs, influential factors in curriculum decision-making, and implications for future teacher preparation programs for the teachers of students who are deaf or hard of hearing.
Purpose of the Study

The purpose of the study is to examine the current nature of the teacher preparation programs which prepare prospective teachers of deaf or hard of hearing students (TEDHH programs) in the following three areas: (1) general education requirements, (2) professional education requirements, and (3) majors or areas of concentration. The secondary purpose is to identify issues and problems associated with program development and to identify recommendations for future Deaf Education programs offered by the teacher educators in TEDHH programs.

The research questions for this study are:

1. What are the current characteristics of the teacher education institutions?
2. What are the current characteristics of the teacher education program curricula for the prospective teachers of students who are deaf or hard of hearing in each of the three broad areas of ‘teacher-education’ requirements: (1) General Education, (2) Professional Education, and (3) a third program component called “Majors,” “areas of concentration,” “areas of emphasis,” and so forth?
3. How do the programs conduct evaluation of the teacher education program (e.g., exit interviews, deaf and hard of hearing students' performances, etc.)?
4. What issues related to deaf education in the U.S. do teacher educators perceive as critical, and what recommendations do they make?

Research Design

The design of the study was neither experimental nor quasi-experimental manipulation. Rather, it was the identification and description of the current nature of teacher education programs for prospective teachers of students who are deaf or hard of hearing...
hearing in the U.S. Therefore, the study is classified as a descriptive study utilizing a survey technique.

Based on the literature review, a model of the factors that potentially influence the current teacher preparation curricula in these programs was developed. The variables of interest for the study were identified through the literature review.

The study was divided into two parts. Part I was a descriptive study of the current nature of TEDHH programs. The study identified the characteristics of a) the programs, b) their curricula and c) their methods of evaluation. First, it examined the nature of the program by identifying overall course requirements, the number of students, and the number of faculty of the current TEDHH programs. Next, the study examined the characteristics of the curricula by focusing on three areas of study. The literature review suggested that teacher preparation programs are comprised of three areas: (1) General Education, (2) Professional Education, and (3) a third program component called “Majors,” “areas of concentration,” “areas of emphasis,” and so forth. Therefore, the study determined the program requirements in these three areas. Then, the study identified trends in the evaluation / accreditation of the TEDHH programs. It also examined the current trends in self-evaluation among the programs.

Part II of the study investigated the perceptions of the teacher educators regarding issues impacting their program development. The teacher educators were asked to respond to two types of questions. First, they were asked to what extent they agreed about the importance of selected issues reported in the literature by responding to Likert scale type questions. Then, they were asked to respond to three open-ended questions, relying on their expertise to provide comments on issues and recommendations for the
resolution of issues and problems in preparing teachers for the students who are deaf and hard of hearing.

Respondents

Teacher educators at 80 teacher preparation programs for students who are deaf or hard of hearing in the United States served as the sample for the study. Due to the limited number of institutions preparing teachers for students who are deaf or hard of hearing (80 institutions), the researcher decided to take a census of all these programs in the U.S. The sample was based on a list of teacher preparation programs in the U.S. published recently in The American Annals of the Deaf (AAD) and the website, Educational Enhancement for the Deaf Education (http://www.deafed.net/PageText.asp?hdnPageId=120).

Methodology

The data for this study were collected by utilizing a mail survey technique. All the survey respondents were university faculty members in the U.S. In addition to the mailed survey, telephone, email, and postcards were used as alternative ways of contacting the respondents. As an incentive for participation in the study, samples of tea and coffee were included in the mailing of the initial survey.

The data were collected from September, 2004 through March, 2005. Prior to data collection, the survey was developed and a panel of experts was formed to examine the survey instruments. The instrument was in a booklet format (Appendix A) following Dillman’s (1978, 2000) Total Design Method. The questionnaire consisted of two sections: a) Program Characteristics Inventory, and b) Personal and Professional Characteristics Inventory.
Initial contact with the teacher education programs was made during the week of September 20, 2004. Three forms of reminders utilizing different communication modes were sent: an email reminder, a reminder postcard, and a second mailed survey (See Appendices C and D). Thereafter, non-respondents were contacted by email and telephone before an additional survey form was sent to them.

Prior to data entry, a coding sheet was created. As questionnaires were received, the data were entered into the spreadsheet. The Statistical Package for Social Science (SPSS V.13) was used for data analysis. Frequencies, percentages, means, standard deviations, simple analysis of variance (ANOVA), and univariate analysis of variance were calculated for the categorical and numerical data whereas content analysis was performed on the open-ended responses.

**Definition of Terms**

Three broad ‘teacher-education’ areas:

- The foundation of teacher education programs is generally three areas of study: general education requirements, professional education requirements, and major or area of concentration.

General Education:

- Studies with emphasis on general knowledge rather than academic specialization as a primary objective, such as studies in languages, communication skills, linguistics, mathematics, logic, information theory, natural and behavioral sciences, and the humanities.

Professional Education:

- Studies distinguishable from the General Education component which should cover the attitudes, knowledge, and skills required of a teacher. Such studies should include: a) content for the teaching specialty, b) humanistic and behavioral studies, c) teaching and learning theory, and d) a practicum.
Requirements for a third program component called “majors,” “areas of concentration,” “areas of emphasis,” and so forth:

• Studies with an emphasis on teaching deaf and hard of hearing students.

Teachers for students who are deaf and hard of hearing:

• Teachers who currently hold either provisional or professional teacher licenses as Intervention Specialists in the area of hearing impaired, as well as those who are currently teaching students with hearing impairments.

General Elementary Education teachers:

• Teachers who currently hold either provisional or professional teacher licenses in the areas of Early Childhood, Middle Childhood, or Multi-age, as well as those who are currently teaching in general education classrooms.

Collaboration:

• A mutually beneficial and well-defined relationship entered into by two or more organizations to achieve common goals.

Limitations

This study used a mailed questionnaire method for its data collection, which represents a form of self-reporting instrument. Due to the selection of such a data collection technique, the data are subject to the limitations inherent in self-reporting instruments, one of which is that the data are based on the perceptions and interpretations of respondents (Bendixen-Noe, 1992; Vail, 1991).
CHAPTER 2

LITERATURE REVIEW

At the heart of the literature review of this study, there are two major themes: a) teacher education and b) special education, specifically in the area of education for deaf or hard of hearing students. These two themes are two major elements of the study.

The chapter is divided into six major sections: a) Areas of study in teacher education, especially three components of study requirements, b) Background of special education, c) Issues in teacher education in special education, d) Evaluation of teacher education programs, e) Research on Teacher Education in special education, f) Importance of the work, and g) Statements of the problem. Each section has several sub-sections so that the widely varied information contained in the literature can be effectively described.

Areas of Study in Teacher Education

Since 1839, when Horace Mann declared the need for special preparation for teachers, researchers and teacher educators have been debating about how to prepare American teachers (Cruickshank et al., 1996). Although scholars have not always had the same views on how to prepare teachers, contemporary scholars seem to agree on the basic components of teacher preparation curricula.
There are four important concepts in teacher education: liberal education, technical education, general education, and professional education. Liberal education and technical education refer to the function of the educative experience but not to a segment of the curriculum, whereas the terms general and professional education refer to an administrative arrangement which divides the teacher preparation curriculum into two segments (Borrowman, 1956). General education and professional education sequences can have both liberal and technical functions although it is sometimes difficult to distinguish between them (Borrowman, 1956). In the history of teacher education, those two functions, liberal and technical, and the two sequences, general and professional, have undergone a shift in balance, especially since the mid-nineteenth century when the normal school was established.

Borrowman (1956) defined the impetus shaping liberal education as “the need to make certain that each person systematically considers the far-flung implications of his vocational and avocational decisions” and that guiding technical education as “the necessity to train individuals to perform efficiently the specialized technical tasks assigned to them” (p. vii). The objective of a liberal education is “to produce the free man – a man who, relieved from the need to produce goods or artisan services directly, could spend his time in speculative thought concerning the problems of philosophy and government” (Borriwman, 1956, p. 3).

By the medieval period, the concept of liberal education had been formalized in the form of the classical seven liberal arts, a combined form of the trivium of grammar, logic, and rhetoric, and the quadrivium of arithmetic, geometry, astronomy, and music. At the inception of American history, it was transformed into a “theory of formal
discipline and faculty psychology” (Borrowman, 1956, p.3). Later, the term liberal came to represent a specific program of liberal education, which required a specific curriculum and had a broad underlying perspective that can be found implicitly in virtually every recent statement on liberal education (Borrowman, 1956). According to Borrowman, maximizing the breadth of perspective is the goal of the liberal function of education.

The technical function of education is complementary to the liberal function of education. The purpose of the technical function of education is “the cultivation of skill in the actual performance of a previously determined task” (Borrowman, 1956, p. 4). The emphasis is not on the determination of purpose or policy but rather on its implementation (Borrowman, 1956). According to Borrowman (1956), examples of such tasks are classroom management, test construction, lesson presentation, grading, and reporting to parents. The liberal and technical functions of education are not different curriculum offerings but a function of the educational experiences incorporated in the curriculum which can be generally categorized as one or the other (Borrowman, 1956).

General and professional education sequences are the two segments of teacher education curricula (Borrowman, 1956). Today’s professional roles are becoming increasingly specialized. In such a specialized world, maintaining effective communication between individuals in different professions is one of the major educational tasks. The general education sequence addresses such a task by providing common learning experiences to diverse students with different occupational goals. On the other hand, the professional education sequence is more effective if students share a common occupational goal. Although the term professional education might imply that everything addressing professional competency is to be provided within this specialized...
sequence, such is not the case (Borrowman, 1956). This sequence, in education, is beneficial only for students who are preparing for professions in education or related areas.

**Components of Areas of Study**

There is enormous concern among the American public, the education profession, researchers, legal advocates, and policy makers regarding whether the quality of teaching makes a difference in students’ learning and their lives or not, and there seem to be general agreement that the quality of teaching has an important influence on students, their learning, achievement, and life chances (Cochran-Smith, 2003). A recent public opinion poll on teacher quality (Hart & Teeter, 2002) revealed that despite of strong public favor in educational reform tied to accountability, they also believed that educational improvement is tied to quality teaching and were unwilling to lower hiring standards in order to resolve a teacher shortage problem (Cochran-Smith, 2003).

There is apparent consensus supporting those who argue that teaching quality has a critical influence on how and what students learn. It is understood that individual teachers constitute the single largest factor that adds value to student learning (Sanders & Horn, 1998). Legal advocates of several pending cases in the nation assert that “access to highly qualified teachers is a birthright of all children” (American Civil Liberties Union, 2000; Cochran-Smith, 2003, p. 95; Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005). The recent legislative movement which culminated in the No Child Left Behind (NCLB) Act brought such a principle into law to guarantee that all schoolchildren will have highly qualified teachers (Cochran-Smith, 2003; Darling-Hammond, 2005).
The NCLB Act requires that every state provide schoolchildren with “high-qualified teachers” who have received “high-quality professional development.” Highly qualified teachers are defined as those with full state certification (or certification through alternate routes) or passing scores on state teacher exams. High-quality professional development is defined as that which improves subject matter knowledge, aligns with standards, and improves instructional strategies “based on scientifically based research.”

Further, Cochran-Smith (2003) stated:

> From a professional perspective, the highly qualified teacher knows subject matter (what to teach) and pedagogy (how to teach) but also knows how to learn and how to make decisions informed by theory and research from many bodies of knowledge and also as informed by feedback from school and classroom evidence in particular contexts. … The professional definition of the highly qualified teacher assumes that teaching is a complex and somewhat uncertain process with knowledge constructed in the interactions of particular teachers, students, materials, texts, and prior experiences. This image of teaching contrasts sharply with the view underlying technical definitions wherein teaching is presumed to be a certain and linear process within which knowledge is transmitted more or less directly from teacher to student by following a fixed and scientifically predetermined sequence of instructions. (pp. 96-97)

Thus, the quality of teaching matters; there is no doubt about it. The question that needs to be answered is how highly qualified teachers can be prepared.
Experts in education have conducted an extended debate over how American teachers should be prepared (Darling-Hammond et al., 2005). Not all of the experts agree with Mann’s assertion that teachers require special preparation, and some even believe that only a little preparation is adequate for teachers (Darling-Hammond et al., 2005; Cruickshank et al., 1996). The current movement of alternative teacher certification reflects this belief among a few professionals. Cruickshank et al. called the struggle among professionals “a constant tug-of-war” (p. 3). Such struggle becomes apparent on university campuses.

Some academicians believe that teachers need only be well educated persons with a solid background in the academic subject areas that they will teach, whereas teacher educators believe that in addition to the above, teachers should possess a body of knowledge related to teaching and learning to enhance their performance and students’ achievement. Such arguments among the experts have resulted in a variety of reform proposals for teacher preparation (i.e., Teach for America, A Harvard President’s Curriculum, the TEAM project, Teacher Corps, etc.). In recent years, the debates have shifted to emphasize the relationship between teacher education and teacher effectiveness, which has led to other arguments involving teacher certification, effectiveness, and teacher preparation (Darling-Hammond et al., 2005).

Although one group of academicians argues in favor of reducing the requirements for the professional education courses of education majors, another much smaller group of professional education faculty fight against such a development based on their belief in the importance of a knowledge base for teaching and learning. According to Cruickshank et al. (1996), such struggles also become visible in state government education agencies
and some legislatures have recently taken the position of decreasing requirements for Special and Professional Education in favor of more General Education.

Such constant arguments have resulted in changes in the curriculum to satisfy both sides. For example, in 1996, Cruickshank et al. (1996) suggested the extension of teacher preparation curricula to five or six years but reluctantly admitted that teacher preparation still remained “undergraduate activities” in some universities (p. 4).

In either case, whether it is an extended curriculum of five or six years or an undergraduate program, the curriculum for preservice teachers is likely to be comprised of three or four components (Cruickshank et al., 1996; National Association of State Directors of Teacher Education and Certification, 2002). For instance, the National Association of State Directors of Teacher Education and Certification (NASDTEC) suggests dividing the teacher education curriculum into the following three components: 1) General Education, 2) Professional Education, and 3) Teaching major or Field of specialization. However, the National Council for the Accreditation of Teacher Education (NCATE) divides the recommended teacher education curriculum into the following four components: 1) General Studies, 2) Professional / Pedagogical Studies, 3) Integrative Studies, and 4) Content Studies. NCATE splits the pedagogical components that NASDTEC called Professional Education into two components. In the following section, the basic three components of the teacher education curriculum will be discussed in detail.

**General Education**

The term *General Education* was first introduced by the Harvard Committee on General Education in 1945 (Cruickshank et al. 1996; Cruickshank, 1985; Mansfield &
Kenan, 2004). At that time, the committee advocated a curriculum to prepare an individual to be a free person and citizen. It consisted of the following areas of study: a) natural sciences, b) social sciences, and c) humanities (Cruickshank et al., 1996; Mansfield & Kenan, 2004). Specifically, the natural sciences were studies that contribute to understanding of the relationship between the physical environment and human beings. The social sciences were studies to develop understanding of the relationship between the social environment and human beings, and the humanities involved studies to promote understanding of the evolution of human beings and their ways of thinking. According to Cruickshank et al., the current curricula at many universities seem still to be based on these three basic components. However, the courses that are included in these components have a tendency to be taught with a narrowly professional or technical purpose in mind, that is, to be designed to prepare professionals such as historians, mathematicians, and physicists (Silberman, 1970).

General Education requirements at most universities are requirements for a basic education and are not very specific (Cruickshank et al., 1996). Current General Education on university campuses has been hampered by several factors. Grouping such interference reveals two major factors: a) lack of interest among employers in business and industry and b) lack of interest among university faculty. Business and industry do not have strong interest in supporting such education requirements, whereas those who teach in higher education have lost interest in teaching undergraduates because they are under the pressure of a reward system based on research and publication (Cruickshank et al., 1996).
In spite of these issues, teacher educators broadly support general education for future teachers and maintain the position that teachers must be generally well educated. For example, AACTE (1985) argued that teachers will serve as role models for students, each other, and the community. NCATE and NASDTEC have also acknowledged the importance of General Education for teachers. In 1957, NCATE emphasized the importance of General Education in the following passage:

Ideally… all persons in our society should be well-educated. 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. … The committee believes… that 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. (Armstrong 1957, p.9)

Since the publication of this statement, NCATE standards for national accreditation and NASDTEC standards for state program approval have regularly acknowledged the importance of general education as an essential component of teacher education (Cruickshank et al., 1996).

Historically, the requirements for general education have changed. In 1982, NCATE standards indicated that such requirements should constitute a minimum of one-third of the total coursework. However, currently two-thirds of a program consists of courses in arts and sciences, and one-third is in professional education, including student teaching experience (Parker, 1993).
Research on General Education

In June of 1980, *Time* published an article entitled "Help! Teachers Can’t Teach!." In that article, the general public’s view on teachers was illustrated:

Quite a few teachers, estimates range to twenty percent, simply have not mastered the basic skills in reading, writing, and arithmetic that they are supposed to teach.

(p. 55)

The article in *Time* was supported by a study sponsored by the National Endowment for the Humanities (Galambos, 1985). This study compared the curricula of more than 3,283 education graduates and 2,760 arts and science graduates from 17 major universities in the South. The results revealed that teacher education graduates had a weaker General Education curriculum, less coursework in each of the major academic areas of General Education, and fewer upper-level liberal arts courses. Compared to arts and sciences students, Galambos (1985) concluded that there is a need to bring the General Education of teachers up to “college” level.

In order to assure that teachers will be well educated or at least be competent in the basics, several states are mandating teacher competency tests (i.e., the Florida Teacher Certification Examination, the PRAXIS, etc.). In addition, many states are mandating that candidates must show their competency by obtaining an adequate score on the SAT, ACT or CAT prior to being admitted in teacher education programs (Cruickshank et al., 1996; Nagata, 2003). Cruickshank et al. (1996) stated, “The public, teacher educators, and academicians agree that teachers should be well educated. However, general education, and particularly the general education of teachers, suffers from neglect” (p.10).
Professional Education

If a primary criterion for any profession is to possess a distinctive body of knowledge, then Professional Education would be “a specialized body of knowledge and skills … acquired during a prolonged period of education and training” (Schein, 1972, p.8). Such requisites obviously would differ among professions. In law, that knowledge is contained in courses on appellate practice, contracts, torts, and property. In medicine, professional knowledge and skills are gained in courses in cardiology, endocrinology, and pathophysiology. In education, such courses as tests and measurement, curriculum theory, and diagnosis of learning problems are offered. The essential common denominator of these courses is that generally they are not intended to be of particular interest or value to persons outside the profession (Cruickshank et al., 1996).

Forty years ago, Koerner (1963) made a strong negative evaluation regarding education as an academic discipline. Since then, teacher educators and professional organizations have attempted to improve the field by generating “a knowledge base to undergird the preparation of teachers” (Cruickshank et al., 1996, p. 15). Such a knowledge base has been integrated into the teacher preparation curricula (AACTE, 1991). However, there are several obstacles that prevent teaching from having true professional status.

The major obstacle is the lack of consensus among educators regarding what “the specialized body of knowledge and skills for effective teaching” is (Cruickshank et al., 1996, p. 15). Armstrong (1957) stated that the lack of a curriculum pattern in teacher education is an indication of a lack of systematic thought among the faculty on what
should be included in such a program. This is likely to result in additional issues such as
a) gaps between the professional and academic education of students,
b) overlaps in course content, c) difficulties for students going through the program, and
d) complexities in evaluating the program (Armstrong, 1957).

The second obstacle is the perception among the public and the profession. In
general, teacher education is perceived as an undergraduate activity, whereas preparation
for law and the medical professions requires a prolonged period of education at the
graduate level. Although several related proposals have been made (i.e., Carnegie
Forum, 1986; Holmes Group, 1986) and some institutions have started to extend
preservice teacher education programs (e.g., the Ohio State University), such proposals
and programs have experienced issues and difficulties in their extended programs. Some
of them are associated with a lack of consensus among the professionals and such beliefs
among the public and educators as the idea that the prolonged education of teachers will
not guarantee teachers’ economic benefits and the historical separation of inservice and
preservice education (Cruickshank et al., 1996).

The Professional capability necessary to become a teacher is believed be nurtured
through the pursuit of professional and pedagogical knowledge (NCATE, 1995).
NCATE (2002) defines professional knowledge as "the historical, economic,
sociological, philosophical, and psychological understandings of schooling and education
…[including] knowledge about learning, diversity, technology, professional ethics, legal
and policy issues, pedagogy, and the roles and responsibilities of the profession of
teaching" (p.56). NCATE (2002) also defines pedagogical knowledge as "the general
concepts, theories, and research about effective teaching, regardless of content areas"
One additional type of knowledge appears to be required to current teachers to be a capable professionals in the field. NCATE (2002) requires teacher education institutions seeking their accreditation to demonstrate that their prospective teachers have attained knowledge, skills, and dispositions in content, pedagogical, and professional areas and NCATE considers this necessary to assist all students to learn (NCATE, 2002). The third type of knowledge required for the teacher is explained as the interaction between the subject matter and effective teaching strategies in order to assist students to learn the content. It is called pedagogical content knowledge (NCATE, 2002).

Current NCATE standards of the 2002 edition specify goals in relation to the three knowledge areas that all teacher candidates are expected to attain. For pedagogical content knowledge, NCATE (2002) expects, prospective teachers: a) to reflect thoroughly their understanding in pedagogical content knowledge; b) to understand the subject matter that they will teach in-depth, c) to be able to explain the content to students in challenging, yet clear and compelling ways, and d) to utilize technology appropriately. The NCATE goals for professional and pedagogical knowledge that prospective teachers can: a) reflect a thorough understanding of professional and pedagogical knowledge and skills, b) develop a meaningful learning environment for all students to facilitate their learning, c) reflect on their own practice, and d) adjust their instruction as necessary to encourage their students to learn, e) understand how students learn and know how to make ideas accessible to the students, and f) attain better understanding of school, family, and community by connecting teaching concepts to students' background experiences and apply instructional ideas to real-world problems.
It seems that, in the content of the NCATE standards of the 2002 edition, the terms, *foundations of education* or *foundational studies* disappeared. In 1996, such terms were synonymous with Professional study, and defined as “the historical, economic, sociological, philosophical, and psychological foundations of education” (Cruickshank et al., 1996, p. 17). This definition of *foundational studies* is very similar to the one that NCATE (2002) has provided for Professional knowledge. Courses in the *foundation of education* included introduction to education, philosophy of education, history of education, educational psychology, educational sociology, educational anthropology, politics of education, economics of education, comparative education, multicultural education, aesthetic education, and moral or ethical education (Cruickshank et al., 1996). The *foundation of education* courses would, the NCATE standards (1995) stated, enhance students’ acquisition and application of knowledge in the following areas: the social, historical, and philosophical foundations of education, including an understanding of the moral, social, and political dimensions of classrooms, teaching, and schools; the impact of technological and societal changes on schools, theories of human development and learning; inquiry and research; school law and educational policy; professional ethics; and the responsibilities, structure, and activities of the profession. Similarly, the NASDTEC standards for state approval of teacher education stated:

The beginning teacher shall have completed a program that provides for the development of insights into child and adolescent psychology; the teaching-learning process; the social interactive process in the classroom, school and community … (and) the broader problems of the profession as they relate to society and the function of the schools…. The program shall require study of the
leaders, ideas and movements underlying the development and organization of education in the U.S. (NASDTEC, 1989, pp. 12-13)

There has been disagreement as to whether foundational studies should be included in the professional education components. Two major reports which shocked teacher education, one from the Holmes Group (1986) and the other from the Carnegie Forum on Education and the Economy (1986), ignored the role of such studies in teacher education (Borman, 1990; Cruickshank et al., 1996). Conant (1963) also argued that such study is not necessary if “the (G)eneral (E)ducation of future teachers is well arranged” (p. 123) and stated, “Helpful philosophical, political and historical insights will be supplied by professors of philosophy, political science and history” (Conant, 1963, p. 131). Conant is an advocate of the idea that teachers should study philosophy from a real philosopher and additional courses in the philosophy of education might be desirable but not essential for professional teacher education (Cruickshank et al., 1996).

However, other professionals argued that Conant's (1963) idea is not practical. For instance, the Council of Learned Societies in Education (1986) stated that foundational studies should be “broadly conceived” and “derive character and fundamental theories from a number of academic disciplines, combinations of disciplines, and area studies: history, philosophy, sociology, anthropology, religion, political science, economics, psychology, comparative and international education, educational studies, and educational policy studies” (p. 3). Broudy (1963) argued strongly against Conant’s recommendation for the separation of foundational studies from professional education components. He stated:
Even the student who has solid work in philosophy, history, psychology and sociology faces formidable obstacles in determining what in those disciplines is relevant to problems of the curriculum (and so forth). The professional educator confronted by class after class of students who cannot overcome these obstacles, understandably might do one or two things. He might approach the department of history, philosophy, sociology and psychology with a plea that they design courses that bear more or less directly on his problems or he might try to devise courses of this kind himself. Very often it is the futility of the first approach that makes the second alternative unavoidable. (p. 50)

The second component of professional education suggested by NCATE (1995) was pedagogical studies, and that is also encouraged by current NCATE standards (2002). Professional Education consists of the following knowledge: a) professional wisdom of teachers gained through classroom experiences, b) knowledge gained through theories from the social and behavioral sciences, c) knowledge generated through university teacher education programs, and d) knowledge derived from the study of K-12 teaching (Cruickshank et al., 1996).

Cruickshank et al. (1996) stated: “Historically, professional wisdom has dominated the content of this curriculum component and frequently has been inseparable from advocacy and commitment” (p. 22). There are two types of knowledge that can assist teacher educators to teach pedagogical studies courses: a) craft knowledge and b) clinical knowledge. According to Cruickshank et al., craft knowledge is the knowledge derived from personal knowledge and the experiences of teachers, and clinical knowledge
is the knowledge gained through the study of teaching and learning in natural classroom settings.

When teacher educators make decisions about the general pedagogical curriculum or specific teaching and learning theory, they are required to use professional wisdom, which is derived from their own experience as a former classroom teacher (Cruickshank et al., 1996). In addition, the efforts to generate competency-based teacher education as well as the so-called generic teaching competencies have also relied heavily on craft knowledge, although other types of knowledge from the undergirding disciplines of education such as psychology as well as from or within teacher education program units are important contributors (Cruickshank et al., 1996).

The content of teaching and learning theory courses could be derived from clinical knowledge. Smith (1983) illustrates this accumulated body of knowledge in the following statement:

There is just as much intellectual challenge in mastering for example, the concept of “praise,” the various ways and conditions of using it, and learning to perform in the classroom according to the rules governing the use of praise as there is in the mastery of a particular concept or principle of philosophy or psychology. (p. 7-8)

It has been suggested that the role of academicians in teacher education programs, especially that of psychologists and philosophers, is to provide prospective teachers ways to understand the accumulated clinical knowledge (Cruickshank et al., 1996). Psychologists and philosophers might enable prospective teachers to understand how and why the acts of teachers have such a strong impact on classroom outcomes. Such a component of teacher education is often referred as general and special methods.
Cruickshank et al. define general methods as those providing pedagogy – the art and science of teaching, and special methods as those intended to address differences in teaching different grade levels or content specialties, and often labeled as The Teaching of Art, Reading in the Elementary School, Elementary Social Studies Methods, or Teaching Mathematics for Elementary / Secondary Students, for example.

There is debate among experts in teacher education regarding such general and special methods courses (i.e., Conant, 1963; Cruickshank et al., 1996; Edmundson, 1990). Although many academicians (e.g., Conant) and some of the general public believe that these courses are unnecessary, duplicative, and lacking intellectual content, the teacher educators defend such courses, saying that they “provide the most practical preparation for … teaching” (Gutek, 1970, p. 140). Present teacher educators may well support this view because experts generally agree on the existence of such a body of knowledge (i.e., Cruickshank, 1990; Gardner, 1989; Imig, 1996; NCATE, 2002; Shulman, 1987).

The NEA report Excellence in Our Schools specified that teachers must be prepared to perform the following three critical functions: a) to facilitate learning and to know the unique characteristics of students, b) to manage and organize the classroom to stimulate learning and foster discipline, and c) to make professional decisions (Cruickshank et al., 1996). However, it seems that teachers sometimes fail in these tasks, perhaps because:

they have not been trained calmly to analyze situations against a firm background of relevant theory…. If the teacher is incapable of understanding classroom
situations, the actions he takes will often increase his difficulties. (Smith, Cohen, & Pearl, 1969, pp. 28-29)

If this assertion of Smith, Cohen, and Pearl is correct, it is the duty of teacher preparation programs to provide opportunities for preservice teachers to reflect on significant teaching situations and problems. In addition, it is also the duty of the programs to assist preservice teachers in analyzing and understanding the situations and resolving problems based on related theories (Cruickshank et al., 1996; NCATE, 2002).

Integrative Studies was the fourth component of the teacher preparation program curriculum suggested by NCATE (1995); it is often included in the professional education component. However, in the current NCATE standards (2002), the term *Integrative Studies* seemed to have disappeared and has been replaced by *Field Experiences and Clinical Practice*. According to NCATE (2002), collaboration, accountability, and an educational environment are the three characteristics of *Field Experiences and Clinical Practice*. NCATE expects field experiences be a variety of early and ongoing school-based opportunities for prospective teachers to conduct observation, assistance, tutorials, instruction and/or research. Such experiences/studies can occur on- and off-campus, in such environment as schools, community centers, or homeless shelters. NCATE also expects clinical practice, including student teaching and internships, to extend opportunities for teacher candidates to experience full immersion into the school community and practice professional roles. In such practices, the candidates are expected to gain experience in the use of information technology and to engage in other professional roles to support teaching and learning (NCATE, 2002).
In order to create such a learning environment for prospective teachers, teacher education programs and K-12 schools are expected to collaborate in designing and implementing such experiences and practices. They are also expected to assume shared responsibility for the learning experiences of teacher candidates. NCATE (2002) states five accountabilities for clinical practice:

1) The application of both entry and exit requirements for candidates;
2) Candidates' demonstration of content, pedagogical, and professional knowledge aligned with standards;
3) Candidates' demonstration of proficiencies in early field experiences;
4) Candidates' application of the skills, knowledge, and dispositions defined by the unit, including the capacity to have a positive effect on P-12 student learning;
5) Candidates' demonstration of skills for working with colleagues, parents, families, and communities. (p. 28)

To fulfill these five responsibilities of clinical practice, teacher preparation programs and their partner schools must utilize diverse assessment approaches in evaluating teacher candidates (NCATE, 2002).

Previously, the term clinical experience was used to describe similar experiences, and such experiences included additional expectations for prospective teachers such as analysis and treatment of learners as physicians diagnose and prescribe to patients (Cruickshank et al., 1996). However, in practice, many of the experiences fall short. For example, during student teaching, student teachers are often not perceived as “students of teaching,” which involves discovering, testing, reflecting, and modifying. Rather, they are seen as “learning to cook in someone else’s kitchen, or modeling the ‘master’”
(Cruickshank et al., 1996, pp. 29-30). Although such experiences are expected to provide an opportunity so that prospective teachers can practice instructional decision making and reflective instruction, the emphasis during the practicum “often shifts toward procedural concerns and routine tasks” (p. 31, Moore, 2003; Fuller, 1969; McBe, 1998) and moves away from “teaching as an inquiry-oriented practice” (Moore, 2003, p. 31; Cochran-Smith & Lytle, 1993). The literature confirms that “although preservice teachers learn a great many strategies and methods for teaching, often they do not learn how to discover in the specific situations occurring in everyday teaching, which methods and strategies to use” (Korthagen & Kessels, 1999, p.7; Moore, 2003).

The NCATE standards (1995, 2002) recommend field experiences which provide prospective teachers opportunities such as: a) relating principles and theories from the conceptual framework(s) to actual practice in classrooms and schools; b) creating meaningful learning experiences for all students; and c) studying and practicing in a variety of communities, with students of different ages and with culturally diverse and exceptional populations.

Prospective teachers have been spending a large and growing proportion of their teacher preparation curriculum in a field setting (Metcalf & Kahlich, 1996; McIntyre, 1983). For example, Metcalf and Kahlich (1996) reported about a 50% growth in the field-based proportion of experiences from 1968 to 1983 in the typical teacher education programs. In a recent study, about half of the survey respondent institutions reported that the increase in student teaching or clinical experience was the most significant change that they had made (Hawley, Austin, & Goldman, 1988; Metcalf & Kahlich, 1996).
Research on Professional Education

No one seems to disagree that teachers need a professional education to understand how to educate others. However, as Silberman (1970) states, “The question is not whether teachers should receive special preparation for teaching, but what kind of preparation they should receive” (p. 413).

From his study of 77 institutions in 22 states on teacher education curricula, Conant reported in 1963 that there were only a few common curriculum components across the institutions, such as educational psychology, at least one methods course, and student teaching. Conant also found a slight variance for semester-hours of professional course requirements between elementary education majors (26 semester-hours out of 59) and secondary education majors (17 out of 30). Sherwin (1974) reports a similar result regarding the preferences of educational psychology in her study of 719 institutions. She found that the professional curriculum components were divided into two categories: a) psychological and social foundations and b) curriculum and instruction. In the psychological and social foundations area, the prospective teachers were most often required to take educational psychology and took approximately 26 to 35 semester-hours of courses (Sherwin, 1974).

Practicum or student teaching experiences are recognized as the most crucial part of teacher preparation (Ricardson-Koehler, 1988; Yee, 1969). However, such experiences are also reportedly associated with difficulties for student teachers (Caruso, 1977; Enz, Freeman, & Wallin, 1996; Piland & Anglin, 1993; Yee, 1969). Researchers found that such difficulties are often associated with the complex relationships among the triad members involved in student teaching experiences: student teachers, cooperating
teachers, and university supervisors (Enz, Freeman, & Wallin, 1996; Yee, 1969).
Although many studies since the 1960s have attempted to examine the influences of cooperating teachers on the student teachers during their student teaching experiences, the results are still inconclusive (Metcalf, 1991).

**Content / Subject Matter Education**

Teachers need to know the subjects that they will teach in addition to possessing general knowledge – knowledge concerning how to be a free man or woman and a citizen (Cruickshank et al., 1996). However, knowing his or her subject will not make an individual a successful teacher (Evertson, Hawley, & Zlotnik, 1985; Cruickshank, Bainer, Metcalf, 2003, 2006; Darling-Hammond et al., 2005).

Obtaining knowledge of the subject to be taught and possessing competency in teaching it are two different requirements (Cruickshank et al., 1996; Feiman-Nemser, 1990). Freiman-Nemser (1990) stated that teachers require not only content knowledge but also a special blend of content and pedagogical knowledge. Shulman (1987) called this pedagogical content knowledge and so did NCATE (2002).

Some academic faculty members assume that when education students gain knowledge of a subject, they automatically gain the ability to excite others about the value of the discipline. Further, some faculty members assume that such subject matter or content knowledge is sufficient to prepare teachers (Cruickshank, et al., 1996; Howsam, Corrigan, Denemark, & Nash, 1976). However, this is not quite accurate. Content knowledge that teachers possess will affect both what they teach and how they teach (Cruickshank, et al., 2003; Grossman, 1995), but there seems to be more required.
Currently, education majors are most likely to take content education courses with students majoring in other fields. For example, prospective science teachers in today’s higher education take biology and physics classes with students from a variety of majors. In such a situation, it will be difficult for prospective teachers to gain sufficient content and pedagogical knowledge together. Therefore, prospective teachers in today’s multipurpose universities need to “synthesize and integrate content knowledge obtained from academic faculty with pedagogical knowledge obtained from teacher educators” (Cruickshank et al., 1996, p.12).

Broudy (1972) contended that, in addition to content knowledge and pedagogical knowledge, “teachers must possess knowledge to teach with” (Cruickshank et al., 1996, p.12). Teachers need to know the relationship between the subject areas that they teach and other subject areas that their students will study. Such knowledge will assist teachers to create more interesting and enthusiastic lessons and to show students how the subject knowledge is developed and related to other areas (Cruickshank et al., 2003, 2006). For example, when a history teacher is teaching the history of civil rights for African Americans, it would be helpful to have additional knowledge of the literature, music, and art in the period being discussed.

Content or subject matter knowledge seems to be an endlessly growing body of knowledge; however, there has been an attempt to limit the knowledge to which teachers need to be exposed. Cruickshank et al. (1996) proposed a list of the queries that might be used to select such knowledge:

a) Is this the content that is taught in K-12 schools?
b) Is this the content that will give the curriculum taught in the schools extended or enriched meaning?

c) Is this the content that will help the preservice teacher understand and be able to communicate the discipline’s attributes and ways of knowing? (p. 12-13)

There are several issues concerning teaching content or subject matter knowledge for prospective teachers. The two major issues are: a) prospective teachers are not receiving the necessary content and pedagogical content knowledge; and b) not all academic faculty who are teaching such content or subject areas are sensitive to the needs of prospective teachers (Crucikshank et al., 1996). Teachers need more than general knowledge of subject areas in order to teach. However, unfortunately, they are not receiving what they need in order to teach, for example, content knowledge, pedagogical content knowledge, the knowledge to teach with, etc. They have to blend the knowledge that they have received from multiple faculty members in the two foundations, academic content areas and teacher education.

It has been reported that one of the reasons for such ignorance of prospective teachers' needs is that the faculty members' interest is focused more on research and instruction of graduate students. One of the major reasons for such faculty members' interests in academia, which has been frequently pointed out, is the current university reward system which heavily emphasizes research and publication over teaching. Teachers need more sensitive education.

Cruickshank et al. (1996) raised the following suggestions for making the content or subject matter education in teacher preparation better: a) create the content courses to
serve as education students' professional courses rather than placing the students in
courses intended for General Education or as prerequisites for academic graduate study,
b) define more clearly what should constitute the content study in each specialty area, and
c) ensure that the academicians teaching content are in contact with schools, teachers, and
teacher educators.

Research on Content / Subject Matter Education

In June 2005, a pamphlet from the American Educational Research Association
(AERA) introduced a forthcoming report, to be published as a book, Studying Teacher
Education by Cochran-Smith. The book synthesizes and assesses the research on teacher
education and makes recommendations for a new research agenda for teacher education.
In its publication, AERA summarized findings from the report. One of them is: "More
teachers than ever before major in academic subjects, such as English or biology, rather
than in education, a response to changes over the last two decades to state and
institutional subject-area requirements for teachers" (AERA, 2005, p. 1). Finally, the
field has started to respond to the public with some promising results.

Over a quarter century ago, the article "Help! Teachers Can’t Teach!" led the
criticism of teachers regarding their ability to teach and perform basic reading, writing,
and mathematics. The above study by Cochran-Smith revealed that after 25 years,
prospective teachers who have completed college education in secondary education
teacher education programs have comparable scores to other college graduates on the
Scholastic Aptitude Test / ACT test (AERA, 2005). Today, graduates from the Colleges
and Schools of Education of secondary education program have comparable subject
matter knowledge.
In a recent study, Darling-Hammond et al. (2005) reported the importance of subject matter content knowledge accompanied by other knowledge and skills such as how to teach content to diverse learners, to manage a classroom, to design and implement instruction and to work effectively with students, parents and other professionals. Through their research on traditionally certified teachers and Teach for America recruits (TFA recruits), alternatively certified teachers recruited from selective universities, the researchers learned that the certified teachers with extensive preparation at the teacher education programs produced better outcomes in student achievement in both reading and mathematics than uncertified teachers, including TFA recruits. When TFA recruits were certified through teacher education programs, the certified TFA recruits appeared to be more effective than other certified teachers. Generally, TFA recruits were recruited from selective universities which are known to be strong in liberal arts education. This study proved that subject content knowledge is important; however, additional knowledge and skills are necessary to produce higher students' outcomes.

**Background of Special Education**

We must recognize our responsibility to provide education for all children which meets their unique needs. The denial of the right to education and to equal opportunity within this nation for handicapped children – whether it be outright exclusion from school, the failure to provide an education which meets the needs of a single handicapped child, or the refusal to recognize the handicapped child’s right to grow – is a travesty of justice and a denial of equal protection under the law. (Senator Harrison Williams, principle author of the Education for All Handicapped Children Act, *Congressional Record*, 1974, p. 15272)
The history of public education for exceptional children in the United States dates from the 1830s, when free public education was established at the beginning of the normal school movement (Culatta & Tompkins, 1998; Wynne & Conner, 1979). However, by the early 1900s, there were only a few public schools for students with disabilities who did not fit into the curricula then available, except for institutional programs for students with sensory impairment and mental retardation (Culatta & Tompkins, 1998; Wynne & Conner, 1979).

Special education was originally supported by the U.S. Office of Education, part of the former Department of Health, Education, and Welfare, which later became the Bureau of Education for the Handicapped (BEH) in the Department of Health, Education, and Welfare. Currently the BEH is called the Office of Special Education and Rehabilitation Services, and it is part of the U.S. Department of Education (Culatta & Tompkins, 1998). Outside the bureaucracy, there was an attempt in special education to reevaluate the role of self-contained classroom programs and to support new programs, such as those “focusing on preschool intervention, guaranteeing the legal rights of exceptional children, mainstreaming, resource room use, and current attempt(s) at full inclusion of exceptional children into the regular classroom“ (Culatta & Tompkins, 1998, p. 5).

According to Culatta and Tompkins (1998), special education has been experiencing a critical turning point since 1975. Due to the enactment of federal laws referred to as the Bill of Rights for the Handicapped, currently mandated activities such as creating an individualized education program (IEP) for each student with a disability and including parents as a part of the decision making team have occurred (Culatta &

Historically, prior to World War II, few federal laws authorized benefits for people with disabilities, and, generally, in U.S. history, children with disabilities were often excluded from schools (Culatta & Tompkins, 1998). However, in the 1960s, federal legislation began to support services and education for children and youth with disabilities. Since then, many state and federal laws protecting the rights of children and youth with disabilities and guaranteeing them free, appropriate, and publicly supported education have been enacted (Culatta & Tompkins, 1998).

The history of special education in public schools seems to be synonymous with the history of special education laws. In the U.S., public education is generally understood to be guaranteed by the U.S. Constitution. However, education is the business of the states, not the federal government, as stated in the Tenth Amendment of the Constitution. In the parallel structure of government (federal, state, and local) known as federalism, two principles will apply: a) shared responsibilities and power among the three branches of government, and b) the supremacy of federal constitutional and statutory law (Turnbull, 1990, 1994). The responsibility and power over the education of children with disabilities has been shared among the three governmental bodies: federal, state, and local government (Turnbull, 1990, 1994). Although traditionally, local and state school boards have had the greatest responsibility and power among the three, recently, such a balance of power seems to have shifted more to the federal government (Turnbull, 1990, 1994).
A current strong trend in educating students with disabilities is normalization in the least restrictive environment, which is supported by law. As Turnbull (1990) explained, “(n)ormalization stands for the proposition that handicapped persons should live and be treated like nonhandicapped persons as much as possible and that their differences from nonhandicapped people can be reduced by minimizing the degree to which they are treated different from nonhandicapped people” (Turnbull, 1990, p. 11). The result of such a concept is mainstreaming – the concept and practice of educating children with disabilities in an environment as nearly normal as possible (Cartwright, Cartwright, & Ward, 1989). Cartwright, Cartwright, and Ward (1989) note that “mainstreaming seeks the integration of children with learning, behavioral, and / or physical problems into regular education settings and programs unless their problems are so severe that they cannot be accommodated in regular programs” (p.10).

**Inclusion and Deafness**

Mainstreaming, inclusion, normalization, and integration – these are terms occasionally used interchangeably in educational fields. Inclusion refers to the placement of students with disabilities in the general education classroom setting with students without disabilities, which includes mainstreaming; however, the courts have tended to use the terms mainstreaming and inclusion interchangeably (Yell, 1998). The definitions used in judicial decisions on “mainstreaming” and “least restrictive environment” (LRE) have varied, even within the same state. In some school districts, the IEP team considers themselves to be required by law to mainstream all children with disabilities. In other school districts, the parents might need to fight to have their children with disabilities “included” in general education classrooms. The law represents an attempt to “take a
commonsense approach to the issue.” (Wright & Wright, 1999, p.43) Children with disabilities should be mainstreamed “to the maximum extent appropriate” and can be removed from regular classes if it is necessary for them to learn (Wright & Wright, 1999).

Paul and Ward (1996) provided an interesting analysis regarding the inclusion debate. These researchers see the debate as a "paradigmatic issue rather than a scientific one" (p. 1) and contextualized the debate with respect to two major paradigms: comparison and ethics. According to Paul and Ward, the comparison advocates would see the LRE and most appropriate placement for a student as "an individualized decision based on careful evaluation of social and academic criteria" (p. 2). These advocates would seek answers from sound research, which compares students' performances in one setting with those in other settings by statistically matching sample groups. Paul and Ward stated that these advocates would argue, as a result, that separate education is not only equal to integrated education but also might be better education in some cases.

Another paradigm described by Paul and Ward (1996) was the ethical paradigm. The advocates of this view primarily see inclusion as an ethical issue, and think it is important to ensure the success of all students, including students with special needs, in the general education environment. These advocates would argue that all individuals should be treated with dignity and possess a moral right to be included in the mainstream of culture, general education (Paul & Ward, 1996). In essence, Paul and Ward argued that much of the inclusion debate is based on different paradigmatic views that individuals possess.
There has been noticeable progress in the inclusion of exceptional children in
general education classes (Afzali-Nomani, 1995; Bunch, 1994). Since the Education for
94-142), introduced the concept of educating students with disabilities in the least
restrictive environment, there has been an observable movement to include children with
disabilities in general education classrooms (Afzali-Nomani, 1995; Bunch, 1994;
Sindelar & Kilgore, 1995). Research studies have reported that such inclusive practices
facilitate both academic and social learning among all students (Gearheart, Weishahn, &

Full inclusion was supported by the argument that all students must be provided
the opportunity to be enrolled with age-appropriate peers in the local school where their
brothers and sisters also attend (Bunch, 1994). Inclusion requires that students with and
without disabilities have the opportunity to participate in appropriate educational
programs that are challenging but geared to their capabilities and unique needs by the
provision of providing any support and assistance that they and /or their teachers may
need in order for them to be successful in the mainstream (Bunch, 1994; Stainback &
Stainback, 1988). However, full inclusion does not suggest that any student with special
needs, specifically, any student with disabilities, should be enrolled in the general
education classroom unless an IEP designed to address the specific learning needs and
styles of the student, and supplemental aids and services are available when needed.
(Bunch, 1994). Bunch (1994) listed seven fundamental characteristics of full inclusion:

\(^5\) The Education for All Handicapped Children Act, 20 U.S.C. § 1400, et seq. (P.L. 94-142) was originally
authorized in 1975, reauthorized and renamed in 1990 the Individuals with Disabilities Education Act
(IDEA), and reauthorized in 1997.
1) education in general education classrooms with all other children in the community; 
2) valuing of individual differences; 3) recognition of the appropriateness of a diverse 
community within the school system; 4) seeing all children as children and not as labels; 
5) understanding the capacity of general education teachers to take responsibility for the 
education of all children; 6) recognition of the need for appropriate support systems to 
facilitate the learning of all children in a classroom; and 7) equal partnership of parents, 
and children when possible, with educators in the educational decision-making process. 

The basic concept of full inclusion is a rejection of the idea that there are two 
separate groups of learners, regular (or general) and disabled (special) (Bunch, 1994). 

Currently, 46.0% of the students who are deaf or hard of hearing have been placed 
in general education settings, and 63.0% have been integrated with hearing students for 
academic instruction at least one hour a week (Gallaudet Research Institute, 2005). The 
inclusion of deaf students in regular local schools and classes is not an issue, since 
everyone supports inclusion as one of the alternatives for the education of deaf students, 
if it is accompanied by appropriate supplementary aids and services (Corson & Stuckless, 
1994). Rather, Corson and Stuckless (1994) report concerns in the interpretation of 
inclusion, specifically of full inclusion or total inclusion, which implies that all deaf 
students should be educated in general education classes with their hearing peers. This 
extreme position is highly controversial. 

There are several arguments against the inclusion of deaf or hard of hearing 
students. First, among the deaf, there is a belief that deafness is not a disability but a 
difference (Afzali-Namani, 1995). Inclusion is seen as insensitive to the differences and 
needs of the deaf culture (Afzali-Nomani, 1995; Salem & Fell, 1988).
The second consideration is the effect on hearing students (Afzali-Nomani, 1995). Without appropriate supplementary aids and services for students who are deaf or hard of hearing, the extra attention required by these students may cause difficulties for teachers in promoting learning among the hearing students (Afzali-Nomani, 1995). In addition, *forced integration* may not lead to desirable results for deaf students. In the case of a minority population being forced to integrate into the majority, the situation can frequently lead to the isolation and stigmatization of the minority and cause the development of negative attitudes and habits among the majority toward the minority (Heward & Orlansky, 1989).

Studies on the validity of the arguments regarding inclusion of students who are deaf or hard of hearing are reported to be inconclusive (Afzali-Nomani, 1995). In education of deaf students, the IDEA requires education with hearing students to the maximum extent appropriate. However, if the education of deaf students in the general classroom with the use of supplementary aids and services (i.e., interpreters, hearing aids, etc.) cannot be achieved satisfactorily, other alternatives can be considered (20 U.S.C. §1412 (5) (A)).

**Relationship between Special Education and General Education**

The current emphasis on the inclusion of students with disabilities in regular education classrooms seems to require much more collaboration among teachers in general education and special education than ever before (Johnson & Pugach, 1996). As changes occurred in service delivery and family-professional relationships, collaborative efforts between special and general education teachers and teacher educators became an issue. This study focused on aspects of such an issue in the survey.
Issues in Teacher Education in Special Education

The historical growth of teacher preparation in special education took the same path as that of general education. However, special education seemed to have developed issues and concerns slightly different from those in general education. Experts have emphasized the following issues and concerns in developing models of teacher preparation programs in special education: a) the critical shortage of teachers, b) certification issues, c) service delivery, and d) teacher education curricula (Reynolds, 1990; Sindelar & Kilgore, 1995; Sindelar & Marks, 1993).

Critical Teacher Shortage

"One of the most pressing concerns surrounding special education is to ensure there are highly qualified teachers for every student" (Bouck, 2005, p. 125), and this concern has been intensified by the recent No Child Left Behind (NCLB) federal legislation (Bouck, 2005; Branstad et al., 2002; Steffan, 2004; Goldstein, 2004; NCLB, 2002). There is growing agreement among teacher educators and researchers that "whether in special or general education, …the single most important influence in education is well-prepared, caring, and qualified adults" (O'Shea, Hammitte, Mainzer, & Crutchfield, 2000, p. 72; Bouck, 2005). What, then, makes teachers "highly qualified teachers?" The NCLB federal legislation defines "highly qualified teachers" as those a) holding a Bachelor's degree, b) demonstrating mastery of subject content knowledge by passing tests in reading, writing, mathematics, and other areas of the curriculum that they will be teaching, and c) holding full state certification (Cochran-Smith, 2003; Paulsen,
The NCLB legislation requires that all teachers be highly qualified, that is, that they fulfill at least the above three requirements by 2005-2006.

The critical shortage of teachers is reported to be one of the developing issues in teacher education (Hussar, 1999; McLeskey, Tyler, & Flippin, 2003; Sindelar & Marks, 1993; Steffan, 2004), along with the need for highly qualified teachers (Darling-Hammond, 2005; Steffan, 2004). There is expected to be a strong demand for new teachers in the United States during the next ten years (Hussar, 1999). Hussar (1999) predicted that by 2008-09, there will be a demand for approximately 1.7 million to 2.7 million new teachers in public schools. Hussar believes that those new teachers will be needed for two major reasons: a) to replace those who retire or otherwise leave the profession and b) because of the growing enrollments of students with special needs. A 1993 study by the U.S. Department of Commerce revealed that the median age of current school teachers is older than that for any other professional group in the United States: 44 for school teachers versus 38 for all other professionals (Hussar, 1999).

In special education, in 1988-89, 27,836 teachers were reportedly needed in the 50 states, the District of Columbia, and Puerto Rico in order to fill vacancies and replace un-certified teachers (U.S. Department of Education, 1991). However, for the same year, it has been reported that a total of 15,543 graduates from higher education institutions received either Bachelor’s or Master’s degrees in special education (National Center for Education Statistics, 1991). New graduates filled only 55.2% of the demand for teachers that year, and such a shortage in fulfilling the demand for special education teachers was not unique in that year; 59.4% of the demand was filled by recent graduates in 1986-87, and 57.1% in 1987-88 (Sindelar & Marks, 1993).
More recent study reported that the shortage of special education teachers becomes more critical. The Council for Exceptional Children predicted in 2000 that America would need over 200,000 special education teachers to fill open positions by 2005 (Kozleski, Mainzer, Deshler, Coleman, & Rodriguez-Walling, 2000) and the Bureau of Labor Statistics (1999) as cited in McLeskey, Tyler, & Flippin (2003), forecasted that between 1998 and 2008, there would be a need for over 135,000 special education teachers. The 22nd Annual Report to Congress projected the need for approximately 80,000 more special education teachers by 2010 (U.S. Department of Education, 2003). In 2000-2001, 47,532 individuals (about 11.4% of all teachers) taught in special education classrooms without appropriate certification in special education (U.S. Department of Education, 2003). Based on the data from 1993-1994 School and Staffing Survey, approximately 40% of beginning teachers were recent graduates of teacher education programs (Boe, Cook, Barkanic, & Leow, 1999; McLeskey, Tyler, & Flippin, 2003). Even considering the fact that the recent growth in number of graduates from the teacher education programs (21% increase from 1993 to 1998) (NCES, 2001), this will not fully fill the opening positions in special education every year.

Given the critical teacher shortage, teacher preparation programs seem to have moved in two separate directions: a) traditional teacher preparation at the institutions of higher education and b) alternative routes to teacher certification. Traditionally, teachers have been prepared by the institutions of higher education; however, due to the recent shortage of certified teachers in the field, the professional development departments of local school districts have begun to provide primary training for special education
teachers. This approach is called an alternative route to certification, alternative route programs, or alternative certification (Gaynore & Little, 1997).

Certification / Licensure

Teacher certification / licensure is another major issue in teacher preparation. Experts have debated about whether teachers should hold certification or licensure, and how the re-certification processes should be conducted. Education, including teacher education, is the business of the states. According to Patton and Braithwaite (1990), “(a)lthough state teacher certification standards alone do not guarantee competent and dedicated teachers, the appropriateness and adequacy of these requirements can decrease the probability of state sanctioning of inadequate teacher training programs” (p. 123). Furthermore, Eichinger and Downing (2000) have pointed out that “(s)tate certification requirements have a tremendous influence on service delivery to students disabilities, because they directly influence teacher preparation programs” (Eichinger & Downing, 2000, p. 109).

In special education, under the influence of the current movement for inclusion of students with disabilities into regular classrooms, scholars have debated whether special education teachers should hold single or dual certification (Reynolds, 1990). Such arguments can be compared to the issue of the re-certification / certification of general education teachers in special education under the Regular Education Initiative movement in the 1980s. The mainstreaming of children with disabilities in the regular classroom environments requires general education teachers to develop competencies necessary for providing individualized instruction to all children. To meet the needs of the children,
IDEA\textsuperscript{6} has mandated implementation of the Comprehensive System of Personnel Development to provide appropriate pre- and in-service education for regular classroom teachers (Patton & Braithwaite, 1980). Because of these changes, the education, certification, and licensing of general education teachers must include special education courses and/or experiences which: a) provide some basic understanding of children with disabilities, b) develop skills in diagnostic and evaluative assessment, and c) deal with appropriate curricular design, effective teaching strategies, and instructional media for children with disabilities (Patton & Braithwaite, 1980).

Patton and Braithwaite (1980) examined the special education requirements for the initial certification and re-certification of regular classroom teachers in 50 states and the District of Columbia. They reported that, in 1980, approximately 70\% of the State Departments of Education did not require regular classroom teachers to complete courses in special education to qualify for initial certification and, furthermore, that approximately 92\% of the states did not require special education coursework for the re-certification of regular classroom teachers. In 1978, only Virginia required an applicant to have experience with exceptional children to qualify for initial teacher certification (Patton & Braithwaite, 1980). Nearly a decade later, the same researchers conducted a follow-up study. In a 1987 survey, they found that approximately 71\% of the states required special education coursework for the initial certification of regular education teachers, and that the state of California had a pending policy to add this requirement. In addition, for the re-certification of regular education teachers, 17\% of the states required

\textsuperscript{6}IDEA was originally authorized in 1975 and then entitled the Education for All Handicapped Children Act, 20 U.S.C. § 1400, \textit{et seq}. (P.L. 94-142), thereafter, reauthorized and renamed in 1990 the Individuals with Disabilities Education Act, and reauthorized in 1997.
special education coursework, and approximately 6% of the states had similar policies pending (Patton & Braithwaite, 1990).

In comparing these two studies by Patton and Braithwaite (1980, 1990), a dramatic increase can be observed in the percentile of the states requiring special education coursework for the initial certification of general education teachers in 1987, from 21% of the states in the 1978 survey to 71% in the 1987 survey. However, for the re-certification of the teachers, only limited growth is observed, from 8% in 1978 to 17% in 1987. In the 1987 survey, Patton and Braithwaite (1990) also examined where the special education coursework was located within the three major components of teacher education programs (i.e., General Education, Professional Education, and Major) as well as the reasons why the State Departments of Education had changed their requirements. About 92% of the states requiring special education coursework for initial certification of general education teachers indicated that they had placed such courses in the Professional Education area of their curricula (Patton & Braithwaite, 1990). In addition, the researchers found in both surveys that the most important factors influencing the states’ requirements were consistent. Fifty-eight percent (58%) of the states who reported such requirements in the 1987 survey responded that they were responding to the influence of P.L. 94-142 and its amendments and the pressure or influence from advocacy groups.

Another issue regarding teaching certification in special education is K-12 versus separate-level certification and preparation of teachers. It is common to offer preparation for a broad range of K-12 certification in special education (Nagata, 2001). For instance, it is assumed that a teacher of students with sensory impairments might be expected to be competent in working with the parents of a newborn child who has visual or hearing
impaired as well as with a teenager with sensory impairment. However, in contrast, in some disability categories, it is also common to separate teaching certification at the preschool level from certification in other age / grade levels because specialists for preschool children with disabilities might be poorly qualified to work at middle or high school levels for students with the same disability (Reynolds, 1990).

Reynolds (1990) suggested that higher education institutions should be actively involved in resolving such issues because the existing conditions appear to depend largely upon the local school practices, especially the practices governing the employment of specialists. For example, in some school districts, special education teachers need to take full responsibility for the curriculum development of students with disabilities, whereas in others, they are just responsible for specialized aspects of the curriculum. In addition, in small districts, specialists are more likely to have the role of consultants and to provide assistance over a wider range of school levels than those employed in large districts since the number of specialists that can be hired is limited in small districts (Reynolds, 1990). Although concerns among teacher educators about K-12 versus separate-level certification are natural, very few researchers have discussed this issue in the literature or have conducted research about it.

The alternative route to certification is another current issue related to certification / licensure. Roth and Lutz (as cited in Sindelar & Marks, 1993), defined an alternative route to certification as “a state-adopted process by which an individual may acquire a regular (standard) teaching certificate through a nontraditional certification program and which allows the individual to assume full classroom responsibility prior to completion of the education program,” and this definition seems to be widely accepted by
experts (e.g., Reynolds, 1990; Sindelar & Marks, 1993). Further, Sindelar and Marks (1993) stipulated that an alternative route to certification would “require something substantially less than the fulfillment of all certification requirements through a nontraditional program” (p. 147). They applied this definition and found that 40 states had adopted programs for alternative routes to certification. Among them, about half of the states required that participants also fulfill all regular state certification requirements (Darling-Hammond et al., 2005).7

The focus of alternative routes to certification in contemporary teacher education is emphasized in the debate about teacher certification and teacher effectiveness. This growing debate focuses on programs such as Teach for America (TFA). The TFA program recruits academically able new graduates from selective universities and provides a few weeks of training before they begin teaching. After a relatively short initial training compared to the traditional route to certification / licensure, the TFA teachers have to make a commitment to teach for two years in hard-to-staff districts such as school districts serving high percentages of low-income and minority students.

In regard to teacher effectiveness and teacher education, specifically the effectiveness of teacher education and certification, contemporary teacher educators and researchers have been engaged in a series of heated debates (Ballou & Podgursky, 2000; Darling-Hammond, 2000; Darling-Hammond & Youngs, 2002; U.S. Department of Education, 2002; Darling-Hammond et al., 2005). One example of such debate was summarized by Darling-Hammond et al. (2005):

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7 Although an equal amount of course work is required, the programs are considered as alternative because participants are allowed to teach before completing the requirements (Sindelar & Marks, 1993).
Teacher effectiveness may be as much a function of general academic ability or strong subject matter knowledge as it is related to any specialized training in how to teach (Ballou & Padgursky, 2000; Finn, 1999; U.S. Department of Education, 2002). Representing this view, the Secretary of Education argued in his 2002 report on teacher quality for the dismantling of teacher certification systems and the redefinition of teacher qualification to include little preparation for teaching (U.S. Department of Education, 2002). Stating that current teacher certification systems impose "burdensome requirements" for education coursework that make up "the bulk of current teacher certification regimes" (p.8), the report argued that certification should be redefined to emphasize higher standards for verbal ability and content knowledge and to de-emphasize education training, making student teaching and most education coursework optional. (p.2)

Another alternative route to certification in special education involves not preservice training but rather inservice training with added-on certification. Although the route appears to be similar to an emergency certificate, according to Gaynore and Little (1997), the alternative route to certification is different from traditional certification because it allows “an individual to assume full classroom responsibility prior to completion of the preparation program” (Roth & Lutz, 1986, as quoted in Sindelar & Marks, 1993, p. 147). It differs from Emergency Certification by requiring completion of a formal training program, typically including course work and some form of on-site mentoring. Emergency certification also requires course work, but leaves to the candidate the task of shopping around for courses that fulfill requirements for standard certification.
Alternative certification programs may or may not lead to a bachelor’s or master’s degree and may or may not reduce the course requirements for certification. Those leading to a bachelor’s or master’s degree typically would not reduce requirements because of institutional constraints associated with the granting of a degree. … state education agencies routinely grant waivers of course requirements for individuals working under emergency certification. (p. 284)

In much earlier research, Buck, Polloway, and Robb (1995) conducted a survey of state directors of teacher education and found that 23 states and the District of Columbia had alternative certification programs in special education. In studies in the early 1990s, only five or six states reported having such programs (Feistritzer & Chester, 1991). However, this figure differs considerably from one reported by Sinderlar and Marks (1993). Such a difference might be caused by terminology ambiguity and the complexity of alternative certification in special education, as pointed out by Gaynor and Little (1997).

The alternative route to certification was created in order to resolve two problems: 1) critical teacher shortages in secondary subject areas, particularly math and the sciences, and 2) the weaknesses of emergency certification. It was intended to attract individuals who otherwise might not enter the field of teaching (Sindelar & Marks, 1993). Because some success for the alternative route to certification has been reported in secondary education, it seems logical to assume that special education would adopt a similar route to certification.

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8 Sindelar and Marks (1993) reported that they found that at least 40 states had adopted an alternative route to certification in special education.
Teacher preparation institutions and teacher unions have expressed opposition to such programs, although organizations such as the U.S. Department of Education and the American Association of Colleges for Teacher Education have expressed their support for the alternative route to certification (Sindelar & Marks, 1993). Those who oppose these programs believe that the alternative route to certification is “a denial of the professional education knowledge base, a denigration of traditional teacher preparation, and … a weakening of the teaching profession” (Sindelar & Marks, 1993, p. 148). Sindelar and Marks (1993) pointed out two weaknesses of the alternative route to certification in applying to special education: a) the success of such programs is inconclusive and requires much careful analysis and b) a model for the alternative route to certification specifically aimed at special or elementary education is yet to be developed.

The traditional approach to teacher preparation in higher education institutions has its own issues to address. Currently, the teacher preparation programs operate in various ways. For instance, some institutions prepare teachers only at the undergraduate level, whereas others admit students at the graduate or post-baccalaureate level. Although no research has examined which approach is superior, according to the proposals of the Holmes Group (1986) to professionalize teaching, the knowledge base for teaching needs to expand beyond what is currently available in undergraduate programs (Reynolds, 1990). Reynolds (1990) identified three areas of study commonly found in undergraduate special education programs which differ slightly from the general education model: a) study of characteristics and needs of exceptional children (usually
emphasizing just one category), b) curriculum, methods, and materials for teaching in the special area selected, and c) a related practicum.

Another issue gaining attention among experts regarding certification / licensure in special education is categorical versus non-categorical certification and preparation of teachers. The National Academy of Science Panel (as cited in Heller, Holtzman, Messick, 1982) stated:

> It is the responsibility of the placement team that labels and places a child in a special program to demonstrate that any differential label used is related to a distinctive prescription for educational practices … that lead to improved outcomes. (pp. 101-102)

The history of non-categorical certification is not quite as extensive as that of categorical certification. Proposals for non-categorical certification have appeared periodically in the literature since Reynolds published his seminal paper in 1979. Currently, about half of the states issue non-categorical teaching certificates as one type of special education teaching credential, and 70% of the states responded in a survey that they would chose a non-categorical approach in the future (Chapey, Pyszkowski, & Trimarco, 1985).

There has been increasing disagreement over classifying children with mild levels of disabilities in the exceptionality categories; the category of mild disabilities is not distinctive enough to justify creating teacher preparation programs for this category (Reynolds, 1990). Under the current practice of inclusion of students with disabilities in regular education classrooms, special education teachers have greater opportunity to work with general education teachers in their classrooms. In such cases, the special education teachers work directly with students with disabilities in several different
exceptionality categories as well as with Chapter I (disadvantaged) children, children from migrant families, and others (Reynolds, 1990). Scholars disagree over such broadly coordinated programs. For instance, Reynolds, Wang, and Walberg (1987) maintained that “the needs across the various categories are not clearly distinctive and that treating them organizationally as different causes excessive disjointedness and wasteful proceduralism⁹ in the schools and in teacher preparation” (Reynolds, 1990, p. 432).

Changes in Service Delivery

Changing service delivery in special education has also been an issue in the field. In the past, most special education teachers were trained directly to teach the students with disabilities who were assigned to them or their classroom. The teachers were most likely to be prepared for their work in special schools or resource rooms (Culatta & Tompkins, 1998; Reynolds, 1990).

Currently, an increasing number of special education teachers work in more collaborative settings with their general education colleagues. They work indirectly with students through consultation with general education teachers and/or family members. Reynolds (1990) described such a relationship as triadic (the special education teacher consults with the regular classroom teacher to improve services for a child) (p. 432). In their work environment, the responsibilities that they used to carry such as those associated solely with teaching students with disabilities and/or those related to solving classroom problems may continue or be shared with the general education teacher.

Therefore, teacher preparation programs in special education need to take into

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⁹ Reynolds (1990) identified this term as referring to a “situation in which the categorizing of pupils and managing of separateness in accordance with many tracks for program eligibility, funding, and accountability become so complex that mere procedural norms tend to take over the system and limit its productivity” (p.432).
consideration to what extent the special education teacher will be prepared for indirect as well as direct work with students (Reynolds, 1990).

Collaboration

There have been extensive reports about the requirement of increasing collaborative effort between special and general education teachers. One such effort in higher education is represented by the unified teacher preparation program. There have also been reports about the challenges that unified teacher preparation programs face. Kemple et al. (1994) reported the following challenges: 1) climate, 2) processes, 3) people, 4) policies, and 5) availability of resources. As an example, in regard to the climate surrounding the Unified program, although the researchers did not find issues of turf among the faculty members, they reported some related issues that were interfering with the programs' success. One reported example was that some faculty members and other involved personnel perceived a “someone-will-lose” threat. It was further reported that such feelings were strong among the parents. For example, the parents of typically developing children thought that their children would not receive services of high quality from the teachers since someone else was taking a large proportion of the time and attention of the teachers. On the other hand, the parents of the children with special needs were also concerned that their children might not receive appropriate attention from the teachers since the teachers may not be able to provide the specific services the children needed.

Another issue surrounding collaboration in the teacher education programs may be specialization in the profession of special education. Corbett, Kilgore, and Sindelar (1998) reported that they found only 13 collaborative teacher education programs in the
literature. They argued that one of the difficulties in nurturing collaborative efforts among special and general educators was the absence of a common culture among them. Among special education teachers or teacher educators, there are at least twelve different eligibility criteria for students with special needs and deafness is one of them (U.S. Department of Education, 1997). When the students' eligibility criteria differ, the teachers of those students have been prepared in different programs in higher education. Among the 13 collaborative teacher education programs identified by Corbett, Kilgore, and Sindelar (1998), none focused on Hearing Impairment or Visual Impairment. The reports of collaboration are most likely to be between general education and Learning Disabilities or Early Childhood Special Education programs.

**Evaluation of Teacher Education Programs**

There have been a series of research studies on Teacher Education, as on students who are deaf or hard of hearing (See the following section, Research on Teacher Education). However, as in many fields other than education, little has been published on the program evaluation in teacher education (Altschuld & Kumar, 2002; Galluzzo & Craig, 1990). Researchers have suggested that current practices of program evaluation in teacher education may not meet the level of a field of inquiry (Galluzzo, 1986; Galluzzo & Craig, 1990). Altschuld and Kumar (2002) stated that this minimum report of evaluations in literature is "surprising" but suggested that this may be due to "the way labels and key terms are used in articles, papers, presentations, and other entries in the database" (p. 178). Teacher education institutions may have conducted program evaluations; however, such reports may not have had a primary emphasis on evaluation studies. This is why researchers assert that there is a lack of literature on the evaluation
of teacher preparation programs although the institutions have understood the importance of evaluations and conducted them.

The Joint Committee on Standards for Educational Evaluation (1981) defined evaluation as the “systematic investigation of the worth or merit of some object” (Galluzzo & Craig, 1990, p. 599). Worth is “the contribution that an object [or educational program] makes to its system, or its external value,” while merit is “the intrinsic value the object [or educational program] engenders” (Galluzzo & Craig, 1990, p. 599; also see Scriven, 1981). Galluzzo and Craig (1990) identify worth and merit specifically in the teacher education context:

In teacher education, the worth of a program would be the degree to which the school administrators who hire recent graduates are satisfied with the quality of the program from which the beginning teacher graduated. In this instance, merit is the degree to which the students and faculty within the program value its experiences and processes. (p. 599)

Since the 1930s, evaluators have introduced a variety of evaluation models, such as objectives-based measurement, formative-summative evaluation, goal-free evaluation, the countenance model, the decision-facilitation model, and context (non-traditional) evaluation. Among such models, one of the most widely known decision-facilitation models is the CIPP model (Galluzzo & Craig, 1990). The model was originally developed by D. L. Stufflebeam and E. G. Guba and presented by Stufflebeam, et al. in 1971. CIPP stands for "four types of evaluation: context, input, process, and product.

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10 For more detail, please refer to Galluzzo and Craig (1990).
11 For more detail, please refer to Altschuld and Kumar (2002).
evaluation" (Galluzzo & Craig, 1990, p. 601). As described by Stufflebeam et al. (1971), the fundamental principle of the CIPP model is that “the purpose of evaluation is not to prove but to improve” (p. 1). According to Galluzzo and Craig (1990), “the introduction of the CIPP Model into the evaluation literature grandly changed the definition of what program evaluation could be” (p. 601).

Galluzzo and Craig (1990) stated:

In current practice, the evaluation is a data collection process wherein the focus is on making decisions about the degree to which educational programs, projects, or materials are valuable to the participants they are intended to serve and to the system in which evaluation operates. (p. 599)

Previous attempts at evaluation of teacher education programs are “best described as site-specific, idiosyncratic models designed for particular applications at individual institutions” (Galluzzo & Craig, 1990, p. 602). In these models, program evaluation is measured by the extent to which “the training experiences produce the competencies defined as objectives of the training program” (Medley, 1977, P. 69). If the student teachers in a teacher education program or the recently graduated beginning teachers can demonstrate the “competencies” or “objectives” of a program, the program is evaluated as being effective (Galluzzo & Craig, 1990, p. 602). Such attempts have caused several difficulties in the evaluation of teacher education programs.

Galluzzo and Craig cited the perspective of Katz, Raths, Mohanty, Kurachi, and Irving (1981) regarding sampling biases and some other methodological issues found in program evaluation in Teacher Education. For example, the researchers stated that there were “sampling biases in response rates and obvious and global recommendations for
change, which, given the vague and general nature of the recommendations, would not and could not be addressed by the faculty in the program” (Galluzzo & Craig, 1990, p. 604). According to Galluzzo and Craig (1990), Adams, Craig, Hord, and Hall (1981) had a point-of-view similar to that of Katz, Raths, Mohanty, Kurachi, and Irving (1981):

Practice in teacher education program evaluation is narrowly conceived; however, Adams and his colleagues argue that, by focusing solely on follow-up studies, Katz and her colleagues present a distorted view of the variety of methods employed in program evaluation. Adams and his colleagues further argue that using review methods and standards in the Katz et al. analysis was more appropriate for education research than for program evaluation. Consequently, Adams et al. find the critique by Katz et al. to be a “straw-man” argument. Regardless of which group of writers makes the most cogent argument, there is still agreement that the lack of experimental evaluation methods limits what is known about the effectiveness of teacher education programs. (Galluzzo & Craig, 1990, p. 604)

**Purpose of Program Evaluation in Teacher Education**

The purposes of evaluation studies in teacher education are the following: (a) accountability, (b) improvement, (c) understanding, and (d) knowledge production (Galluzzo & Craig, 1990). Accountability refers to the “the degree to which an evaluation is conducted to meet external accreditation standards” (Galluzzo & Craig, 1990, p. 605). For example, NCATE (2002) includes a standard on the assessment system and unit evaluation, and states and regional accreditation associations require faculty members to collect evaluation data routinely. Further, NCATE (2002) currently
requires its candidate institutions to submit explicit explanation of their program
evaluation processes. Although Adams and Craig (1983), in their study, did not show
primary relationships between accountability and program evaluation, nearly 400
institutions have reported conducting evaluations, comparatively few evaluation reports
can be found in the literature. This raises a concern regarding accountability in relation
to the motivation of a considerable number of teacher educators in collecting evaluation
data: "The evaluation report is hardly submitted for publication, because once the
evaluation has met the accountability requirements, it has already served its purpose"
(Galluzzo & Craig, 1990, p. 605).

Improvement is the second purpose of program evaluation in teacher education.
Medley (1982) is an advocate of this view. Medley sees program evaluation as serving a
gate-keeping function to control who successfully completes a teacher education
program. Such a practice, according to Galluzzo and Craig (1990), “places the
responsibility for quality control with the teacher education faculty and not with the state
office of teacher certification. In this way, program evaluation becomes a statement from
the profession that teacher educators are confident of the qualities of their graduates” (p.
605).

The third purpose of program evaluation in teacher education is to understand the
program better through conducting evaluations. The idea behind such program
evaluation is that “the more clearly the stakeholders understand the experiences of
preservice teachers, the more likely they will operate from a set of shared perceptions and
the more capable they will be to make decisions about the continuation, modification, or
termination of the program” (Galluzzo & Craig, 1990, p. 605). The fourth purpose of
conducting a program evaluation is to contribute to the knowledge base of teacher education. Evaluation reports tend to be used only to meet accountability concerns, but not for publication in the literature. However, regardless of the difficulty of generalizing the findings from one setting to another, the methods and techniques used for such a study can be generalizable (Galluzzo & Craig, 1990). In addition, the goal of program evaluation needs to be built in in order “to develop comprehensive knowledge production effort about the relationship among a program’s contexts, inputs, processes, and products” (Galluzzo & Craig, 1990, p. 606). Although, when evaluation is designed solely for the accountability purpose, it will contribute little to the knowledge base of teacher education, when evaluation is designed to address understanding and knowledge production, it should also satisfy accountability and improvement purposes (Galluzzo & Craig, 1990). Thus, the evaluation plans that lack a long-range development plan, for example, and which fail to involve a variety of stakeholders, or a narrowly defined evaluation (i.e., product evaluations or follow-up studies) will fail to address the essential features of a total evaluation effort. The ideal evaluation for teacher education programs would require the following commitments: a) inquiring into practices, b) facilitating communication, c) improving the ways of practicing teacher education, d) advancing what is known about teacher education, and e) raising questions regarding the issues and practices to be addressed (Freeman, 1987; as cited in Galluzzo & Craig, 1990).

Issues and Problems in Program Evaluation

Program evaluation is necessary to improve teacher education programs. However, in conducting evaluations, there are limitations, issues, and problems. For example, Galluzzo and Crain (1990) pointed out underdeveloped areas of program
evaluation, which include: a) outcome notions are vague and general; b) accurate identification of evaluation audiences is difficult; c) there are not enough networks to share program-evaluation practice and data; d) there are known methodological issues; e) historically, teacher educators fail to inquire about program evaluation; and f) schools, colleges, and departments of education lack a systemic program evaluation design to utilize an essential features of program evaluation.

Program evaluation must be recognized as a social process as well as a data collection process (Galluzzo & Craig, 1990). The social context appears to play an important role when a program evaluation is conducted. For example, it determines the parameters of decisions regarding resources and the operation of the evaluation itself (Galluzzo & Craig, 1990). According to Galluzzo and Craig (1990), there are four major factors in social context which influence program evaluation: a) political bases, b) relationships, c) change, and d) values. Different groups and individuals from various positions have to relate to each other regardless of their power, influence, and authority (Banner, Doctors, & Gordon, 1975; Galluzzo & Craig, 1990). In such an atmosphere, the evaluation might become “less effective and less useful in some contexts than in others” (Galluzzo & Craig, 1990, p. 606). The interaction of various individuals in teacher education may not be ideal for program evaluation due to political reasons.

One of the key features of an evaluation is the personal and professional relationships between a program operator and an evaluator. Ideally, the program operation and evaluation should be independent, but they need to function together in order to create, operate, and refine the best program (Galluzzo & Craig, 1990).
The social context of teacher education programs changes over time. Due to this change, what is currently appropriate and acceptable might not be in the future. For example, when additional federal legislation is passed requiring additional courses or modification of course contents, the programs need to change their requirements to show evidence of meeting the standards or complying with the requirements of the new legislation (Galluzzo & Craig, 1990).

According to Galluzzo and Craig (1990), in program evaluation, values held by the various audiences of the evaluation have major power influencing form, operation, and evaluation of the programs (Wortman, 1975) as well as the interpretation of the outcomes of the evaluation (Gorry & Goodrich, 1978). However, values have two sides, positive and negative. People often have two opposing feelings about other people, objectives, and situations (Williamson, Swingle, & Sarget, 1982). In addition, values have relatively permanent cognitive structures and may impact on an individual’s behavior. Values are relatively resistant to change; therefore, they tend to determine the direction and operation of a program (Galluzzo & Craig, 1990).

There are a number of factors limiting the evaluation efforts of teacher education programs. Galluzzo and Craig (1990) identified three basic issues limiting such efforts: a) identification of criterion variables, b) identification of independent variables, and c) evaluation design.

There is limited evidence “to support the assumption that a program faculty can state the specific expectations of a program, such as teaching skills, interpersonal skills, and subject-matter competence” (Galluzzo & Craig, 1990; p. 608). Other than the outcomes specifically listed for the competency-based teacher education programs, the
program expectations are listed as a way of enlisting “measurement devices such as tests, observation instruments, attitude / belief inventories, and interview protocols that capture in general ways the process or effects of the program” (Galluzzo & Craig, 1990, p. 608). Criterion variables have the widest range: a) General, Professional, and Subject-matter knowledge, b) teaching behaviors/skills, c) attitudes and dispositions, and d) perceptions about teacher preparation. Although institutions define each of these criterion variables to meet their own needs in evaluation data, each is always accompanied by problems.

For instance, knowledge of prospective teachers is commonly identified as a general category of outcome variables determined by a teacher education program; however, it is one of the outcomes that most institutions do not measure in any systematic way (Galluzzo, 1984, as cited in Galluzzo & Craig, 1990). Major problems associated with each variable are summarized in Table 2.1.

The central issues in advancing program evaluation in teacher education relate directly to the ability of the faculty to reach consensus. Unfortunately, faculty members seem to be unable to reach consensus as to what the essential attributes of their teacher education programs are. “It is rare to find a program outlined with a knowledge base, conceptions of teaching, processes for importing the knowledge base, and appropriate assessment techniques for program evaluation” (Galluzzo & Craig, 1990, p. 610). Because of this, the development of teacher education program evaluation is impeded (Galluzzo & Craig, 1990; Raths, 1987). Likewise, it is rare for teacher educators to agree on the characteristics of competent beginning teachers (Galluzzo & Craig, 1990; Raths, 1987). However, they must "agree upon a body of knowledge or knowledge base:
<table>
<thead>
<tr>
<th>Criterion variables</th>
<th>Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge in general, professional, and</td>
<td>• Lack of systematic measurement of outcome in knowledge of preservice teachers. (Galluzzo &amp; Craig, 1990; also see Galluzzo, 1984)</td>
</tr>
<tr>
<td>subject-matter</td>
<td></td>
</tr>
<tr>
<td>Teaching behaviors/skills</td>
<td>• Slow replacement of institutional assessment in teaching skills by internships and performance assessments of beginning teachers by state departments of education (Galluzzo &amp; Craig, 1990).</td>
</tr>
<tr>
<td></td>
<td>• Sampling issues in performance assessment of teaching skills: the context in which observation takes place can influence the degree to which the teacher demonstrates the expected outcomes of the program.</td>
</tr>
<tr>
<td></td>
<td>- Elementary school teachers might have differential expectations for pupil attentiveness across content areas (Galluzzo &amp; Craig, 1990; Stodolsky, 1984).</td>
</tr>
<tr>
<td></td>
<td>- The expectation for attentiveness during mathematics might be different from that during social studies (Galluzzo &amp; Craig, 1990).</td>
</tr>
<tr>
<td>Attitudes and dispositions</td>
<td>• Measurements have been reduced to global measures and only limited insight into program effects is offered (Galluzzo &amp; Craig, 1990; Zeichner &amp; Tabachnick, 1981).</td>
</tr>
<tr>
<td></td>
<td>• There is a relationship between the significant problems of attitude measurement and the inability of faculty to agree upon a set of attitudes to be addressed, despite low and non-significant relationships between teacher performance and attitude (Borich, 1977).</td>
</tr>
<tr>
<td></td>
<td>• An instrument such as the Minnesota Teacher Attitude Inventory (Cook, Leeds, &amp; Callis, 1951, as cited in Galluzzo &amp; Craig, 1990) remains the most overused instrument in the study of program effects although it provides little information that teacher educators can use to improve their programs (Galluzzo &amp; Craig, 1990).</td>
</tr>
<tr>
<td>Perceptions of preparation --- students’</td>
<td>• Available evaluation data appears to only present “a fragmented picture regarding graduates’ perceptions” because evaluation projects seem to rush to use the survey method regardless of what they want to know (Galluzzo &amp; Craig, 1990).</td>
</tr>
<tr>
<td>perceptions obtained through mailed</td>
<td></td>
</tr>
<tr>
<td>follow-up questionnaires is the most</td>
<td></td>
</tr>
<tr>
<td>frequently used site-specific evaluation</td>
<td></td>
</tr>
<tr>
<td>study</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.1: Major problems associated with the criterion variables
skills, understandings, and dispositions they want to develop in the preservice teacher” (Galluzzo & Craig, 1990, p. 610) in order to conduct program evaluation.

Most institutions, including teacher education programs, have been committed to program evaluation insofar as it demonstrates accountability. However, “such a narrow conception of program evaluation always relegates evaluation to a reoccurring temporary system within a larger structure” (Galluzzo & Craig, 1990, p. 613). Galluzzo and Craig (1990) stated that “the best scenario is that program evaluation become a collection of small loosely coupled studies conducted by a variety of faculty members, all of which are designed to gain a clearer understanding of the contexts, inputs, processes, and outcomes of the teacher education program” (p. 613).

Accreditation and Evaluation of Programs

In May 2005, the National Academy of Education (NAE)\textsuperscript{12} released the study \textit{A good teacher in every classroom: Preparing the highly qualified teachers our children deserve}. In this study, ten policy recommendations were made. Five out of the ten were in relation to accreditation and evaluation of teacher preparation programs. The four recommendations listed below can have a significant influence on the future approach in program evaluation.

- Both traditional and alternative teacher education programs should be closely evaluated and granted accreditation only if their programs ensure that candidates master the core set of knowledge and skills … The federal government can incorporate this expectation when it authorizes accrediting organizations;

\textsuperscript{12} The National Academy of Education (NAE) was founded in 1965 and since then, has sought educational research of the highest quality which can be used in policy foundation and practice.
• States should close programs that do not meet the rigorous accreditation criteria and should also refuse to grant licenses to individuals who have not successfully completed accredited programs;

• Data-tracking systems should be created to assess programs' success in preparing candidates who enter and stay in teaching and in demonstrating good practice on performance assessments;

• Teacher education programs should evaluate their programs against the recommendations proposed here and take steps to strengthen their course work and clinical work.

(Darling-Hammond, 2005, p.70)

The National Council for Accreditation of Teacher Education (NCATE) is a national accrediting organization authorized by the U.S. Department of Education. NCATE determines which institutions (i.e., schools, colleges, and departments of education) meet national standards in preparing teachers and other school specialists (NCATE, 2002). NCATE (2002) defines accreditation as "a process for assessing and enhancing academic and educational quality through voluntary peer review … [and] informs the public that an institution has a professional education unit that has met state, professional, and institutional standards of education quality " (p.52)

According to NCATE (2002), the organization render two separate accreditation decisions for initial teacher preparation, accreditation or provisional accreditation, by examining whether the units, or professional education units, meet six standards

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13 NCATE (2002) defines this as "the institution, college, school, department, or administrative body with the responsibility for managing or coordinating all programs offered for the initial and continuing
presented by NCATE. Provisional accreditation is rendered when the unit has failed to meet one or more of the standards for unit accreditation. In such a case, the unit has NCATE accredited status but within an established time period must meet the previously unmet standard(s). If an additional focused visitation is required, NCATE will visit within two years of the semester when the previous accreditation decision was made. When the unit has met all six standards in a focused visit, thereafter, an NCATE accreditation visit will be scheduled every five years. Thus, each unit should have a scheduled NCATE visitation within five to seven years if it is seeking accreditation from this body.

In order to ensure the quality of teacher preparation programs, NCATE uses reviewers from relevant professional associations in specialty areas. In the area of special education, that association is the Council for Exceptional Children (CEC). The reviewers from CEC examine the programs within the unit and report their findings. The programs need to provide evidence that their teacher candidates "know the subject matter and how to teach it effectively" (NCATE, 2002, p.42).

CEC is one of the Specialized Professional Associations identified by NCATE; it is responsible for developing standards which describe the knowledge base of special education teachers and their expected performance. Recently, the 2001 CEC performance-based standards for the preparation and licensure of special educators were approved by NCATE. The standards consist of three parts: a) field experiences and clinical practice standards, b) assessment system standards, and c) special education preparation of teachers and other school personnel regardless of where these programs are administratively housed" (p.58).
content standards. According to the current 2001 CEC standards, the programs must provide evidence that they have assessed their program with reference to all the standards and their teacher candidates performed appropriately in these assessments. The programs are required to include documentation as proof to describe their assessment system (CEC, 2001)

These are the two national organizations concerning teacher education in special education. When the teacher certification emphasizes more specific area in special education, such as deaf or hard of hearing, there is another national organization that accredits the teacher preparation programs. That is the Council on Education of the Deaf (CED). The CED is a national organization which deals with both teacher certification and evaluation of the teacher preparation programs. Since 1930, CED\(^{14}\) has been involved in voluntary evaluation and approval of teacher preparation programs. Current CED standards were approved by the executive board of the CED on June 26, 1977 and revised four times (the last revision was in July, 2002). According to CED (2003), the standards represent the knowledge base for teacher education programs, which indicates the perspectives of teacher educators, teachers, administrators, and parents regarding what components should be included in an effective teacher preparation program for the teachers of students who are deaf or hard of hearing. These standards are incorporated with three areas of CEC standards: a) the Common Core of Knowledge and Skills Essential for All Beginning Special Education Teachers, b) the Knowledge and Skills for

\(^{14}\) CED is composed of six member organizations: a) the Alexander Graham Bell Association for the Deaf, b) the Conference of Educational Administrators of Schools and Programs for the Deaf, c) the Convention of American Instructors of the Deaf, d) Association of College Educators – Deaf and Hard of Hearing, e) the National Association of the Deaf, and f) the American Society for Deaf Children.
All Beginning Special Education Teachers of Students Who Are Deaf or Hard of Hearing, and c) the Institutional and Program Requirements.

There is another important organization besides NCATE that addresses the standards and requirements for teacher education programs: the National Association of State Directors of Teacher Education and Certification (NASDTEC). The NASDTEC maintains a current list of recommended standards for teacher certification; its standards address the acceptable standards for the certification of the teacher of high quality (Dumas & Weible, 1984).

NCATE offers similar guidelines for teacher education programs, but its standards address the requirements of teacher preparation programs (Dumas & Weible, 1984). Recently, NCATE has attempted to reach agreement with forty states for cooperative approaches to teacher education program accreditation in some subject areas. For example, for the teachers of Social Studies, NCATE requires the states to submit institutional portfolios to the National Council (a NCATE member organization) for approval based on the National Council standards (Dumas, Evans, & Weible, 1997). The two sets of standards govern the teacher preparation programs at the national level.

State standards are considered to be minimum standards for the state education agencies, and those differ from the requirements established by the teacher education institutions (Dumas & Weible, 1984). Weible and Dumas (1982) mention that many institutions have lowered their expectations, especially their professional education requirements, due to the limited budgets and shrinking faculty resources in higher education. This has caused a movement away from the standards approved by NCATE and NASDTEC (Dumas & Weible, 1984).
Research on Teacher Education in Special Education

In *A Call for Change in Teacher Education*, The National Commission for Excellence in Teacher Education (1985) “call for an extended program of teacher education that would allow more time for a “more intellectually challenging and integrated program of liberal studies” (General Education) and especially time for attaining greater breadth and depth of understanding of the subject or subjects to be taught.” (Dumas, 1993, p.59)

According to Tracy, Sheehan, and McArdle (as cited in Dumas, Evans, & Weible, 1990), “at least thirty national reports and nearly 300 state task forces have called for major education reform” (p.2). These reports have produced a wave of state legislation reports issued by various commissions. Many of such reports were aimed to improve the quality of individuals who seek an initial teaching certification / licensure (Dumas, Evans, & Weible, 1990).

There have been several assertions among experts regarding teacher preparation curricula (Cruickshank, 1990, Ishler, 1984; Lanier & Little, 1986). For instance, Isher (1984) mentioned the following four major criticisms of teacher education:

a) Admission standards are so low that anyone can enroll in teacher education;

b) Education majors take too much coursework on “how to teach” and not enough coursework on “what to teach”;

c) The general education program for prospective teachers is less rigorous than that required of other majors; and

d) Anyone who gains admission to a teacher education program will undoubtedly graduate, because the academic standards are so low. (p. 121)
Lanier and Little (1986) reported the assertions of stakeholders who noted that the curricula of teacher preparation tend to consist of unstable, less intellectual, experience-based but not research-based coursework and contents that reflect instructors' personal ideologies and promote students' trial-and-error learning through field-based experiences. Lanier and Little also criticized the teacher preparation curricula as having the tendency to neglect General Education and being based on a too narrowly conceptualized recent research on teaching effectiveness.

Such critiques and assertions led policy makers to respond by incorporating new regulations to restrict access to teacher education and teaching that would further prescribe specific courses of study and ways to prepare teachers (Evertson, Hawley, & Zlotnik, 1985). Such movements often occurred without much involvement of teacher educators and resulted in their frustration (Evertson et al., 1985). Yet, the movements also assisted the teacher educators to initiate two major initiatives: a) a call for higher standards such as a requirements for a higher grade point average for admission to teacher education programs, minimum course requirements, a listing of faculty qualifications, and high-stakes tests of teacher knowledge, and b) an initiative to require more extensive prerequisite course work as well as better supervised practicum and internship experiences (Evertson et al., 1985).

Researchers have expressed their frustration regarding studies of teacher preparation curricula (Cruickshank, 1990; Evertson et al., 1985; Heywood, 1992; Koehler, 1985; Lanier & Little, 1986). Few studies have been conducted in this area, especially on how teacher education programs implement research findings to their practice and / or how programs are utilized (Heywood, 1992; Lanier & Little, 1986).
Lanier and Little (1986) declared, “Existing data do not allow clear portraits of the explicit teacher preparation curriculum to be drawn” (p.548). Koehler (1985) also mentioned her frustration regarding research limitations on the teacher preparation curriculum. Koehler found from extensive literature reviews using the ERIC from 1980 through 1984, as cited in Cruickshank (1990), that a large number of the studies were “not comparative studies but rather evaluations of one course or method using pre- and post-testing or just post-testing” (p. 110).

Most studies of teacher preparation have been conducted by utilizing surveys (Koehler, 1985), and such methods do not provide access to the qualitative aspects of teacher preparation programs (Feiman-Nemser, 1990; Heywood, 1992). Koehler expressed her frustration that “none of the studies involved long-term follow-up of the [preservice] students into classroom teaching, nor did they include descriptive research on the treatments themselves” (p. 24). Similar concerns in regard to the studies of program evaluation were expressed by Medley (1982). Cruicishank also expressed his concern about the current studies of teacher preparation as the studies “failed to take into account program validation or whether the program’s treatment effect makes a difference in preservice teachers’ behavior once they take positions in K-12 classrooms” (p. 111).

In 1978, Howey, Yarger, and Joyce conducted a survey study for 175 teacher preparation institutions to identify trends in a) enrollment, b) selection and admission policies and procedures, c) curriculum and instruction, d) research development, and e) concerns on the topics then frequently publicized (i.e., competency-based approaches and multicultural education). Howey et al. (1978) found that most of the programs prepared teachers for conventional self-contained elementary and secondary classrooms...
and those programs that prepared teachers for more specialized roles and support functions were increasing in number and size. The researchers also observed at least on the surface level, the curriculum seemed to be remarkably similar from institution to institution: on average, the institutions required 61 semester hours in General Education, 35 in Professional Education, and 18 in applied or clinical work. Further, the majority of department heads (64%) believed that coursework and clinical experiences were equally important areas of teacher education; however, there was a tendency for elementary department heads to place more emphasis on clinical experiences than secondary heads.

Two years later, Ishler and Kay (1981) surveyed 550 teacher preparation institutions to determine norms for early field experiences. They found that 99% of the total responding institutions (240 institutions) required 100 to 160 clock hours of early field experience for their prospective teacher candidates.

Later, Ishler (1984) surveyed 66 member institutions of Colleges and Schools of Education in State Universities and Land Grant Colleges and affiliated private universities to identify curriculum contents. He found that elementary majors took an average of 51 semester hours in General Education (a range of 33-81) and secondary majors took an average of 47 semester hours. With regard to Subject Matter Education, elementary majors took an average of 29 semester hours in content specialization (range 12-38) and secondary majors took 35 semester hours (a range of 22-66). Further, elementary majors spent an average of 200 clock hours in field experience prior to student teaching, but secondary majors spent only an average of 92 clock hours. For student teaching experience, both elementary and secondary majors took an average of nine semester credit hours for student teaching.
In the same year, Kluender (1984) reported research that was based on the review of university catalogues and their program descriptions. The research purpose was to determine the content distribution requirements of the teacher preparation curricula. Kluender found that a majority of coursework of preservice teachers was comprised of General Education and Subject Matter Education. Both elementary and secondary major students took the same percentile of courses in General Education (40%). However, the composites of courses in Professional Education and other related courses differed between elementary and secondary majors. Elementary majors took 44% in Professional Education and 14% in other related requirements, whereas secondary majors took 21% of their courses in Professional Education, and 39% in Subject Matter Education (teaching specialty areas). The researcher conducted further analysis of contents within Professional Education and found that elementary majors took 21% of their Professional Education courses from the areas of curriculum and methods courses, and these courses comprised only 6% for the secondary majors.

Evertson et al. (1985) reviewed the studies published between 1958 and 1984 to identify whether teacher preparation programs prepared prospective teachers to teach effectively. They compiled the studies into two groups: a) studies comparing the teacher effectiveness of regularly certified and provisionally certified teachers, and b) studies examining the relationship between specific instructional strategies learned by prospective teachers and their reflection in K-12 classroom performance. They investigated reform proposals whose purposes were: a) to improve the quality of students who were admitted and graduated from teacher preparation programs; and b) to extend and / or upgrade the curriculum of teacher preparation. Evertson et al. concluded:
a) Teachers who are in preservice teacher preparation programs seem to be more likely to be perceived as more effective than those who have little or no formal training.
b) Efforts to teach specific skills and knowledge to preservice teachers appear to be effective.
c) There is not enough evidence to conclude that teachers’ performance is correlated with scores on measurements such as standardized admission tests, grade point averages, performance on the National Teacher Examination, or faculty evaluations of student teaching, whereas there is some reported evidence indicating that teachers’ or teacher candidates’ verbal ability is correlated with student performance.
d) Knowledge of the subject matter does not necessarily make a good teacher of that subject. Good instructional capabilities aid in teaching effectiveness if the teachers also has in-depth knowledge of the subjects they teach.

In their study, Evertson et al. (1985) identified 13 studies that compared regularly and provisionally certified teachers’ effectiveness conducted between 1958 and 1984. Among the 13 studies identified, 11 studies reached the conclusion that regularly certified teachers were more effective in terms of student achievement gains and the ratings of administrators. However, two studies, Shim (1965) and Cornett (1984), concluded that uncertified teachers ranked higher or showed no difference in their effectiveness when compared to certified teachers.

Shim (1965) studied 89 elementary school teachers and found that students taught by uncertified teachers scored higher on academic achievement tests. Cornett (1984) studied principals' rankings of provisionally certified and regularly certified teachers and found no difference in the teachers’ performance. With respect to teacher effectiveness
and teacher characteristics studies, Evertson et al. (1985) warned that those studies that compared regularly and provisionally certified teachers “do not control for possible differences in the intelligence or general academic competence of the teachers” (Evertson et al., 1985, p. 3; Cruickshank, 1990).

Evertson et al. (1985) also found numerous studies indicating that particular efforts of institutions which were aimed at structuring prospective teachers’ learning appeared to have the desired effects on student teacher behavior, at least for a period of time (i.e., Collins, 1976; Francke, 1971; Joyce & Weil, 1972; Millett, 1969; Murphy, 1972). However, while some studies reported the staying power of such efforts (Adams, 1982, as cited in Evertson et al. (1985); Hord & Hall, 1978), others did not (Fullan, 1982). There has been a criticism regarding: “[the researchers] mixed findings as to whether the newly acquired abilities transfer to student teaching or to teaching in natural classrooms” (Cruickshank, 1990, p. 111).

Evertson et al. (1985) reported on the relationship between preservice teachers’ Subject Matter knowledge and their effectiveness. Prior to that study, Druva and Anderson conducted a similar meta-analysis in 1983, which focused specifically on studies addressing relationships among teacher characteristics (i.e., gender, coursework, IQ, etc), their teaching behavior, and student outcomes. Evertson et al. introduced the study of Druva and Anderson as “the most extensive assessment of the effects of subject matter knowledge on teaching effectiveness” (p. 5). After extensive meta-analysis, Druva and Anderson found very low correlations between teachers' background characteristics and the two dependent factors: a) their teaching behavior and b) student outcomes. The researchers also reported some relationships between teacher
characteristics and their teaching behavior, teacher effectiveness, and student outcomes. Most importantly, they found a positive relationship between teacher preparation programs (i.e., the number of education courses taken, student teaching grade and experience teaching) and teaching effectiveness. The number of content courses taken by a teacher had a positive relationship with three areas of student outcomes: achievement, process skills, and attitudes toward the content taught.

Evertson et al. (1985) extended their study to analyze relationships between teacher expertise and teacher performance. They concluded that such a relationship was not clear since there were mixed findings. Similar findings were reported by Darling-Hammond (2000). Although several researchers found positive but small relationships (i.e., Massey & Vineyard, 1958), others reported no or negative relationships between teacher knowledge measured by grade point averages and standardized tests and student achievement (i.e., Eisenberg, 1977; Maguire, 1966, as cited in Evertson et al., 1985; Siegel, 1969 as cited in Evertson et al., 1985). Based on their findings, Evertson et al. stated that a person with knowledge of the subject matter does not necessarily become a good teacher of that subject; rather, teachers with good instructional ability appear to “be more effective if they had in-depth knowledge of the subjects they teach” (p. 5).

Darling-Hammond et al. (2005) conducted a study to examine to what extent teacher preparation and certification influence teacher effectiveness for both Teach for America (TFA) recruits and for other teachers. The TFA recruits were teachers recruited from selective colleges who received a few weeks of training before they began teaching. They reported that students of certified teachers from traditional teacher preparation programs made significantly stronger achievement gains in reading and mathematics than
those of uncertified teachers. Further, Darling-Hammond et al. found that TFA recruit teachers were less effective than certified teachers but were at the same level as other uncertified teachers. However, when the certified TFA recruits and other certified teachers were compared, the students of the TFA recruits performed significantly better on one of the three mathematics assessments than those of the certified teachers. Based on these results, Darling-Hammond et al. asserted that the students' relatively better performance on the one assessment might be the result of the apparently strong liberal arts background of TFA teachers and that the effectiveness of teachers is "strongly related to the preparation they have received for teaching" (p.1).

Regarding the content of the preservice teacher preparation curriculum and the certification requirements of state education department, a few research studies have been conducted: such as Dumas and Weible (1984), Howey, Yarger, and Joyce (1978), Ishler (1984), Ishler and Kay (1981), Kluender (1984), Research About Teacher Education Project (1987, 1988, 1989), Weible and Dumas (1982).

In 1982, Weible and Dumas conducted their initial study of state standards and institutional requirements for initial teacher certification / licensure. The purpose of the study was to identify the minimum program standards established by 50 state education agencies for preparation and certification of secondary education teachers. Its specific goals were to identify (1) General Education requirements, (2) Professional Education requirements, and (3) Majors / Subject Matter Education requirements. They replicated the study for elementary education teachers, and the results were reported in 1984 and 1985.
Six years later, Dumas, Evans, and Weible (1990) studied state standards for the preparation of elementary teachers for General Education, Professional Education, and Majors / Subject Matter. The researchers compared the results with those of the previous study of Dumas and Weible (1985). They found that despite the reform efforts to enhance the General Education for elementary teachers, the core standards remained unchanged: an average of 51.7 semester hours (a range of 30-80 semester hours) in 1988-89 and an average of 51.5 semester hours (a range of 24-82 semester hours) in 1982. Table 2.2 shows the changes in a decade in each of the seven areas of General Education requirements.

<table>
<thead>
<tr>
<th></th>
<th>English/Composition</th>
<th>Humanities/ Fine Arts</th>
<th>Social Sciences/ History</th>
<th>Science</th>
<th>Mathematics</th>
<th>Oral communication</th>
<th>Health / physical education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982 (N=34)</td>
<td>28 (82%)</td>
<td>25 (74%)</td>
<td>34 (100%)</td>
<td>30 (88%)</td>
<td>27 (79%)</td>
<td>17 (50%)</td>
<td>16 (47%)</td>
</tr>
<tr>
<td>1988-89 (N=30)</td>
<td>27 (90%)</td>
<td>23 (77%)</td>
<td>29 (97%)</td>
<td>27 (90%)</td>
<td>26 (87%)</td>
<td>16 (53%)</td>
<td>18 (60%)</td>
</tr>
</tbody>
</table>

Note. Data are adopted from Dumas & Weible (1985) and Dumas, Evans, & Weible (1990)

Table 2.2: Number of states requiring specific General Education components for elementary education teachers

In 1990, Dumas et al. found the following changes: a) a substantially decreased number of states mandated General Education standards for their teacher education institutions; b) the states tended "to leave [such] components to the judgment of institutions or the institutional program-approval process" (p. 4); and c) the Professional
Education component also changed during the decade. The required semester hours appeared to remain the same: an average of 28 semester hours (a range of 16-45 semester hours) in 1988-89 and an average of 29.3 semester hours (a range of 16-72 semester hours) in 1982. Although the total amount of work required remained about the same, field experiences requirements were substantially increased: from a mean of 6.2 semester hours in 1985 to 8.4 semester hours in 1990.

In 1994, Dumas, Evans and Weible conducted a follow-up study and reported it in 1997. They found that, with four exceptions, most aspects of Professional Education requirements remain very similar to those reported in the previous study of Dumas et al. (1990).

Significant changes were observed in the following four areas: a) coursework or competency in specific methods in social studies (95% of the states mandated special methods); b) increase in the number of states requiring early field experiences in secondary social studies classrooms (25 states had this requirement in 1988-89, but 34 states had the requirement in 1994); c) length of student teaching or the terminal internship experience; and d) coursework or competency in the area of school organization/administration (11 states had this requirement in 1988-89, but 24 states had the requirement in 1994). Table 2.3 shows the number of states requiring specific areas of Professional Education components.
Table 2.3: Number of states requiring specific Professional Education components

Teacher Preparation in Deaf and Hard of Hearing

Although there have been numerous studies and findings regarding state minimum standards for initial teacher certification and the requirements of teacher preparation programs in General Education, few studies (most over ten years old) have been conducted in the area of the teacher preparation curriculum for deaf and hard of hearing students (i.e., Garber, Garn, & Testut, 1984; Mason, 1995; Moulton, Roth, & Winney, 1983; Shroyer & Compton, 1992).

Moulton, Roth, and Winney (1983) stated that “state certification standards for teacher(s) of the hearing impaired have received scant attention in professional literature” (p.490). This trend has not changed. Table 2.4 summarizes the studies on state
certification standards and institutional requirements in the area of deaf and hard of hearing.

<table>
<thead>
<tr>
<th>Moulton, Roth, and Winney (1983)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The state certification standards for teachers of deaf and hard of hearing students focusing on the aspect of deaf education and were classified as follows:</td>
</tr>
<tr>
<td>a) standards calling for a specific number of credit hours in specified deaf education subject areas;</td>
</tr>
<tr>
<td>b) standards mandating a specific number of semester hours in deaf education from an approved program but not indicating what the subject areas must be; and</td>
</tr>
<tr>
<td>c) standards requiring teachers to complete the deaf education program of an approved college or university but not specifying semester hours or required areas of study.</td>
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</table>

<table>
<thead>
<tr>
<th>Garber, Garn, and Testut (1984)</th>
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<tbody>
<tr>
<td>Studied the state minimum curriculum requirements for teachers of students with hearing impairments and classified the requirements into three categories:</td>
</tr>
<tr>
<td>a) foundational requirements relating to special education:</td>
</tr>
<tr>
<td>• 54% of the states required psychology courses.</td>
</tr>
<tr>
<td>• 16% of the states required human growth and development courses.</td>
</tr>
<tr>
<td>• 14% of the states required assessment and diagnosis courses.</td>
</tr>
<tr>
<td>b) state minimum requirements in specific courses for hearing impairment included:</td>
</tr>
<tr>
<td>• aural habilitation (64% of the states)</td>
</tr>
<tr>
<td>• audiology (54%)</td>
</tr>
<tr>
<td>• speech pathology (34%)</td>
</tr>
<tr>
<td>• audiometry and hearing aids (30%)</td>
</tr>
<tr>
<td>• teaching academic subjects to the hearing impaired (28%)</td>
</tr>
<tr>
<td>• education and guidance of the hearing impaired (24%)</td>
</tr>
<tr>
<td>• oral, manual, and total methods of communication (10%).</td>
</tr>
<tr>
<td>c) state minimum requirements for prior educational experience and background included:</td>
</tr>
<tr>
<td>• bachelor’s degree with major in hearing impairment (66% of the states)</td>
</tr>
<tr>
<td>• practicum / student teaching (64%)</td>
</tr>
<tr>
<td>• certification in early and/or secondary education (38%)</td>
</tr>
<tr>
<td>• general college courses (22%),</td>
</tr>
<tr>
<td>• university recommendation (24%).</td>
</tr>
</tbody>
</table>

Table 2.4: Teacher Preparation Curriculum Studies in the area of Deaf and Hard-of-Hearing
<table>
<thead>
<tr>
<th><strong>Garber, Garn, and Testut (1984)</strong></th>
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<tbody>
<tr>
<td>(c) state minimum requirements for prior educational experience and background included:</td>
</tr>
<tr>
<td>• teaching of reading and math (18%)</td>
</tr>
<tr>
<td>• professional education experience (16%)</td>
</tr>
<tr>
<td>• a general education component included in major (14%)</td>
</tr>
<tr>
<td>• a Teacher’s Examination prior to certification (12%)</td>
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<tr>
<td>• competencies guidelines based on CED standards (4%)</td>
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<table>
<thead>
<tr>
<th><strong>Mason (1995)</strong></th>
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<tbody>
<tr>
<td>Studied 29 master’s degree granting programs for the education of deaf and hard of hearing students in North America to identify the following:</td>
</tr>
<tr>
<td>(a) criteria for admission, graduation, and certification</td>
</tr>
<tr>
<td>(b) program content</td>
</tr>
<tr>
<td>(c) the ratios of hearing students and professionals to their culturally Deaf, deaf, deafened, and hard-of-hearing counterparts in the programs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Shroyer and Compton (1992)</strong></th>
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</thead>
<tbody>
<tr>
<td>Illustrated how, at the University of North Carolina at Greensboro, courses in a second major and in liberal arts were added in order to expand the knowledge base of preservice teachers enrolled in the program for the education of deaf children.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Nagata (2001)</strong></th>
</tr>
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<tbody>
<tr>
<td>Studied minimum program standards established by the fifty state educational agencies and the District of Columbia for the licensure of teachers of deaf and hard of hearing students to investigate the nature of the current minimum requirements for general education, professional education, and major.</td>
</tr>
<tr>
<td>• NASDTEC manual (2000) did not sufficiently elucidate the specific requirements for teachers of deaf and hard of hearing students in the three areas of the study: General Education, Professional Education, and Major.</td>
</tr>
<tr>
<td>• The manual provides a description of the overall nature of the requirements for teacher certification applicants.</td>
</tr>
<tr>
<td>• At the time, 48 states maintained requirement in General Education, and 49 states maintained the requirements in Professional and Major components for initial teaching certification.</td>
</tr>
<tr>
<td>• The number of the states requiring each General Education area of study had increased during the past two decades. However, the percentile of the responding states (N=34 in 1982, N= 30 in 1988-89) requiring each discipline area seemed to have declined in five areas: English; Humanities, Fine Arts, or Letters; Social Science, History; Natural Science; and Mathematics.</td>
</tr>
<tr>
<td>• In the area of the Professional Education component, the only significant differences found were a significant increase in the following four areas: a) Cultural Diversity, b) Technology in Teaching, c) Student Assessment, and d) Classroom Management.</td>
</tr>
</tbody>
</table>
In 1983, Moulton, Roth, and Winney studied the state certification standards for
teachers of deaf or hard of hearing students focusing on the Content / Subject Matter area
of deaf education. They classified the standards as follows: (a) standards that call for a
specific number of credit hours in specified deaf education Subject areas, (b) standards
that mandate a specific number of semester hours in deaf education from an approved
program but do not indicate what the Subject areas must be, and (c) standards that require
teachers to complete the deaf education program of an approved college or university but
do not specify semester hours or required areas of study.

Moulton et al. (1983) found considerable interstate variability in the state
standards. For instance, more than half of the states specified minimum required credit
hours and the completion of specific courses. Although they required a certain number of
semester hours in deaf education, they did not specify course requirements in detail. This
could lead to diverse interpretations of the standards. Moreover, the required semester
hours in deaf education also varied among the states. For example, in 1983, Delaware
required 12 semester hours while Alabama required 39 (Moulton, Roth, & Winney,
1983).

A year later, in 1984, Garber, Garn, and Testut studied the state minimum
curriculum requirements for teachers of students with hearing impairments. They
classified those requirements into three categories: (a) foundational requirements related
to special education, (b) requirements that were curricula specific to hearing impairment
and (c) certification requirements that were based on prior educational experiences and
background. They found the following foundational requirements related to special
education: 54% of the states required psychology courses, 16% required human growth and development courses, and 14% required assessment and diagnosis courses.

Additionally, Garber et al. (1984) reported that the state minimum requirements in specific courses for hearing impairment included: aural habilitation (64% of the states), audiology (54%), speech pathology (34%), audiometry and hearing aids (30%), teaching academic subjects to the hearing impaired (28%), education and guidance of the hearing impaired (24%), and oral, manual, and total methods of communication (10%). The state minimum requirements for prior educational experiences and background included: a bachelor’s degree with major in hearing impairment (66% of the states), practicum / student teaching (64%), certification in early and /or secondary education (38%), general college courses (22%), university recommendation (24%), teaching of reading and math (18%), professional education experience (16%), a general education component included in major (14%), a Teacher’s Examination prior to certification (12%) and competencies guidelines based on Council on Education of the Deaf (CED) standards (4%).

About a decade after these two studies, two additional studies were conducted. Shroyer and Compton (1992) described how, at the University of North Carolina at Greensboro, courses in a second major and in liberal arts were added to expand the knowledge base of preservice teachers enrolled in the program for the education of deaf children. Three years later, Mason (1995) studied 29 Master’s degree granting programs for prospective teachers of students who are deaf or hard of hearing in North America to identify the following: (1) admission, graduation, and certification criteria, (2) program

15 However, 6% of the states listed no specific requirements for teaching the hearing impaired.
content, and (3) the ratios of hearing students and professionals to their culturally Deaf, deaf, deafened, and hard-of-hearing counterparts in the programs.

In 2001, Nagata reviewed the 50 states’ minimum requirements for initial teacher certification in the area of education of students who are deaf or hard of hearing by using the studies of Dumas and Weible as a model. She analyzed the data obtained from the NASDTEC manual (2000), which collects and aggregates data on state standards and authorization of certification every two years. Nagata found that the manual did not record much specific information of the kind provided for elementary and secondary teachers about requirements for prospective teachers of students who are deaf or hard of hearing. The manual provides information about the overall nature of requirements for the teacher certification applicants (Nagata, 2001). For example, in 2001, 48 states maintained an overall minimum requirement in the General Education component, and 49 states maintained the requirements in the Professional Education and Major components for initial teaching certification. However, states such as Alaska and Vermont had indicated that their General Education requirements were included in the requirements for the state approved teacher preparation programs; therefore, the states did not have any specific requirements for their applicants in the General, Professional and Major Education components.

Over 35 of the 48 states that specified requirements in the General Education component listed specific areas of study such as English, Humanities/Fine Arts, Social Science/History, Natural Science, and Mathematics. However, states such as Alaska, Vermont, Washington, and West Virginia did not specify the courses but stated that such requirements were included in or determined by the preparation agencies.
Some states required General Education coursework only for elementary level applicants or partially intended for elementary level applicants. In addition, some states set different requirements for elementary and secondary level applicants in the minimum credit hours in General Education component; e.g., Louisiana required 15 semester hours for elementary and 12 semester hours for secondary in Natural Science, and 12 semester hours for elementary and 6 semester hours for secondary in Mathematics (Nagata, 2001).

In 2001, 49 states maintained requirements in Professional Education, including professional studies and pedagogical studies. Among the areas of requirements, the following areas were most frequently required by the states: Nature of Students’ Learning Process/Developmental characteristics (88.2% of the states at the elementary level, 86.3% at the secondary level), Development of Basic Repertoire of Teaching Strategies (84.8% at the elementary level, 80.4% at the secondary level), and Methods of Teaching Elementary/Secondary School Subjects (88.2% at the elementary level, 80.4% at the secondary level). On the other hand, the following areas were the areas least required by the states: Restructuring and School Improvement (29.4% of the states at the elementary level, 27.5% at the secondary level) and Study of Self (Teacher) as Learner (33.3 % at the elementary level, 33.3% at the secondary level). For most of the requirements in the Professional Education component, there were few significant differences between elementary and secondary levels; however, Methods of Teaching Reading was required by a significantly larger number of states at the elementary level (90.2%) than at the secondary level (56.9%).

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16 The NASDTEC (2000) called this requirements in teaching and schooling.
Regarding the requirements in Content / Subject Matter components, the NASDTEC manual (2000) did not provide much information specifically concerning the teachers of students who are deaf or hard of hearing (Nagata, 2001). The manual (2000) focused more on the specific requirements for elementary and secondary teachers: 35 states maintained Subject Matter requirements for teacher certification applicants at the elementary and middle/junior high school level, while 46 states set Subject Matter requirements for secondary level applicants (Nagata, 2001).

As additional requirements for initial teacher certification, which applied to all teachers including teachers of students who are deaf or hard of hearing, the states required the submission of official transcripts from their colleges (90.2% of the states), an institutional recommendation (56.9%), and official scores of examinations (PRAXIS I: 34.6%; PRAXIS II: 23.1%). Eighteen states required the paper-based Pre-Professional Skills Test (PPST) or the Computer-based Test (CBT), and 12 states required the PRAXIS II Subject Assessments Test in 2001. Some states specified the specific test scores needed by applicants. For example, Vermont required 177 points in Reading, 174 in Writing, and 175 in Mathematics on PPST scores, and 327 in Reading, 322 in Writing, and 322 in Mathematics on CBT scores. Those scores differed slightly from state to state. In addition, some states had particular degree requirements. For instance, 25 states required a Bachelor’s degree and 5 states required a Master’s degree for teaching certification in the area of deaf or hard of hearing.

Nagata (2001) also aggregated the data regarding the grade ranges authorized by the certification to teach students who are deaf or hard of hearing. Twenty-six states issued a K-12 teaching certification while the other 11 responding states had slightly
different ranges of authorization. Some authorized teachers to teach students from much younger ages such as Nursery or age 3, and other states even granted authorization from the birth of the child. Overall, nearly 70% of the 50 states and District of Columbia authorized teaching in a wider range of grades (i.e., K-12, PreK-12, Age 3 – grade 12, or N-12), while the same states issued certifications for general education teachers by age groups such as elementary, middle / junior high, and secondary except in subject specific areas.

**Importance of the Work**

In the United States, over one million preschool, elementary and secondary-aged children have been assumed to have a hearing loss (Fischgrund, 1995; National Center for Health Statistics, 1988) but among them, the *2003-2004 Annual Survey of Deaf and Hard of Hearing Children and Youth* identified only about 38,800 students. As of 2005, 35,300 students had been identified as receiving instruction in educational programs for students who are deaf or hard of hearing, including special school or center self-contained classrooms, resource rooms, and general education settings in the United States (Gallaudet Research Institute, 2005). The low incidence of deafness seems to significantly impact educational prospects and cause a possible lack of awareness of regular and special educators, a shortage of appropriately trained personnel, and a lack of accessibility of necessary support services (Fischgrund, 1995).

In order to improve support services available for students who are deaf or hard of hearing, in 1983, the CED, which is composed of three member organizations -- the Alexander Graham Bell Association for the Deaf, the Conference of Educational Administrators Serving the Deaf, and the Convention of American Instructors of the Deaf
-- sought a way to upgrade and narrow the range of quality existing among teacher preparation programs (Garber, Garn, & Testut, 1984). In the Fall of the same year, the Ad Hoc committee of CED’s member organizations had made a number of recommendations to clarify and change the CED standards for teacher education. One of the 13 recommendations posed by the committee was to provide prospective teachers experiences through coursework at preschool, elementary and secondary levels in the area of hearing impairment. This recommendation seems to have been adopted by current teacher certification programs.

Current teachers of students who are deaf or hard of hearing are most likely to obtain K-12 certification / licensure (Nagata, 2001, also see NASDTEC, 2000), whereas those of general education are most likely to obtain one of the following: elementary, middle level / junior high, secondary education and all grades certification (i.e., NASDEC, 2000). In some states, the teacher certification of students with disabilities is distinguished by the students’ grade level such as K-8 and 7-12. However, this is not the case for students who are deaf or hard of hearing. Among the frequently posed issues surrounding teacher education in special education (e.g., the issues of categorical versus non-categorical, the critical teacher shortage in special education, attrition and retention of teachers, professional certification, etc.), the issue of the effectiveness and appropriateness of K-12 certification for teachers of students who are deaf or hard of hearing seems to be neglected. Unfortunately, with respect to teacher education programs for the prospective teachers of students who are deaf or hard of hearing, not enough research exists to inform teacher educators, researchers, and teachers.
During the eighties, a series of national teacher education reform reports were issued: these ranged from reports from the Carnegie Forum (1986) and Holmes Group (1986) to *Time*’s article (1980). Those reports provided criticisms of and a reform agenda for teacher preparation programs (Dumas, Evans, & Weible, 1997). They led the movement toward redefining the teacher preparation goals to emphasize outcomes, competencies, and performance based objectives (Dumas, Evans, & Weible, 1997). According to Dumas, Evans, and Weible (1997), such a movement was also reflected in the revised NASDTEC and NCATE standards.

However, in spite of the national movement toward outcome-based standards, little is known regarding the current curricula of teacher preparation for prospective teachers of students who are deaf or hard of hearing. Table 2.5 presents a comparison of the studies found in the area of the teacher preparation curriculum.

Among the studies listed in Table 2.5, the research on state requirements and university / college requirements in the three broad teacher education areas of study (General Education, Professional Education, and Subject Matter Education) was conducted by using either survey or document analysis as the research method. However, in the areas of Deaf Education, after Mason's 1995 survey study on the components of the Deafness or Hearing Impaired area of study in teacher preparation programs granting the Master’s degree, no research can be found. Moreover, in this area, the focus has been very narrowly placed (e.g., limited to the area of deafness or hearing impairments, required credit hours, etc.) Since there has been a very limited study, too little is known in the area of Deaf Education in regard to the characteristics of the teacher preparation programs, specifically, the characteristics of program, curriculum, and
<table>
<thead>
<tr>
<th>Research Questions</th>
<th>General Education</th>
<th>Special Education</th>
<th>Deaf / Hard of Hearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Requirements on the three broad ‘teacher-education’ areas of study</td>
<td><strong>Document Analysis</strong></td>
<td>Dumas, Evans, &amp; Weible (1990)</td>
<td><strong>Document Analysis</strong></td>
</tr>
<tr>
<td>University / College requirements &amp; Program implementation</td>
<td><strong>Survey</strong></td>
<td>Howey, Yarger, and Joyce (1978)</td>
<td><strong>Survey</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Meta-Analysis</strong></td>
<td>Druva &amp; Anderson (1983)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Document Analysis</strong></td>
<td>Kluender (1984)</td>
<td></td>
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<tr>
<td>Contents of the National Standards</td>
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<tr>
<td>Teacher Educators’ perception of:</td>
<td><strong>Case Study – Interviews</strong></td>
<td>Joan Selena Haywood (1992)</td>
<td><strong>Case Study – Observation / Document Analysis</strong></td>
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<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>Survey</strong></td>
<td>Fader (1996)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.5: Comparison of Teacher Preparation Curriculum Studies
program evaluations. There has been a delay of almost two decades since the studies in
general education; nevertheless, study of the current minimum requirements of TEDHH
programs in the characteristics of curriculum (specifically, in the three broad teacher
education areas of study) and program evaluation is still necessary.

Furthermore, the current research has one missing area - voices from teacher
educators who will be accountable for preparing teachers and providing appropriate
education to the teacher candidates to meet the state requirements for beginning teachers.
Teacher educators comprise one of the important vehicles which make teacher
preparation programs work. In the area of deaf and hard of hearing, we have not heard
from them yet.

Under the influence of strong movement of inclusion and mainstreaming, research
on the relationship between teachers and teacher educators in special and general
education has become common (i.e., Callahan, 1990; Fader, 1993; Lamb, 1997; Yates,
1994). For example, Lamb (1997) studied the collaborative efforts of three teachers to
develop a science curriculum for all students including those with disabilities, Yates
(1994) illustrated the beliefs of preservice teachers in special education regarding
collaborative team teaching with secondary general educators. Both studies utilized a
case study approach. Callahan (1990) examined the relationship between the value
agreements on integration and the actual practices of selected teacher preparation
programs in the specific areas such as content knowledge, instructional strategies, and
field experiences. Among such studies, only Fader (1993) reported several voices of
teacher educators in special and general education. She investigated the nature of
differences between unified early childhood / early child special education programs and
separate early child special education programs in the areas of course content, field experiences, and program administration. Although such studies attempted to illustrate the voices of teachers, teacher educators, and teacher candidates, none of the studies placed direct focus on the curriculum of the teacher preparation programs and concerns of teacher educators. Further, in the area of deaf and hard of hearing, no study can be found in this area.

This current study intends not only to reveal the current nature of teacher preparation programs which prepare prospective teachers of students who are deaf or hard of hearing, but also to identify current concerns of teacher educators in developing teacher preparation programs in Deaf Education, make recommendations to resolve such issues and problems, and suggest future areas of study as well.

**Statements of the Problem**

Recent enactment of the No Child Left Behind federal legislation requires that teachers must be highly qualified by the 2005-2006 school year. The legislation defines a "highly qualified teacher" as a teacher a) holding a bachelor's degree, b) demonstrating mastery of subject content knowledge by passing tests in reading, writing, mathematics, and other areas of the curriculum that they will be teaching, and c) receiving full state certification (Cochran-Smith, 2003; Paulsen, 2005; Steffan, 2004). The critical shortage of teachers is reported to be one of the developing issues in teacher education (Hussar, 1999; Johnson, 2004; Sindelar & Marks, 1993; Steffan, 2004), along with the need for highly qualified teachers (Darling-Hammond, 2005; Rosen, 2005; Steffan, 2004). An urgent demand for new teachers is expected in the United States during the next ten years (Hussar, 1999), especially for "highly qualified teachers."
Teacher certification is another area that has gained recent teacher educators' attention. In addition to the critical teacher shortage described above, teacher certification / licensure is one of growing issues in teacher preparation. Experts have debated about whether teachers should hold certification or licensure, how teachers should be prepared, whether alternative routes to certification would be effective in special education, and how the re-certification processes should be conducted, for example. These issues have been discussed in the literature; however, it appears that no concrete solutions have been identified.

Another area of concern pointed out by the current literature is collaboration among the professionals and experts. Many researchers and teacher educators have discussed the collaboration of the K-12 teachers in special and general education and discussed the benefits of such collaboration (Goodwin, Boone, & Wittmer, 1994; Kemple, Hartle, Correa, & Fox, 1994; Pugach, 1996; Pugach & Lilly, 1984; Stainback & Stainback, 1988). Such discussions include suggestions for unifying teacher preparation programs (special and general education) as one way to assist collaboration efforts (i.e., Fader, 1996; Stainback & Stainback, 1988). However, as Fader (1996) stated, the literature has not provided information regarding studies examining the effectiveness of such practices.

Fader (1996) found in her study of unified and separate teacher preparation programs, that all participating students reported a lack of practical information and a strong emphasis on textbook knowledge of course content in teacher preparation programs. In addition, Fader reported noticeable differences between unified and separate programs regarding administrative barriers and collaboration. The unified
programs seemed to have fewer barriers and more collaboration among faculty in different departments and programs. There were more similarities in their philosophical beliefs, yet differences which prohibit unification or collaboration also existed. In regard to administrative barriers that hinder unification, issues of time, organizational structure, and budget constraints were reported. In addition, state certification was pointed out as a major issue in determining whether to unify or separate the programs. The curriculum studies identified and reported were in either general education or other areas of special education categories besides Deaf Education.

Other than the study of the program content of 29 Master’s degree granting programs in North America done by Mason (1995), the recent literature does not provide any information regarding the teacher preparation curriculum for prospective teachers of students who are deaf or hard of hearing. What is missing is the investigation of the nature of the programs, specifically characteristics of the programs, curricula, and program evaluations, as well as the voices of teacher educators regarding influential factors in developing curriculum and the implications for future teacher preparation programs for prospective teachers of students who are deaf or hard of hearing.
CHAPTER 3

RESEARCH METHODS

The third chapter presents the design and methodology utilized for this study. The objectives, variables of interest, research questions, research design, sampling procedures, instrumentation, data collection and data analysis techniques are discussed.

Objectives of the Study

This study was a descriptive study utilizing a survey research design. The primary objective was to explain and describe the overall nature of American teacher preparation programs for the students who are deaf and hard of hearing (TEDHH programs). The secondary objective was to identify factors impacting the development of current TEDHH programs and to pose recommendations to resolve issues and problems based on the survey responses.

Variables of Interest

The variables for this study were derived from the literature review. Table 3.1 illustrates four major variables.
Program Characteristics

1. Term system
2. Size of the program (number of students and faculty members in the program)
3. Faculty information - faculty members who teach prospective teachers for students who are deaf / hard of hearing (i.e., rank and program affiliation)

Curriculum Characteristics

1. Number of courses and hours required for program completion
2. Number of courses and hours required for General Education courses
3. Number of courses and hours required for Professional Education courses
4. Number of courses and hours required for “major”
5. Number of courses and hours required for field experience and student teaching
6. Methods of program evaluation

Program Evaluation Characteristics

1. State accreditation
2. National accreditation (NCATE, CEC and CED)
3. Other

Perception of Teacher Educators

1. Issues in preparing Deaf Education teachers
2. Recommendations for future teacher preparation in Deaf Education

Table 3.1: Variables of the study

Research Questions

The purpose of the study was to examine the current nature of TEDHH programs in the following three areas: (1) General Education requirements, (2) Professional Education requirements, and (3) Majors or areas of concentration. The secondary purpose was to identify issues and problems associated with program development and to suggest recommendations to resolve such issues.

The specific research questions posed by the study are:

1. What are the current characteristics of teacher education institutions for prospective teachers of students who are deaf or hard of hearing?
2. What are the current characteristics of teacher education program curricula for prospective teachers of students who are deaf or hard of hearing in each of the three broad ‘teacher-education’ areas: (1) General Education, (2) Professional Education, and (3) a third program component called “Majors,” “areas of concentration,” “areas of emphasis,” and so forth?

3. How do the programs conduct evaluations of the teacher education program (e.g., exit interviews, deaf or hard of hearing students’ performances, etc.)?

4. What issues related to deaf education in the U.S. do teacher educators perceive as critical, and what recommendations do they make?

Research Design

The design of the study was neither experimental nor quasi-experimental manipulation. Rather, it was identification and description of the current nature of teacher education programs in the U.S. Therefore, the study was classified as a descriptive study utilizing the survey technique.

This study was divided into two parts. Part I of the study was a descriptive study of the current nature of TEDHH programs (Part I – Question 1-16). The study identified the characteristics of a) programs, b) curriculum, and c) program evaluation. The specific variables are listed in Table 3.1. The literature review suggested that current teacher preparation programs consist of three areas of study: (1) general education, (2) professional education, and (3) a third program component called “majors,” “areas of concentration,” “areas of emphasis,” and so forth. Historically, the proportion of the three components within the program requirements has changed. In addition, movement in a recent national organization suggests that teacher education programs need to
indicate clear evaluation plans for their program effectiveness and accountability (NCATE, 2002). Therefore, the study first examined current program characteristics by investigating how the programs divide their requirements for courses for preservice teachers in each of the three areas and then described current trends in program evaluation by compiling their self-evaluation plans.

Part II of the study investigated the perception of the teacher educators regarding issues impacting their program development and teacher preparation. The teacher educators were asked to provide their insights regarding important internal and external factors in developing programs in the following two types of questions. First, a list of selected issues was provided to the respondents, and they were asked if they agreed concerning the importance of the issues as reported in the literature (Part I - Question 17). Then, the respondents were further asked to respond to three open-ended questions (Part II – Questions 2, 3, and a follow-up question). They were asked to make recommendations based on their insights to resolve such issues and problems, in preparing teachers for the students who are deaf and hard of hearing.

**Sampling Methodology**

Teacher educators at 80 TEDHH programs in the U.S. served as the sample for this study. Due to the relatively small number of institutions preparing teachers for students who are deaf and hard of hearing, the researcher decided to take a census of all these programs in the U.S. Therefore, the sampling population and sample size of the study were the same. The sample was based on a list of teacher preparation programs in the U.S. published recently in The American Annals of the Deaf (AAD) and a website

In order to control for non-response error, early respondents were compared to late respondents in the dependent variables of program and curriculum characteristics, and perception of Teacher Educators. Non-respondents were considered similar to late respondents (Vail, 1991). During the second week of December 2005, non-respondents were contacted by telephone and email, and additional survey questionnaires were mailed. If requested, the surveys were sent electronically. Table 3.2 presents the results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Characteristics</strong></td>
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<tr>
<td>Minimum Hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early</td>
<td>35</td>
<td>85.63</td>
<td>46.223</td>
<td>1.028</td>
<td>.309</td>
</tr>
<tr>
<td>Late</td>
<td>13</td>
<td>70.46</td>
<td>43.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students in Deaf Ed.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early</td>
<td>35</td>
<td>39.66</td>
<td>29.026</td>
<td>1.859</td>
<td>.069</td>
</tr>
<tr>
<td>Late</td>
<td>13</td>
<td>23.69</td>
<td>17.105</td>
<td></td>
<td></td>
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<td>Graduating Students</td>
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<td></td>
<td></td>
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<tr>
<td>Early</td>
<td>35</td>
<td>9.83</td>
<td>6.926</td>
<td>.627</td>
<td>.534</td>
</tr>
<tr>
<td>Late</td>
<td>13</td>
<td>8.54</td>
<td>4.215</td>
<td></td>
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<tr>
<td># of Faculty teaching in the program</td>
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<td></td>
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<tr>
<td>Early</td>
<td>34</td>
<td>6.09</td>
<td>8.373</td>
<td>.775</td>
<td>.443</td>
</tr>
<tr>
<td>Late</td>
<td>13</td>
<td>4.23</td>
<td>3.166</td>
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<tr>
<td>Full-time Faculty in Deaf Ed.</td>
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<td></td>
</tr>
<tr>
<td>Early</td>
<td>34</td>
<td>2.18</td>
<td>3.424</td>
<td>.409</td>
<td>.685</td>
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Continued

Table 3.2: Comparison of early respondents to late respondents

116
Table 3.2 Continued

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<td>Late</td>
<td>14</td>
<td>3.50</td>
<td>1.899</td>
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<td>.136</td>
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<tr>
<td>Late</td>
<td>14</td>
<td>3.50</td>
<td>1.899</td>
<td></td>
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</table>
Because there were no significant differences, the null hypothesis was accepted (alpha = .05); it was concluded that significant differences did not exist between early and late respondents.

**Instrumentation**

The questionnaire consisted of two sections: a) Program Characteristics Inventory, and b) Personal and Professional Characteristics Inventory. The researcher developed the instrument in a booklet format (Appendix A) following Dillman’s (1978, 2000) Total Design Method. The booklet was a size of 5 ½” x 6 1/2”. The front cover displayed the title of the questionnaire, the questionnaire logo, and the name of the researcher's university, The Ohio State University, printed on it. The back cover contained only the coding number. The instruments were printed in the following order: a) Program Characteristics Inventory and b) Personal and Professional Characteristics Inventory.

**Data Analysis**

A coding sheet was created prior to data entry. As the questionnaires were received, data was entered into the spreadsheet. The statistical Package for Social Science (SPSS V.13) was used for data analysis. Table 3.3 illustrates the relationships among each research question, related items in the questionnaire, and type of statistical analysis.
1. What are the current characteristics of the teacher education institutions?

2. What are the current characteristics of the teacher education program curriculum for the students who are deaf and hard of hearing in each of the three broad ‘teacher-education’ areas of study requirements: (1) General education, (2) Professional Education, and (3) a third program component called “Majors,” “Areas of Concentration,” “Areas of Emphasis,” and so forth?

3. How do the programs conduct an evaluation of teacher education program (e.g., exit interviews, deaf and hard of hearing student’s performances, etc.)?

4. What issues related to deaf education in the U.S. do teacher educators perceive as critical and what recommendations do they make?

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Related Items in the Questionnaire</th>
<th>Statistical Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are the current characteristics of the teacher education institutions?</td>
<td>Program Characteristics Inventory</td>
<td>Frequencies, percentages, Mean, Standard Deviations</td>
</tr>
<tr>
<td>2. What are the current characteristics of the teacher education program curriculum for the students who are deaf and hard of hearing in each of the three broad ‘teacher-education’ areas of study requirements: (1) General education, (2) Professional Education, and (3) a third program component called “Majors,” “Areas of Concentration,” “Areas of Emphasis,” and so forth?</td>
<td>Program Characteristics Inventory</td>
<td>Frequencies, percentages, Mean, Standard Deviations</td>
</tr>
<tr>
<td>3. How do the programs conduct an evaluation of teacher education program (e.g., exit interviews, deaf and hard of hearing student’s performances, etc.)?</td>
<td>Program Characteristics Inventory</td>
<td>Frequencies, percentages, Mean, Standard Deviations, Content Analysis</td>
</tr>
<tr>
<td>4. What issues related to deaf education in the U.S. do teacher educators perceive as critical and what recommendations do they make?</td>
<td>Program Characteristics Inventory &amp; Personal and Professional Characteristics Inventory</td>
<td>Frequencies, percentages, Mean, Standard Deviations, Content Analysis</td>
</tr>
</tbody>
</table>

Table 3.3: List of research questions, related items in the questionnaire, and statistical analysis

Reliability and Validity of the Study

The reliability and validity of the study were examined by the panel of experts. The panel consisted of three teacher educators at The Ohio State University, including
teacher educators specializing in deaf education, general education and research / evaluation design.

A reliability analysis was performed using the returned data. Cronbach's alpha was used as the coefficient for the scale section data (Question17). The reliability coefficient was .702. Reliability coefficients larger than .70 are considered to be acceptable (Nunnaly, 1978; Santos, 1999); therefore, it was concluded that the survey instrument was reliable. For the open-ended questions, another panel of experts was formed for data analysis. Interrater agreement was measured and was greater than 85%.
CHAPTER 4

FINDINGS AND DISCUSSION

This chapter presents a description of the findings related to the overall nature of American teacher preparation programs for the teachers of students who are deaf or hard of hearing.

Respondents

The survey was sent to 92 teacher educators from 80 Deaf Education programs in the U.S. published recently in the American Annals of the Deaf (AAD) and the website of Educational Enhancement for the Deaf Education (http://www.deafed.net/PageText.asp?hdnPagId=120).

The regional classifications specified by the Gallaudet Research Institute (GRI) were used to classify the respondent programs: 1) Northeast, 2) Midwest, 3) South, and 4) West. Table 4.1 shows a classification of each state. The GRI has been collecting demographic and educational information on children and youth who are deaf and hard of hearing since 1968. The findings were reported annually and obtained through its Annual Survey of Deaf and Hard-of-Hearing via their website (http://gri.gallaudet.edu/Demographics). Table 4.2 shows a distribution of the 80 Deaf Education programs by regions.
Regions | States
--- | ---
Midwest | Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin
South | Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Tennessee, Texas, Virginia, West Virginia
West | Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Note: Retrieved August 3, 2005, and modified from the Gallaudet Research Institute, http://gri.gallaudet.edu/Demographics/

Table 4.1: Regions of the program

<table>
<thead>
<tr>
<th>Regions</th>
<th>Number of listed programs</th>
<th>Responses received</th>
<th>Response rate by region (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>21</td>
<td>13</td>
<td>61.90</td>
</tr>
<tr>
<td>Midwest</td>
<td>14</td>
<td>11</td>
<td>78.57</td>
</tr>
<tr>
<td>South</td>
<td>30</td>
<td>21</td>
<td>70.00</td>
</tr>
<tr>
<td>West</td>
<td>15</td>
<td>10</td>
<td>66.67</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>55*</td>
<td>68.75</td>
</tr>
</tbody>
</table>

Note: *Three cases were initially included but were found to be closed or in the process of phasing out.
Chi square = 1.139
Cramer's V = .119

Table 4.2: Responses by region

The study obtained responses from 55 TEDHH programs in the U.S. (Table 4.2).

Among the 55 programs, 50 programs responded to the survey. Prior to the study (during the initial contact stage) one program in the South region contacted the researcher.
through email and informed her that their program was closed due to the retirement of a faculty member. After the study started, two additional programs informed the researcher that their programs were not qualified for the participation in the study; one program in the Northeast region was not Deaf Education but a Deaf-Blind Education program, and another in the Northeast was closed when ADA was enacted and the college had to cut costs for the support services of the program.

Later, two additional programs were found not to be qualified for the study. When the researcher contacted the non-respondents to the survey after December 1st, 2004, five teacher education programs could not be reached. The program information for these five was searched electronically by using internet resources. Two programs out of the five (one in the Midwest and the other in the South region) reported on their web pages that their TEDHH programs were currently either not accepting new students or were in the process of phasing out. Therefore, when the study was concluded on March 15, 2005, the response rate was 68.75%.

For this study, overall, the responses were received from across the states. As shown in Table 4.1, the response rate ranged from 61.90% to 78.57% by region. The highest return rate was for the TEDHH programs located in Midwest region (78.57%) whereas the lowest was for the Northeast region (61.90%). However, the number of listed programs for the South region included two programs that were currently closed or not accepting students for their programs. There was a low association between regions and response rates (Chi square = 1.139).

Tables 4.3 and 4.4 show the demographic information of the respondents (Teacher Educators who filled out the survey). Table 4.3 indicates that the majority of
the survey respondents (60%) were Deaf Education Coordinators or Administrators. The respondents included 38% Associate Professors, 34% Full Professors, and 20% Assistant Professors. Two percent (2%) of the respondents were lecturers and 6% were instructors.

<table>
<thead>
<tr>
<th>Positions</th>
<th>Instructor</th>
<th>Lecturer</th>
<th>Assistant Professor</th>
<th>Associate Professor</th>
<th>Full Professor</th>
<th>Deaf Education Coordinator or Administrator</th>
<th>Department Chair or Equivalent</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>3 (6.0%)</td>
<td>1 (2.0%)</td>
<td>10 (20%)</td>
<td>19 (38%)</td>
<td>17 (34%)</td>
<td>30 (60%)</td>
<td>7 (14%)</td>
<td>1 (2%)</td>
<td>*51</td>
</tr>
</tbody>
</table>

* Due to multiple responses received, the total number of the respondents does not equal to 51.

Table 4.3: Respondents’ demographics

Except for one program, all the Deaf Education Coordinator and Administrator positions were held by faculty members who currently also served in other positions such as Assistant, Associate, and Full Professor. Table 4.4 shows that 68.4% of the Associate Professors served concurrently as Deaf Education Coordinators or Administrators, whereas 50% of the Assistant Professors and 47.1% of the Full Professors also served as Deaf Education Coordinators or Administrators. Further, two (2) Associate Professors, which consisted of 10.5% of the 19 total Associate Professors, served concurrently in three roles: a) Associate Professor, b) Deaf Education Coordinator or Administrator and c) either Department Chair or Equivalent or Associate Dean. Three Full Professors, which comprised 17.6% of the 17 total Full Professors, concurrently served in three roles: a) Full Professor, b) Deaf Education Coordinator or Administrator and c) Department
Chair or Equivalent. In a unique case, one survey response was filled out collaboratively by the two faculty members (Instructor and Assistant Professor).

<table>
<thead>
<tr>
<th>Only that position</th>
<th>Instructor</th>
<th>Lecturer</th>
<th>Assistant Professor</th>
<th>Associate Professor</th>
<th>Full Professor</th>
<th>Total</th>
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<tbody>
<tr>
<td>Only that position</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>5 (50)</td>
<td>6 (31.6)</td>
<td>9 (52.9)</td>
<td>23</td>
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<tr>
<td>Concurrently with Deaf Education Coordinator or Administrator</td>
<td>3 (100)</td>
<td>1 (100)</td>
<td>5 (50)</td>
<td>13 (68.4)</td>
<td>8 (47.1)</td>
<td>26</td>
</tr>
<tr>
<td>Concurrently with Department Chair or Equivalent</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>1 (5.3)</td>
<td>6 (35.3)</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>1 (5.3)</td>
<td>0 (0)</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>1</td>
<td>10</td>
<td>*21</td>
<td>**23</td>
<td>7</td>
</tr>
</tbody>
</table>

Note: The numbers within brackets represent the percent among those holding that position. 
* Due to multiple responses, the total exceeded the total number of Associate professors (19).
** Due to multiple responses, the total exceeded the total number of Full Professors (17).

Table 4.4: Respondents’ demographics: Position distribution

Research Question One

**What are the current characteristics of the teacher education institutions?**

In order to respond to Research Question One, the following program characteristics were examined: a) term systems, b) Program levels (Undergraduate vs. Graduate), c) number of students who enrolled in and graduating from the programs, and d) the number of faculty teaching in the programs.

The current TEDHH programs utilized three different term systems: semester, trimester, and quarter term. As shown in Table 4.5, 90% of the programs utilized a semester term system whereas 8% utilized a quarter system and the rest, 2%, utilized a
trimester system. Therefore, in the following sections of the study, for purposes of statistical comparisons, credit conversion of trimester and quarter term systems was conducted, to base all term systems on the semester credit system.

<table>
<thead>
<tr>
<th>Term Systems</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester System</td>
<td>45</td>
<td>90.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Quarter System</td>
<td>4</td>
<td>8.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Trimester System</td>
<td>1</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.5: Institutional term system

The current TEDHH programs employed program at two levels: Graduate and Undergraduate. Fifty percent of the programs were listed as Graduate level, whereas 28% were at the Undergraduate level. However, the remaining of 22% had both Undergraduate and Graduate level programs (Table 4.6). When this information was cross tabulated with that of the Institutional Term Systems, no significant difference was observed. All four quarter system programs were listed as Graduate only programs, and one trimester system was listed as an Undergraduate only program.
Program Levels | Frequency | Percent | Cumulative Percent
--- | --- | --- | ---
Graduate | 25 | 50.0 | 100.0
Undergraduate | 14 | 28.0 | 10.0
Both | 11 | 22.0 | 2.0
Total | 50 | 100.0

Table 4.6: Program levels

When the data of program levels were cross tabulated with regional information, the results showed some regional differences (Table 4.7). It is estimated that the program levels utilized by the TEDHH programs has a moderate association with the region where the programs were located (Cramer's V = .424). The programs located in the West and Northeast regions have a tendency to utilize graduate level programs whereas those in South region have tendency to utilize the undergraduate level program. According to the

<table>
<thead>
<tr>
<th>Program Levels</th>
<th>Northeast</th>
<th>Midwest</th>
<th>South</th>
<th>West</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate (%)</td>
<td>6 (66.7)</td>
<td>6 (50.0)</td>
<td>5 (26.3)</td>
<td>8 (80.0)</td>
<td>25 (50.0)</td>
</tr>
<tr>
<td>Both (%)</td>
<td>1 (11.1)</td>
<td>5 (41.7)</td>
<td>3 (15.8)</td>
<td>2 (20.0)</td>
<td>11 (22.0)</td>
</tr>
<tr>
<td>Undergraduate (%)</td>
<td>2 (22.2)</td>
<td>1 (8.3)</td>
<td>11 (57.9)</td>
<td>0 (0)</td>
<td>14 (28.0)</td>
</tr>
<tr>
<td>Total</td>
<td>7 (100.0)</td>
<td>12 (100.0)</td>
<td>6 (100.0)</td>
<td>8 (100.0)</td>
<td>50 (100.0)</td>
</tr>
</tbody>
</table>

Note: Chi square = 18.007
Cramer's V = .424

Table 4.7: Program levels by regions
list provided by the AAD and institutional websites, 80% of the programs in the West region and 66.7% in the Northeast region were graduate level programs. On the other hand, 57.9% of the programs in the South were undergraduate level programs. In the Midwest region, over 40% of the programs utilized both graduate and undergraduate programs.

For the 50 teacher education programs completing the survey, the minimum required hours to receive licensure / certification ranged from 27 to 159 (Table 4.8). For the purpose of statistical comparison, credit conversion of the credit trimester and quarter term systems was conducted, to base all term systems on the semester credit system. The median number of hours was 58; however, 26% (mode of 36) required between 35 - 44 credit hours to complete the TEDHH programs, and more than a half of all programs (52%) required less than 65 credit hours. Two programs reported requirements of between 155 – 164 credit hours; however, both programs included verbatim comments that the number of credit hours included all of the undergraduate and graduate hours. This wider range of responses might be a result of the respondents' interpretations of a questionnaire item.

The original question was:

At your institution, what are the minimum number of hours that students are required to take to receive teacher certification/licensure in deaf education?

______________ TOTAL HOURS

This might have been interpreted by the respondents in multiple ways. For example, some respondents reported a range of hours (i.e., 52-54, 46-68+, or 132-156+),
and others reported the credit hours by separating undergraduate and graduate program hours. The minimum reported hours from each program was used for statistical reports and analysis.

<table>
<thead>
<tr>
<th>Minimum Hours Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>155 - 164</td>
<td>2</td>
<td>4.2</td>
<td>100.0</td>
</tr>
<tr>
<td>145 - 155</td>
<td>1</td>
<td>2.1</td>
<td>95.8</td>
</tr>
<tr>
<td>135 - 144</td>
<td>5</td>
<td>10.4</td>
<td>93.8</td>
</tr>
<tr>
<td>125 - 134</td>
<td>8</td>
<td>16.7</td>
<td>83.3</td>
</tr>
<tr>
<td>115 - 124</td>
<td>3</td>
<td>6.3</td>
<td>66.7</td>
</tr>
<tr>
<td>105 - 114</td>
<td>1</td>
<td>2.1</td>
<td>60.4</td>
</tr>
<tr>
<td>95 - 104</td>
<td>0</td>
<td>0</td>
<td>58.3</td>
</tr>
<tr>
<td>85 - 94</td>
<td>0</td>
<td>0</td>
<td>58.3</td>
</tr>
<tr>
<td>75 - 84</td>
<td>0</td>
<td>0</td>
<td>58.3</td>
</tr>
<tr>
<td>65 - 74</td>
<td>2</td>
<td>4.2</td>
<td>58.3</td>
</tr>
<tr>
<td>55 - 64</td>
<td>3</td>
<td>6.3</td>
<td>54.2</td>
</tr>
<tr>
<td>45 - 54</td>
<td>5</td>
<td>10.4</td>
<td>47.9</td>
</tr>
<tr>
<td>35 - 44</td>
<td>13</td>
<td>27.1</td>
<td>37.5</td>
</tr>
<tr>
<td>25 - 34</td>
<td>5</td>
<td>10.4</td>
<td>10.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: * In two cases, the responses were not valid.
Mean = 81.52; Median = 58.00; Std. Dev. = 45.46; Mode = 42 and 36, Skewness = .343; Minimum = 27; Maximum = 159

Table 4.8: Minimum credit hours required to complete the program

Table 4.9 shows the number of students enrolled in Deaf Education programs in the 2004-2005 school year. The 48 valid responses from the 50 TEDHH programs completing the survey were used for the analysis. In two cases, the responses were not
valid. One program responded with a large range of student numbers (i.e., 60 – 180), and the other did not respond to the question.

Among the 48 programs responding appropriately to the question, the number of students enrolled in the TEDHH programs ranged from 4 to 135. The mean number of students enrolled in the programs was 35.33; however, one-third of the programs had 11 – 20 students in their programs and, further, more than half of the programs (54.1%) had fewer than 30 students enrolled in their programs. Two programs reported having more than 100 students enrolled in their programs. One such program was primarily an undergraduate program, and the other was a graduate program. Both programs responded to that they had approximately 20 students graduating from their programs out of over 100 students enrolled in their programs.

<table>
<thead>
<tr>
<th>Students in Deaf Ed. Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 or more</td>
<td>2</td>
<td>4.2</td>
<td>100.0</td>
</tr>
<tr>
<td>91 - 100</td>
<td>0</td>
<td>0</td>
<td>95.8</td>
</tr>
<tr>
<td>81 - 90</td>
<td>1</td>
<td>2.1</td>
<td>95.8</td>
</tr>
<tr>
<td>71 - 80</td>
<td>1</td>
<td>2.1</td>
<td>93.7</td>
</tr>
<tr>
<td>61 - 70</td>
<td>4</td>
<td>8.3</td>
<td>91.6</td>
</tr>
<tr>
<td>51 - 60</td>
<td>0</td>
<td>0</td>
<td>83.3</td>
</tr>
<tr>
<td>41 - 50</td>
<td>6</td>
<td>12.5</td>
<td>83.3</td>
</tr>
<tr>
<td>31 - 40</td>
<td>8</td>
<td>16.7</td>
<td>70.8</td>
</tr>
<tr>
<td>21 - 30</td>
<td>6</td>
<td>12.5</td>
<td>54.1</td>
</tr>
<tr>
<td>11 - 20</td>
<td>16</td>
<td>33.3</td>
<td>41.6</td>
</tr>
<tr>
<td>10 or less</td>
<td>4</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: * In two cases, the responses were not valid.
Mean = 35.33; Median = 24.50; Std. Dev. = 27.122; Minimum = 4; Maximum = 135

Table 4.9: Students enrolled in Deaf Education programs
For the 50 teacher education programs completing the survey, the estimated number of students who graduated from the TEDHH programs in 2004-2005 ranged from 0 to 37. The mean was 9.48, and the median was 8. The mode was also 8, whereas 52.1% of the programs estimated that 6 - 10 students would graduate from their TEDHH programs (Table 4.10). These students represented both undergraduate and graduate (Master's and Ph.D.) students. Because the original survey question asked the number of students enrolled in and graduating from the programs in the 2004-2005 school year, the respondents reported both undergraduate and graduate students.

<table>
<thead>
<tr>
<th>Graduating Students Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 - 40</td>
<td>1</td>
<td>2.1</td>
<td>100.0</td>
</tr>
<tr>
<td>31 - 35</td>
<td>0</td>
<td>0.0</td>
<td>97.9</td>
</tr>
<tr>
<td>26 - 30</td>
<td>0</td>
<td>0.0</td>
<td>97.9</td>
</tr>
<tr>
<td>21 - 25</td>
<td>0</td>
<td>0.0</td>
<td>97.9</td>
</tr>
<tr>
<td>16 - 20</td>
<td>5</td>
<td>10.4</td>
<td>87.5</td>
</tr>
<tr>
<td>11 - 15</td>
<td>8</td>
<td>16.7</td>
<td>70.8</td>
</tr>
<tr>
<td>6 - 10</td>
<td>25</td>
<td>52.1</td>
<td>18.8</td>
</tr>
<tr>
<td>5 or less</td>
<td>9</td>
<td>18.8</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>48*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In two cases, the responses were not valid.

Mean = 9.48; Median = 8.00; Mode = 8; Std. Dev. = 6.291; Minimum = 0; Maximum = 37

Table 4.10: Students graduating from Deaf Education programs in 2004-2005

For the 47 TEDHH programs that responded to the question concerning the total number of faculty member who were teaching in the TEDHH programs, the faculty number ranged from 1 to 40 (Table 4.11). The median was 3, and the mode was 1.
<table>
<thead>
<tr>
<th>Number of Faculty Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 or more</td>
<td>3</td>
<td>6.4</td>
<td>100.0</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>2.1</td>
<td>93.6</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>2.1</td>
<td>91.5</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>6.4</td>
<td>89.4</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>6.4</td>
<td>83.0</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>6.4</td>
<td>76.6</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>8.5</td>
<td>70.2</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>10.6</td>
<td>61.7</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>17.0</td>
<td>51.1</td>
</tr>
<tr>
<td>2.5</td>
<td>1</td>
<td>2.1</td>
<td>34.0</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>10.6</td>
<td>31.9</td>
</tr>
<tr>
<td>1.5</td>
<td>1</td>
<td>2.1</td>
<td>21.3</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>19.1</td>
<td>19.1</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>47*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In three cases, the responses were not valid.
Mean = 5.57; Median = 3.00; Mode = 1; Std. Dev. = 7.321; Minimum = 1; Maximum = 40

Table 4.11: Total number of faculty in the TEDHH programs

Among the 47 programs, 19.1% reported having one full-time faculty in their programs; however, three programs reported having more than 11. These faculty numbers included full-time, part-time, adjunct, and other instructors. The programs that reported having more than nine included the faculty members who taught in the TEDHH programs but also specialized in other areas. For example, one program that reported having 40 faculty members in the program stated they were reporting the number of faculty members in the entire College of Education because their students were required to take content courses in reading, science, math, etc. On the other hand, the programs having lower faculty numbers appeared to be reporting only those who specialized in deaf or hard of hearing program, as evidenced by their written comments.
Follow-up survey questions requested the programs to report the number of faculty in the following five positions: a) full-time faculty in Deaf Education, b) full-time faculty teaching in both Deaf Education and other education courses, c) part-time faculty in Deaf Education, d) adjunct faculty in Deaf Education, and e) other instructional positions in Deaf Education. For the 50 TEDHH programs completing the survey, the responses to the question ranged from 23 to 48. The overwhelming majority of the respondents of the survey (96%) reported the number of full-time faculty positions in Deaf Education programs, whereas only 62% of the TEDHH programs reported the number of part-time faculty positions. Additionally, over 50% did not respond at all regarding the number of other instructional positions (Table 4.12). The relatively high rate of no responses was problematic for the data analysis.

In general, the majority of the TEDHH programs had one or two full-time faculty positions in their programs with the support of one or two full-time faculty from other program areas, one or two part-time faculty, one or two adjunct faculty, and one or two other instructional positions in their TEDHH programs. The mean number of full-time faculty in the TEDHH programs was 2.06, and the median was 2.00 with a mode of 2 (standard deviation is 2.985).

Over 83% of the TEDHH programs reported having fewer than two full-time faculty positions in their programs. Nearly 40% had two full-time faculty positions; however, one-third (33.3%) had only one such a position. Ten percent reported having no full-time faculty position in their TEDHH programs. On the other hand, two programs reported having more than five (5) full-time faculty in their TEDHH programs. The maximum was 21. This response might be a result of the respondents' interpretation of
the question regarding "Full-time faculty positions in Deaf Education programs." Some respondents may have reported the number of the entire faculty members in their colleges or sections.

<table>
<thead>
<tr>
<th>Current Issues</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-time faculty positions in Deaf Education programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 or more</td>
<td>2</td>
<td>4.2</td>
<td>95.8</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
<td>95.8</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>12.5</td>
<td>95.8</td>
</tr>
<tr>
<td>2</td>
<td>19</td>
<td>39.6</td>
<td>83.3</td>
</tr>
<tr>
<td>1</td>
<td>16</td>
<td>33.3</td>
<td>43.8</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
<td>10.4</td>
<td>10.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>48*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In two cases, the responses were not valid.
Mean = 2.06; Median = 2.00; Mode = 2; Std. Dev. = 2.985; Skewness = 5.671;
Minimum = 0; Maximum = 21

<table>
<thead>
<tr>
<th>Current Issues</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-time faculty positions teaching both Deaf Education and other education courses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 or more</td>
<td>1</td>
<td>2.5</td>
<td>100.0</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>2.5</td>
<td>97.5</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>5.0</td>
<td>95.0</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>17.5</td>
<td>90.0</td>
</tr>
<tr>
<td>1</td>
<td>15</td>
<td>37.5</td>
<td>72.5</td>
</tr>
<tr>
<td>0</td>
<td>14</td>
<td>35.0</td>
<td>35.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In ten cases, the responses were not valid.
Mean = 1.23; Median = 1.00; Mode = 1; Std. Dev. = 1.732; Skewness = 3.562;
Minimum = 0; Maximum = 10

Table 4.12: Faculty members teaching in TEDHH programs

Continued
### Part-time faculty positions in Deaf Education programs

<table>
<thead>
<tr>
<th>Count</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or more</td>
<td>2</td>
<td>6.5</td>
<td>100.0</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>9.6</td>
<td>93.5</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>6.5</td>
<td>83.9</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>9.7</td>
<td>77.5</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>32.3</td>
<td>67.8</td>
</tr>
<tr>
<td>0</td>
<td>11</td>
<td>35.5</td>
<td>35.5</td>
</tr>
<tr>
<td>Total</td>
<td>31*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 19 cases, the responses were not valid.

Mean = 1.61; Median = 1.00; Mode = 0; Std. Dev. = 2.124; Skewness = 1.930; Minimum = 0; Maximum = 8

### Adjunct faculty positions in Deaf Education programs

<table>
<thead>
<tr>
<th>Count</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or more</td>
<td>6</td>
<td>16.2</td>
<td>100.0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>10.8</td>
<td>83.8</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>8.1</td>
<td>73.0</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>21.6</td>
<td>64.9</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>21.6</td>
<td>43.2</td>
</tr>
<tr>
<td>0</td>
<td>8</td>
<td>21.6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>37*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 13 cases, the responses were not valid.

Mean = 2.30; Median = 2.00; Mode = 2, 1, and 0; Std. Dev. = 2.053; Skewness = 0.715; Minimum = 0; Maximum = 6

### Other instructional positions in Deaf Education programs

<table>
<thead>
<tr>
<th>Count</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or more</td>
<td>2</td>
<td>8.7</td>
<td>100.0</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
<td>91.3</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>13.0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>34.8</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>8</td>
<td>34.8</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 27 cases, the responses were not valid.

Mean = 2.39; Median = 1.00; Mode = 1 and 0; Std. Dev. = 4.915; Skewness = 3.075; Minimum = 0; Maximum = 20
For example, one program reported having 21 full-time faculty members but added the written comment that they also taught other courses or did research. Another reported having 10 total full-time faculty, but this figure represented a combination of those in Deaf Education and those who taught both Deaf Education and other education courses. Such ambiguity in the interpretation of "Full-time faculty position in Deaf Education programs" appeared to result in a variety of responses among the respondents.

The mean number of full-time faculty teaching both Deaf Education and Other Education courses was 1.23, and the median and the mode were both 1.00 with a standard deviation of 1.732. Over 90% of the TEDHH programs had fewer than two such full-time faculty positions. Of the 90%, 37.5% had only one such faculty position and 35% reported no such faculty positions in their programs. Ten programs did not respond to the question, which comprised 20% of the 50 possible respondent programs.

Of the 50 TEDHH programs, 31 programs (62% of the total of 50 programs) reported the number of part-time faculty positions in their TEDHH programs. The mean was 1.61, and the median was 1.00 (a standard deviation = 2.124). However, 35.5% reported having none in their programs (a mode of 0), whereas 32.3% reported having one, and 9.7% reported having two. Thus, 77.5% had fewer than two part-time faculty positions in their TEDHH programs.

The mean number of adjunct faculty positions in Deaf Education programs was 2.30 and the median was 2.00. Three modes (2, 1, and 0) were observed, which led to the result of 64.9% having fewer than two adjunct faculty positions in the TEDHH programs. However, 16.2% of the programs reported having more than five adjunct faculty positions in their programs. The maximum was six. Although eight programs reported
having no adjunct faculty in their programs, 13 programs, which comprised 26% of the 50 programs completing the survey, did not respond to the question.

Regarding other instructional positions in the TEDHH programs, less than a half of the programs responded to the question (46%). The mean number of other instructional positions was 2.39 but the median was 1.00. There were two modes observed, one (34.8%) and none (34.8%). Combined with the 13.0% having two other instructional positions, this resulted over 82% of the programs having fewer than two other instructional positions in the TEDHH programs. Two programs reported having more than five such positions. The maximum was 20.

Sixteen TEDHH programs provided specifications describing the “other instructional positions.” Among the 16, 37.5% mentioned having instructors or lecturers who taught sign language courses or ASL classes. An additional 18.8% reported having a faculty member to teach Audiology courses.

Research Question Two

What are the current characteristics of the teacher education program curriculum for the students who are deaf and hard of hearing in each of the three broad ‘teacher-education’ areas of study requirements: (1) general education, (2) professional education, and (3) a third program component called “majors,” “areas of concentration,” “areas of emphasis,” and so forth?

Among the 50 total programs completing the survey, 30 programs responded to the query asking the number of General Education courses required in receiving a teacher certification or license. Table 4.13 shows the number of courses in General Education requirements for teacher certification / licensure. For the 30 programs (60% of the total
respondent programs), the number of courses required in General Education ranged from 0 to 26. One-third of the programs (33.3%) required between 11 – 15 courses and 60% required less than 15 courses.

<table>
<thead>
<tr>
<th>Number of General Ed. Courses Interval</th>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>26 – 30</td>
<td>1</td>
<td>3.3</td>
<td>100.0</td>
</tr>
<tr>
<td>21 – 25</td>
<td>3</td>
<td>9.9</td>
<td>96.7</td>
</tr>
<tr>
<td>16 – 20</td>
<td>8</td>
<td>26.7</td>
<td>86.7</td>
</tr>
<tr>
<td>11 – 15</td>
<td>10</td>
<td>33.3</td>
<td>60.0</td>
</tr>
<tr>
<td>6 - 10</td>
<td>0</td>
<td>0</td>
<td>26.7</td>
</tr>
<tr>
<td>5 or less</td>
<td>8</td>
<td>26.7</td>
<td>26.7</td>
</tr>
<tr>
<td>Total</td>
<td>30*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 20 cases, the responses were not valid.
Mean = 12.83; Median = 15.00; Mode = 15; Std. Dev. = 7.437; Skewness = -.337
Minimum = 0; Maximum = 26

Table 4.13: Number of required courses in General Education for certification / licensure

Among them, two programs required 0 courses in General Education. An additional 11 programs (although they did not respond to this query) provided written comments regarding General Education courses and their programs. Six stated that they were Graduate programs and General Education courses were considered as pre-requisites. Furthermore, five programs indicated similar responses, but they reported the number required courses in General Education depending on students' Undergraduate backgrounds.

The distribution of the number of courses is negatively skewed with a mean of 12.83 (standard deviation = 7.437), a median of 15, and a mode of 15.
Table 4.14 indicates 33 TEDHH programs responded to the query asking the number of credit hours required in General Education to receive a teacher certification/licensure. For the 33 programs, the minimum credit hours required by the programs ranged from 0 to 124. These credit hours were converted basing semester term system.

<table>
<thead>
<tr>
<th>Credit Hours for General Ed. Courses Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>121 – 130</td>
<td>1</td>
<td>3.0</td>
<td>100.0</td>
</tr>
<tr>
<td>111 – 120</td>
<td>0</td>
<td>0.0</td>
<td>97.0</td>
</tr>
<tr>
<td>101 – 110</td>
<td>1</td>
<td>3.0</td>
<td>97.0</td>
</tr>
<tr>
<td>91 – 100</td>
<td>0</td>
<td>0.0</td>
<td>93.9</td>
</tr>
<tr>
<td>81 – 90</td>
<td>1</td>
<td>3.0</td>
<td>93.9</td>
</tr>
<tr>
<td>71– 80</td>
<td>0</td>
<td>0.0</td>
<td>90.9</td>
</tr>
<tr>
<td>61 – 70</td>
<td>2</td>
<td>6.1</td>
<td>90.9</td>
</tr>
<tr>
<td>51 – 60</td>
<td>8</td>
<td>24.2</td>
<td>84.8</td>
</tr>
<tr>
<td>41 – 50</td>
<td>11</td>
<td>33.3</td>
<td>60.6</td>
</tr>
<tr>
<td>31 – 40</td>
<td>1</td>
<td>3.0</td>
<td>27.3</td>
</tr>
<tr>
<td>21 – 30</td>
<td>1</td>
<td>3.0</td>
<td>24.2</td>
</tr>
<tr>
<td>11 - 20</td>
<td>3</td>
<td>9.1</td>
<td>21.2</td>
</tr>
<tr>
<td>10 or less</td>
<td>4</td>
<td>12.1</td>
<td>12.1</td>
</tr>
<tr>
<td>Total</td>
<td>33*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 17 cases, the responses were not valid.
Mean = 45.48; Median = 48.0; Mode 60, 51, and 12; Std. Dev. = 27.051; Skewness = .600;
Minimum = 0; Maximum = 124

Table 4.14: Credit hours required in General Education for certification/licensure

Among the 33 programs, one-third (33.3%) reported that they required between 41-50 credit hours of General Education courses for a teacher certification or licensure and 60.6% required less than 50 credit hours. The distribution of reported hours is
positively skewed with a mean of 45.48 (standard deviation = 27.051), a median of 48.0, and three modes of 12, 51, and 60.

Table 4.15 shows that among the 50 TEDHH programs completed the survey, 33 programs responded to the query. The number of Professional Education courses required for a teacher certification or licensure ranged from 0 to 23. Among the 33 programs, 42.4% required between 6 – 10 courses in Professional Education to receive a teacher certification or licensure whereas nearly 70% required less than 10 courses. The maximum was 23. The distribution of the number of courses is positively skewed with a mean of 8.70 (standard deviation = 5.525), a median of 7 and the two modes of 6 and 7.

<table>
<thead>
<tr>
<th>Number of Professional Ed. Courses Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 – 25</td>
<td>1</td>
<td>3.0</td>
<td>100.0</td>
</tr>
<tr>
<td>16 – 20</td>
<td>3</td>
<td>9.1</td>
<td>97.0</td>
</tr>
<tr>
<td>11 – 15</td>
<td>6</td>
<td>18.2</td>
<td>87.9</td>
</tr>
<tr>
<td>6 - 10</td>
<td>14</td>
<td>42.4</td>
<td>69.7</td>
</tr>
<tr>
<td>5 or less</td>
<td>9</td>
<td>27.3</td>
<td>27.3</td>
</tr>
<tr>
<td>Total</td>
<td>33*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 17 cases, the responses were not valid.
Mean = 8.70; Median = 7.00; Mode = 7 and 6; Std. Dev. = 5.525; Skewness = .974; Minimum = 0; Maximum = 23

Table 4.15: Number of courses in Profession Education required for teacher certification / licensure

For the 50 teacher education programs completing the survey, the minimum required hours in Professional Education to receive licensure / certification ranged from 0 to 86. For statistical comparison purpose, credit conversions of trimester and quarter...
term systems were conducted, basing all term systems on the semester credit systems. Minimum reported hours from each program was used for analysis. For this query, 35 TEDHH programs responded, which was 70% of the total 50 TEDHH programs completing the survey. Table 4.16 shows their response distributions.

<table>
<thead>
<tr>
<th>Credit Hours for Professional Ed. Courses Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>81 – 90</td>
<td>1</td>
<td>2.9</td>
<td>100.0</td>
</tr>
<tr>
<td>71– 80</td>
<td>0</td>
<td>0.0</td>
<td>97.1</td>
</tr>
<tr>
<td>61 – 70</td>
<td>1</td>
<td>2.9</td>
<td>97.1</td>
</tr>
<tr>
<td>51 – 60</td>
<td>0</td>
<td>0.0</td>
<td>94.3</td>
</tr>
<tr>
<td>41 – 50</td>
<td>3</td>
<td>8.6</td>
<td>94.3</td>
</tr>
<tr>
<td>31 – 40</td>
<td>3</td>
<td>8.6</td>
<td>85.7</td>
</tr>
<tr>
<td>21 – 30</td>
<td>10</td>
<td>28.6</td>
<td>77.1</td>
</tr>
<tr>
<td>11 – 20</td>
<td>12</td>
<td>34.3</td>
<td>48.6</td>
</tr>
<tr>
<td>10 or less</td>
<td>5</td>
<td>14.3</td>
<td>14.3</td>
</tr>
<tr>
<td>Total</td>
<td>35*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 15 cases, the responses were not valid.
Mean = 24.99; Median = 21.00; Mode = 30, 21, 18, 12 and 9; Std. Dev. = 17.243; Skewness = 1.737; Minimum = 0; Maximum = 86

Table 4.16: Credit hours required in Professional Education for teacher certification / licensure

The mean number of credit hours required in Professional Education for a teacher certification / licensure was 24.99. The median was 21, and five modes (30, 21, 18, 12, and 9) were observed. Over one-third of the 35 TEDHH programs (34.3%) required between 11 – 20 credit hours in Professional Education courses and 48.6% required less
than 20 credit hours in Professional Education to receive a teacher certification / licensure.

A slightly higher mean number was a result of the relatively high credit hours reported by two programs. The maximum was 86. This particular program was listed as having both undergraduate and graduate programs and reported constantly higher credit hours for this segment of questionnaire: 46 hours for General Education, 86 for Professional Education, and 33 for Subject Matters.

Table 4.17 shows the response distributions regarding the number of courses requiring in Subject Matter Education. Among the 50 TEDHH programs completing the survey, 38 programs (76% of the total 50 possible respondent programs) responded to the query.

<table>
<thead>
<tr>
<th>Number of Subject Matter Courses Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 – 25</td>
<td>2</td>
<td>5.3</td>
<td>100.0</td>
</tr>
<tr>
<td>16 – 20</td>
<td>5</td>
<td>13.2</td>
<td>94.7</td>
</tr>
<tr>
<td>11 – 15</td>
<td>19</td>
<td>50.0</td>
<td>81.6</td>
</tr>
<tr>
<td>6 - 10</td>
<td>11</td>
<td>28.9</td>
<td>31.6</td>
</tr>
<tr>
<td>5 or less</td>
<td>1</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 12 cases, the responses were not valid.
Mean = 12.95; Median = 13.00; Mode = 14 and 12; Std. Dev. = 4.197; Skewness = .692; Minimum = 5; Maximum = 24

Table 4.17: Number of courses in Subject Matter Education required for teacher certification / licensure
The number of Subject Matter Education courses required for a teacher certification or licensure ranged from 5 to 24. The mean was 12.95 and the median was 13, whereas two modes were found: 14 and 12. Among the 38 TEDHH programs, 50% required between 11 - 15 courses in Subject Matter Education, which matches with the results of mean, median, and modes. Over 81% of the programs required less than 15 courses in Subject Matter Education to receive a teacher certification or licensure.

For the 50 teacher education programs completing the survey, the minimum required credit hours in Subject Matter Education to receive a licensure / certification ranged from 10 to 72 (Table 4.18). For statistical comparison purpose, credit conversions of trimester and quarter term systems were conducted, basing all term systems on the semester credit systems. For the analysis, the minimum reported hours from each program was used for the statistical report. For this question, 39 TEDHH programs responded, which was 78% of the total 50 TEDHH programs, completed the survey.

Among the 39 TEDHH programs, the mean number of minimum required hours for Subject Matter Education was 38.39 and the median was 37. Multiple modes were observed: 42, 40, 30 and 24. Nearly 31% required between 21 – 30 credit hours in Subject Matter Education whereas 28.2% required between 31 – 40 credit hours. Over 61% of the programs required less than 40 credit hours in Subject Matter Education to receive a teacher certification / licensure. A slightly higher mean number was led by the higher credit hours required by several programs. The maximum was 72. The programs requiring more than 61 credit hours in Subject Matter Education all operated in a semester term system and listed as having both Undergraduate and Graduate programs.
and having a tendency for requiring slightly higher credit hours also in General Education courses.

<table>
<thead>
<tr>
<th>Credit Hours for Subject Matter Ed. Courses Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>71 – 80</td>
<td>1</td>
<td>2.6</td>
<td>100.0</td>
</tr>
<tr>
<td>61 – 70</td>
<td>2</td>
<td>5.1</td>
<td>97.4</td>
</tr>
<tr>
<td>51 – 60</td>
<td>2</td>
<td>5.1</td>
<td>92.3</td>
</tr>
<tr>
<td>41 – 50</td>
<td>10</td>
<td>25.6</td>
<td>87.2</td>
</tr>
<tr>
<td>31 – 40</td>
<td>11</td>
<td>28.2</td>
<td>61.5</td>
</tr>
<tr>
<td>21 – 30</td>
<td>12</td>
<td>30.8</td>
<td>33.3</td>
</tr>
<tr>
<td>11 - 20</td>
<td>0</td>
<td>0.0</td>
<td>2.6</td>
</tr>
<tr>
<td>10 or less</td>
<td>1</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>39*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 11 cases, the responses were not valid.

Mean = 38.59; Median = 37.00; Mode = 42, 40, 30, and 24; Std. Dev. = 12.985; Skewness = 0.605; Minimum = 10; Maximum = 72

Table 4.18: Credit hours required in Subject Matter Education for a teacher certification / licensure

When the TEDHH programs were asked whether or not their programs required Field-based Experiences prior to Student Teaching experiences, all 50 programs responded to the query (Figure 4.1). Among 50 TEDHH programs, 48 programs, which was 96% of the programs, required such experiences. Two programs reported not requiring such experiences, however, one program mentioned that they required observations instead of field-based experiences.
Figure 4.1: Is Field-based Experiences required prior to Student Teaching?

For the 48 programs requiring field-based experiences prior to student teaching experiences, the survey asked further information such as the number of courses and credit hours for field-based experiences. Forty-one programs (82% of the total 50 possible respondent programs) responded to the query. The number of courses in Field-based Experience for a teacher certification / licensure ranged from 0 to 9 (Table 4.19).

The mean number of courses for Field-based experiences, among the 41 programs, was 3.15 with a median of 3.0 and a mode of 2. Nearly a quarter of the 41
programs (24.4%) required two courses, and over 68% of the programs required less than three courses in Field-based experiences. Although one program required none in such experiences to receive a teacher certification or licensure, four programs (9.8% of the 41 programs) required more than eight courses. The maximum number of courses required was nine. Two programs reported requiring nine courses. One of them appeared to misinterpret the query. Based on their written comment and their response for the next query (the number of credit hours required for Field-based experiences - reported as five credit hours for nine courses), it is likely a misinterpretation of the query. The other three responses of requiring more than eight courses appeared to be accurate considering they were requiring 21 – 32 credit hours for Field-based experiences.

<table>
<thead>
<tr>
<th>Number of Field-based Experience Courses</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>4.9</td>
<td>100.0</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>4.9</td>
<td>95.1</td>
</tr>
<tr>
<td>7</td>
<td>0</td>
<td>0</td>
<td>90.2</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>0</td>
<td>90.2</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>9.8</td>
<td>90.2</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>12.2</td>
<td>80.5</td>
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<td>3</td>
<td>9</td>
<td>21.9</td>
<td>68.3</td>
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<tr>
<td>2</td>
<td>10</td>
<td>24.4</td>
<td>46.3</td>
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<tr>
<td>1</td>
<td>8</td>
<td>19.5</td>
<td>21.9</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>41*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In nine cases, the responses were not valid.
Mean = 3.15; Median = 3.00; Mode = 2; Std. Dev. = 2.197; Skewness = 1.321; Minimum = 0; Maximum = 9

Table 4.19: Number of courses in Field-based Experiences required for teacher certification / licensure
For the query regarding the credit hours required in Field-based experiences for a teacher certification / licensure, 41 programs responded. However, the rest of the nine programs, which was 18% of the 50 TEDHH programs completing the survey, did not respond (Table 4.20).

<table>
<thead>
<tr>
<th>Credit Hours for Field-based Experiences Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>141 – 150</td>
<td>2</td>
<td>4.9</td>
<td>100.0</td>
</tr>
<tr>
<td>131 – 140</td>
<td>1</td>
<td>2.4</td>
<td>95.1</td>
</tr>
<tr>
<td>121 – 130</td>
<td>0</td>
<td>0</td>
<td>95.1</td>
</tr>
<tr>
<td>111 – 120</td>
<td>0</td>
<td>0</td>
<td>95.1</td>
</tr>
<tr>
<td>101 – 110</td>
<td>0</td>
<td>0</td>
<td>95.1</td>
</tr>
<tr>
<td>91 – 100</td>
<td>0</td>
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<td>95.1</td>
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<tr>
<td>81 – 90</td>
<td>0</td>
<td>0</td>
<td>95.1</td>
</tr>
<tr>
<td>71 – 80</td>
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<td>51 – 60</td>
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<td>95.1</td>
</tr>
<tr>
<td>41 – 50</td>
<td>0</td>
<td>0</td>
<td>95.1</td>
</tr>
<tr>
<td>31 – 40</td>
<td>1</td>
<td>2.4</td>
<td>92.7</td>
</tr>
<tr>
<td>21 – 30</td>
<td>2</td>
<td>4.9</td>
<td>90.2</td>
</tr>
<tr>
<td>11 - 20</td>
<td>3</td>
<td>7.3</td>
<td>85.4</td>
</tr>
<tr>
<td>10 or less</td>
<td>32</td>
<td>78.0</td>
<td>78.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: * In nine cases, the responses were not valid.
Mean = 17.10; Median = 5.33; Mode = 3; Std. Dev. = 37.039; Skewness = 3.241; Minimum = 0; Maximum = 150

Table 4.20: Credit hours required in field-based experiences for teacher certification / licensure

Among the 41 TEDHH programs that responded to the query, the mean number of credit hours required in field-based experiences was 17.10. However, 78% required less than 10 credit hours (a mode of 3) and the median was 5.33. The mean appeared to
be influenced by the three responses with high credit hours. Two programs reported requiring 150 credit hours, and one program reported 135 hours. The two programs requiring maximum hours did not provide any information; however, the one reported to require 135 credit hours mentioned that they require 3 courses (5 credit). It seemed to be an error of representation. There were other programs responded requiring 4 credits in 150 clock hours. Considering these facts, it seems to be an error, and the responses should have been 150 or 135 clock hours instead of credit hours.

Among the 50 total respondent programs, 49 programs (98%) completed the query. The number of courses in Student Teaching required for a teacher certification or license ranged from 0 to 12 (Table 4.21). All programs except one required at least one course in Student Teaching. Nearly 80% of the program required 1 or 2 courses in Student Teaching Experiences. The mean number of courses was 2.00, however, the median and the mode were both 1.00.

The maximum number of courses required in Student Teaching was 12. As a note, the program reported that they required two types of courses: B-5 course and K-12 course. However, their requirement in credit hours in Student Teaching was only 8 credit hours. No further information was available regarding this high number of courses required by this program.
<table>
<thead>
<tr>
<th>Number of Student Teaching Courses</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>1</td>
<td>2.0</td>
<td>100.0</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>0</td>
<td>98.0</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>0</td>
<td>98.0</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>0</td>
<td>98.0</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>0</td>
<td>98.0</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>2.0</td>
<td>98.0</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>0</td>
<td>95.9</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>2.0</td>
<td>95.9</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>8.2</td>
<td>93.9</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>4.1</td>
<td>85.7</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>26.5</td>
<td>81.6</td>
</tr>
<tr>
<td>1</td>
<td>26</td>
<td>53.1</td>
<td>55.1</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>49</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: * In one case, the responses were not valid.
Mean = 2.00; Median = 1.00; Mode = 1; Std. Dev. = 1.947; Skewness = 3.389;
Minimum = 0; Maximum = 12

Table 4.21: Number of courses in student teaching required for teacher certification / licensure

All the 50 TEDHH programs completing the survey reported their minimum required hours in Student Teaching to receive a licensure / certification. The responses ranged from 0 to 400 (Table 4.22). For statistical comparison purpose, credit conversions of trimester and quarter term systems were conducted, basing all term systems on the semester credit systems. The minimum reported hours from each program was used for statistical reports. All 50 TEDHH programs responded to the query.
<table>
<thead>
<tr>
<th>Credit Hours for Student Teaching Interval</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 31</td>
<td>2</td>
<td>4.0</td>
<td>100.0</td>
</tr>
<tr>
<td>21 – 30</td>
<td>2</td>
<td>4.0</td>
<td>96.0</td>
</tr>
<tr>
<td>11 - 20</td>
<td>21</td>
<td>42.0</td>
<td>92.0</td>
</tr>
<tr>
<td>10 or less</td>
<td>25</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: Mean = 25.69; Median = 11.00; Mode = 12; Std. Dev. = 77.361; Skewness = 4.805; Minimum = 0; Maximum = 400

Table 4.22: Credit hours required in Student Teaching for teacher certification / licensure

Among the 50 TEDHH programs, the mean number of minimum required hours for Subject Matter Education was 25.69 and the median was 11.00. However, 50% of the programs required less than 10 credit hours in Student Teaching whereas an additional 42% required between 11 - 20 credit hours. On the other hand, two programs required more than 31 credit hours and both reported requiring "400." However, one of them also provided a note specifying "10 credits 16 weeks." Although the program reported "400" credit hours, they appeared to mean "10 credit hours." There appeared to be some confusion in the interpretation of the query.

Research Question Three

How do the programs conduct an evaluation of the teacher education program (e.g., exit interviews, deaf and hard of hearing students' performances, etc.)?
Among the 50 TEDHH programs completing the survey, 49 responded to the query as to whether or not they were nationally accredited. Over 83% of the programs were nationally accredited, and the rest (16%) were not (Figure 4.2).

![Pie chart showing 83.67% Yes and 16.33% No for national accreditation](image)

Note: n = 49

Figure 4.2: Is the TEDHH program nationally accredited?

For the questions regarding which national organization the TEDHH programs were accredited by, eight (8) programs did not provide valid answers. Table 4.23 shows the national organizations from which the TEDHH programs had received their
accreditation. Because of multiple responses, the total number in the table exceeds the total number of TEDHH programs that responded to the item (42).

<table>
<thead>
<tr>
<th>Types of national accreditation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCATE</td>
<td>32</td>
<td>76.2</td>
</tr>
<tr>
<td>CED</td>
<td>29</td>
<td>69.0</td>
</tr>
<tr>
<td>CEC</td>
<td>17</td>
<td>40.5</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>16.7</td>
</tr>
<tr>
<td>Total</td>
<td>85*</td>
<td></td>
</tr>
</tbody>
</table>

Note: * Due to multiple responses, the total exceeded the total number of survey respondents (50) and the total number that responded to the query (42).

Table 4.23: What national organizations granted accreditations to the TEDHH programs?

Notably over half of the 42 TEDHH programs were accredited either by the National Council for the Accreditation of Teacher Education (NCATE) or the Council on Education of the Deaf (CED). Seventeen percent of the programs were accredited by other organizations. Examples of "other organizations" included Teacher Education Accreditation Council, CA Commission on Teacher Credentialing, and the Western Association of Schools and Colleges (WASC). Although the query specifically asked about national accreditations, some programs responded that they had been accredited by the state or by the National Association of State Directors of Teacher Education and Certification (NASDTEC). Table 4.24 concerns the combinations of such national accreditation organizations by which the TEDHH programs were accredited.
Among the combinations most often seen, 23.8% had been accredited by NCATE, CED, and CEC, and an additional 21.4% had been accredited by NCATE and CED. A combined total of 45.2% of the programs had been accredited by both NCATE and CED. Nearly 60% of all NCATE accredited TEDHH programs had also been accredited by CED. Some of the programs appeared sought accreditation from both of these national organizations, but the respondents noted obstacles which inhibited them in their attempts, such as the number of faculty members and students, and administrative support.

<table>
<thead>
<tr>
<th>Types of national accreditation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCATE only</td>
<td>7</td>
<td>16.7</td>
</tr>
<tr>
<td>CED only</td>
<td>3</td>
<td>7.1</td>
</tr>
<tr>
<td>CEC only</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NCATE + CED</td>
<td>9</td>
<td>21.4</td>
</tr>
<tr>
<td>NCATE + CEC</td>
<td>5</td>
<td>11.9</td>
</tr>
<tr>
<td>CED + CEC</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>NCATE + CED + CEC</td>
<td>10</td>
<td>23.8</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>16.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>**42 ***</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: * In eight cases, the responses were not valid.

Table 4.24: Combinations of national accreditation held by the TEDHH programs

The "other" types of national organizations included several other combinations of organizations such as CED and the Teacher Education Accreditation Council; CEC, CED, and WASC; NCATE, CED, and CA Commission on Teacher Credentialing; and CEC, CED, and NASDTEC. There were two responses stating the respondents had CED
and state certification. It seems that there was some confusion in response to the question in that it did not ask about local or non-accrediting agencies.

For the 50 TEDHH programs completing the survey, over 90% of them reported having state accreditation whereas 4.17% reported having none. Figure 4.3 shows the results. One program (2%) reported that they did not know the answer.

Figure 4.3: Do the TEDHH programs have state accreditation?

Forty-eight TEDHH programs out of the 50 programs completed the question dealing with self-evaluations; more than 90% of the programs reported conducting self-
evaluations (Figure 4.4). All 48 programs provided further information regarding the ways in which these were conducted.

![Pie chart showing self-evaluation data]

Note: n = 48

Figure 4.4: Do the TEDHH programs conduct self-evaluation?

The survey asked the programs for the last date a program self-evaluation was implemented. For the 42 programs responding, two-thirds (66.7%) reported that they conducted a self-evaluation in 2004 or that they were in the process of conducting one (Table 4.25). About seven percent (7%) of the programs indicated that they had conducted their last self-evaluations more than four (4) years ago.
<table>
<thead>
<tr>
<th>Last Self-evaluation conducted</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>28</td>
<td>66.7</td>
<td>100.0</td>
</tr>
<tr>
<td>2003</td>
<td>5</td>
<td>11.9</td>
<td>33.3</td>
</tr>
<tr>
<td>2002</td>
<td>6</td>
<td>14.3</td>
<td>21.4</td>
</tr>
<tr>
<td>2001</td>
<td>1</td>
<td>2.4</td>
<td>7.1</td>
</tr>
<tr>
<td>2000</td>
<td>1</td>
<td>2.4</td>
<td>4.8</td>
</tr>
<tr>
<td>1999</td>
<td>1</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>42*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In eight cases, the responses were not valid.

Table 4.25: The last time the TEDHH programs conducted a self-evaluation

One of the follow-up questions asked how often the programs conducted self-evaluations. Thirty-six (36) programs provided valid responses. Ten programs provided no responses to the question and another four did not provide valid responses by mentioning that self-evaluation was "on-going" in their programs at the time (Table 4.26).

For the 36 TEDHH programs that responded, 47.2% conducted a program self-evaluation annually, and for 58% of the programs, it was possible that self-evaluations could be conducted more than once annually. On the other hand, the maximum interval for conducting self-evaluation was every seven years, whereas the minimum interval was every semester or session. The one program that reported their self-evaluations were conducted every seven years also stated being accredited by both NCATE and CEC in addition to state accreditation. Nearly 20% of the programs reported the interval conducting self-evaluations were five to seven years. One program, in a written
comment, mentioned that they conducted their evaluations as a "school review process" and had done so last year. Current NCATE standards (2002) specify that their program visitations are to be conducted every five to seven years. Based on this information, it seems that some TEDHH programs schedule their self-evaluations to correspond to the NCATE accreditation team visitations.

<table>
<thead>
<tr>
<th>Duration intervals between self-evaluation</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every 7 years</td>
<td>1</td>
<td>2.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Every 6 years</td>
<td>1</td>
<td>2.8</td>
<td>97.2</td>
</tr>
<tr>
<td>Every 5 years</td>
<td>5</td>
<td>13.9</td>
<td>94.4</td>
</tr>
<tr>
<td>Every 4-5 years</td>
<td>2</td>
<td>5.6</td>
<td>80.5</td>
</tr>
<tr>
<td>Every 4 years</td>
<td>1</td>
<td>2.8</td>
<td>74.9</td>
</tr>
<tr>
<td>Every 3 years</td>
<td>3</td>
<td>8.3</td>
<td>72.1</td>
</tr>
<tr>
<td>Every 2 years</td>
<td>1</td>
<td>2.8</td>
<td>63.9</td>
</tr>
<tr>
<td>Annually</td>
<td>17</td>
<td>47.2</td>
<td>61.1</td>
</tr>
<tr>
<td>Whenever students graduate</td>
<td>1</td>
<td>2.8</td>
<td>13.9</td>
</tr>
<tr>
<td>Every semester / session</td>
<td>3</td>
<td>8.3</td>
<td>11.1</td>
</tr>
<tr>
<td>No regular set time</td>
<td>1</td>
<td>2.8</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>36*</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: * In 14 cases, the responses were not valid.

Table 4.26: How often the TEDHH programs conduct self-evaluation

In regard to how they conducted self-evaluations, 43 TEDHH programs provided written comments. The content of the comments was analyzed. Based on the analysis, four categories emerged: a) Who requested the evaluations (Sponsors), b) How the evaluations were conducted (Instrumentation), c) Who was involved in the self-
evaluations (Evaluation sample), and d) What evaluation strategies were utilized (General evaluation strategies).

Table 4.27 shows the distribution of comments as classified into the four categories that emerged: Sponsors, Instrumentation, Evaluation sample, and General evaluation strategies, was 55.8%, 48.8%, 69.8%, and 39.5% respectively. Because the comments were cross-classified in multiple categories, the total for frequency and percentile is not equal to the total number of respondents to the query (43) nor is it equal to 100%.

<table>
<thead>
<tr>
<th>Comments about:</th>
<th>Frequency*</th>
<th>Percent**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsors</td>
<td>24</td>
<td>55.8</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>21</td>
<td>48.8</td>
</tr>
<tr>
<td>Evaluation sample</td>
<td>30</td>
<td>69.8</td>
</tr>
<tr>
<td>General evaluation strategies</td>
<td>17</td>
<td>39.5</td>
</tr>
</tbody>
</table>

Note: * Due to the multiple classification of the comments, the total exceeds the total number of query respondents (43). ** Percentage frequency of the comment among the 43 query respondents.

Table 4.27: Types of information found in the comments

In the following section, the four coding categories (Sponsors, Instrumentation, Evaluation sample, and General evaluation strategies) are discussed in detail.

In Table 4.28, two sub-categories which emerged from the analysis of the Sponsors category are presented. Among the 24 TEDHH programs responding to this
question, 62.5% reported that their self-evaluations were conducted to prepare a report to the state or national organizations (i.e., NCATE, CED, etc.). The same percentile of the programs (62.5%) indicated that their self-evaluations were conducted for or requested by the university, specifically by their departments, colleges, or graduate schools. Two-fifths of the programs (40% of the above 62.5%) identified both, universities and state / national organizations as the recipients of the evaluation results. It was interesting to note that in relation to how self-evaluations were conducted, 25% reported only sponsors and nothing else.

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Frequency*</th>
<th>Percent**</th>
</tr>
</thead>
<tbody>
<tr>
<td>State / National Organizations</td>
<td>15</td>
<td>62.5</td>
</tr>
<tr>
<td>University (including Department or College)</td>
<td>15</td>
<td>62.5</td>
</tr>
<tr>
<td>Total</td>
<td>30*</td>
<td></td>
</tr>
</tbody>
</table>

Note: * Due to the multiple classification of the comments, the total exceeds the total number of identified responses (24). ** Percentage frequency of each comment among the 24 respondents who referred to Sponsors.

Table 4.28: Organizations to whom the TEDHH programs report self-evaluations

Table 4.29 shows additional coding classifications of the Instrumentation category. From the comments of the 21 TEDHH programs who referred to Instrumentation, the following three sub-coding categories emerged: a) interviews, b) surveys, and c) meetings / advisory board. Two-thirds (66.7%) of the respondents providing comments stated that they conducted surveys for their self-evaluations. The
rest (33.3%) had meetings and / or created advisory boards. Among the 33.3% of the programs mentioning meetings and / or advisory boards, one program (4.8%) also said that they conducted interviews.

<table>
<thead>
<tr>
<th>Instrumentation</th>
<th>Frequency*</th>
<th>Percent**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveys</td>
<td>14</td>
<td>66.7</td>
</tr>
<tr>
<td>Meeting / Advisory board</td>
<td>7</td>
<td>33.3</td>
</tr>
<tr>
<td>Interviews</td>
<td>1</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: * Due to the multiple classification of the comments, the total exceeds the total number of identified responses (21). ** Percentage frequencies of each comment among the 21 respondents who referred to Measurements.

Table 4.29: How the TEDHH Programs Conducted Self-Evaluations

Six categories of evaluation sample emerged from the comments of the institutions completing the survey. They were a) Students, b) Postgraduates, c) Employers of postgraduates, d) Faculty, e) Advisory board / Meeting, and f) Field / Student teaching experience placement sites (Table 4.30). Initially, the 30 comments were classified together in the Evaluation sample category. Among these, 73.3% mentioned that their self-evaluation sample was current students in their TEDHH programs, and 60.0% reported that graduates of the programs were their target population. These two groups were the major respondents of their self-evaluations. A few programs indicated that they incorporated the evaluations from K-12 fields into their
self-evaluation processes. For example, the programs mentioned that they sent surveys to the employers of their program graduates as well as received feedback from the field / student teaching placement sites of their current students as a part of their self-evaluation process.

<table>
<thead>
<tr>
<th>Evaluation Sample</th>
<th>Frequency*</th>
<th>Percent**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>22</td>
<td>73.3</td>
</tr>
<tr>
<td>Postgraduates</td>
<td>18</td>
<td>60.0</td>
</tr>
<tr>
<td>Employers of postgraduates</td>
<td>8</td>
<td>26.7</td>
</tr>
<tr>
<td>Faculty</td>
<td>6</td>
<td>20.0</td>
</tr>
<tr>
<td>Participants of Advisory board / meeting</td>
<td>5</td>
<td>16.7</td>
</tr>
<tr>
<td>Field / Student teaching placement sites</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>61</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: * Due to the multiple classification of the comments, the total exceeds the total number of responses identified (30). ** Percentage frequencies of each comment among the 30 respondents who referred to Respondents.

Table 4.30: Who were the Respondents to the Self-Evaluations?

Table 4.31 presents general evaluation strategies utilized by the TEDHH programs for their self-evaluation. For 17 programs responding to the question, over 60% utilized course evaluations, 53% conducted program evaluations, and 47% collected student achievements. Course evaluations were generally collected each session /
semester from current students in the programs, and program evaluations were conducted at the end of the programs or after the students had completed their programs.

Examples of the respondents' comments includes:

- Every course is evaluated every semester by the university. Follow-up evaluations are conducted by the college after students have worked for a year;

- Ongoing -student evaluation, curriculum review by faculty and professional development school members;

- Program evaluations, course evaluations, observational practicum evaluations, faculty evaluations, alumni evaluations, committees (regular and special) / external / advisory boards.

<table>
<thead>
<tr>
<th>General Evaluation Strategies</th>
<th>Frequency*</th>
<th>Percent**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Evaluation</td>
<td>11</td>
<td>64.7</td>
</tr>
<tr>
<td>Program Evaluation</td>
<td>9</td>
<td>52.9</td>
</tr>
<tr>
<td>Student Achievements</td>
<td>8</td>
<td>47.1</td>
</tr>
<tr>
<td>Faculty Evaluation</td>
<td>5</td>
<td>29.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note: * Due to the multiple classification of the comments, the total exceeds the total number of responses identified (17). ** Percentage frequencies of each comment among the 24 respondents who referred to Sponsors.

Table 4.31: What program evaluation strategies did the TEDHH programs utilize?
Combinations of cross-classifications are also analyzed (Table 4.32). A little over 25% of the programs responding to the question (43) reported only sponsors as those who requested the self-evaluations, or in another words, to whom they were planning to report evaluation results. For example, to the query asking how they conducted their self-evaluations, they responded:

- 5 yr reviews / formal, Annual in-house reviews (university / colleges);
- (1) As a requirement of CED, (2) as a requirement of CEC and NCATE, (3) as a requirement for university program review; and
- Annual review by department.

Those comments were classified as reporting only about sponsors.

<table>
<thead>
<tr>
<th>Comments about:</th>
<th>Frequency*</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only Sponsors</td>
<td>11</td>
<td>25.6</td>
</tr>
<tr>
<td>Sponsors + General evaluation strategies</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Evaluation sample + General evaluation strategies</td>
<td>4</td>
<td>9.3</td>
</tr>
<tr>
<td>Instrumentation + Evaluation sample</td>
<td>10</td>
<td>23.3</td>
</tr>
<tr>
<td>Sponsors + Instrumentation + Evaluation sample</td>
<td>5</td>
<td>11.6</td>
</tr>
<tr>
<td>Sponsors + Evaluation sample + General evaluation strategies</td>
<td>5</td>
<td>11.6</td>
</tr>
<tr>
<td>Instrumentation + Evaluation sample + General evaluation strategies</td>
<td>5</td>
<td>11.6</td>
</tr>
<tr>
<td>Sponsors + Instrumentation + Evaluation sample + General evaluation strategies</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.32: Combinations of cross-classifications
The category "Sponsors" was the only category that was found in cross-classifications with other categories as well as standing alone. The comments classified in the other three categories were found only in combination with other categories. Instrumentation and Evaluation sample were the two categories mentioned most frequently together. For example, 23.3% of the respondents mentioned only Instrumentation and Evaluation sample; an additional 11.6% listed Sponsors with Instrumentation and Evaluation sample information. Further, another 11.6% reported Instrumentation and Evaluation sample with information about the general strategies of evaluations conducted, and 2.3% reported all four types of information. Following are some examples of comments categorized as Instrumentation and Evaluation sample:

- Currently doing a self-study for CED accreditation; annually do a self-evaluation involving the advisory board, the faculty and former graduates;
- Exit interviews with graduating students; and
- We conduct Student Outcomes Assessment where we survey alumni and their employers.

**Research Question Four**

**What issues related to deaf education in the U.S. do teacher educators perceive as critical and what recommendations do they make?**

In order to respond to this research question, the responses to the ten Likert-type questions and three open-ended questions were analyzed. Of the ten Likert-type questions, nine items had been selected from the literature review as issues in current teacher education in Deaf Education. The respondents were asked to rate the issues according to their level of agreement from 0 (Not an issue) to 5 (Most pressing issue).
The last Likert-type question was a semi open-ended question, in which the respondents were asked to suggest an issue that they perceived as a pressing issue in Deaf Education.

The results of the nine Likert-types questions are presented in Tables 4.33 – 4.35. The three groups (Most / Moderately / Less pressing issues) were arbitrarily determined based on the responses. The combined percentile of scale responses 4 and 5 was used for the arbitrary ranking: issues with a combined percentile of over 60% comprise the Most Pressing Issue group, those with a combined percentile of 40% - 60% comprise the Moderately Pressing Issue group, and those with a combined percentile of less than 40% comprise the Less Pressing Issue group.

*State Requirements for Beginning Teachers, the Critical Shortage of Classroom Teachers in Deaf Education, and the Critical Shortage of Higher Education Instructors in Deaf Education* were identified as the three most pressing issues in preparing teachers in Deaf Education. *Collaboration with K-12 Classroom Teachers in Deaf Education, NCATE/CEC Requirements for Beginning Teachers, Collaboration with General Elementary/Secondary Classroom Teacher, and Too Broad K-12 Certification/Licensure Range in Deaf Education* were considered moderately pressing issues. The last two, *Collaboration with General Elementary/Secondary Instructors in Higher Education, and Requirements from Your Institution (College/University)* were grouped in the less pressing issues area.
4.33: Most pressing issues in preparing teachers in Deaf Education (Valid percentage indicated in parentheses)
<table>
<thead>
<tr>
<th>Issue</th>
<th>5 Most Pressing Issue</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1 Least Pressing Issue</th>
<th>0 Not an Issue</th>
<th>Missing</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration with K-12 classroom teachers in Deaf Education</td>
<td></td>
<td>8</td>
<td>17</td>
<td>13</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>48</td>
<td>3.28</td>
<td>1.317</td>
</tr>
<tr>
<td>Too broad K-12 certification/licensure range in Deaf Education</td>
<td></td>
<td>11</td>
<td>10</td>
<td>12</td>
<td>11</td>
<td>4</td>
<td>2</td>
<td>50</td>
<td>3.20</td>
<td>1.366</td>
</tr>
<tr>
<td>Collaboration with general elementary / secondary classroom teachers</td>
<td></td>
<td>5</td>
<td>19</td>
<td>14</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>50</td>
<td>3.15</td>
<td>1.301</td>
</tr>
<tr>
<td>NCATE/CEC requirements for beginning teachers</td>
<td></td>
<td>11</td>
<td>14</td>
<td>11</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>49</td>
<td>3.13</td>
<td>1.674</td>
</tr>
</tbody>
</table>

4.34: Moderately pressing issues in preparing teachers in Deaf Education (Valid percentage indicated in parentheses)

<table>
<thead>
<tr>
<th>Issue</th>
<th>5 Most Pressing Issue</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1 Least Pressing Issue</th>
<th>0 Not an Issue</th>
<th>Missing</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration with general elementary / secondary instructors in Higher Education</td>
<td></td>
<td>4</td>
<td>15</td>
<td>13</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>49</td>
<td>2.83</td>
<td>1.342</td>
</tr>
<tr>
<td>Requirements from your institution (College/University)</td>
<td></td>
<td>6</td>
<td>12</td>
<td>11</td>
<td>11</td>
<td>5</td>
<td>3</td>
<td>48</td>
<td>2.87</td>
<td>1.388</td>
</tr>
</tbody>
</table>

4.35: Less pressing issues in preparing teachers in Deaf Education (Valid percentage indicated in parentheses)
According to the scale results, state standards and the recruitment of teachers and teacher educators in Deaf Education were most pressing issues that the TEDHH programs need to resolve. Certification and national accreditation requirements as well as collaboration with and among teachers are the next in importance, and collaboration among higher education faculty and the university/college requirements are also thought of as pressing issues.

Analysis of the verbatim comments told a slightly different story. In the survey, there were three open-ended questions and one semi open-ended question to gain further insight from the respondents regarding their views of the issues in Deaf Education and their recommendations. The three open-ended questions were in the Part II of the survey and one semi open-ended question was the last question in the scale section in Part I. In Part II, respondents were asked what recommendations they would make regarding Deaf Education in the United States today. Thirty-seven (37) individuals responded to the question. Further, as follow-up to this question, the respondents were asked to provide brief responses to the following: a) Further comments or thoughts about deaf education, and b) Do you have any thoughts or comments you wish to share about deaf education? Twenty-one respondents shared their thoughts and insights in response to the former, and 13 responded to the latter. Finally, in the last question of the scale section, respondents were asked to share their thoughts regarding current issues in preparing teachers for students who are deaf and hard of hearing. Twenty respondents shared their insights.

After content analysis and discussion with two Ph.D. candidates in the College of Education, the following five codes emerged: a) program, b) curriculum and assessment, c) communication / language, d) teacher recruitment and certification, and e) teaching
and learning in the K-12 field. Table 4.36 shows the distribution of the emerging recommendation themes. The total of the frequency of recommendations exceeds the total number of respondents to each question because multiple recommendation themes were used to classify a comment, even the single comment of one respondent.

A total of 143 statements from the 37 respondents were analyzed. Over 60% were identified as Teacher Education program recommendations, 30.8% were related to curriculum and assessment, and 24.2% were recommendations related to communication/language, 19.8% were related to teacher recruitment and certification, and another 19.8% were recommendations related to teaching and learning in the K-12 field. Program recommendations and curriculum and assessment were the two major areas about which the respondents made comments and/or recommendations. This appeared to be consistent in all four questions.

In the comments responding to the first question, what recommendations would the respondents made regarding Deaf Education in the U.S., 68 different themes were identified in responses from 37 respondents. Among them, 73% were classified as program recommendations and 43.2% were related to curriculum and assessment. These two areas seemed to dominate among the themes identified.
<table>
<thead>
<tr>
<th>What recommendations would you make regarding deaf education in the United States today? (n=37)</th>
<th>Program and Curriculum and Assessment</th>
<th>Communication/Language</th>
<th>Teacher Recruitment and Certification</th>
<th>Teaching and Learning in K-12 field</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 (73.0)</td>
<td>16 (43.2)</td>
<td>11 (29.7)</td>
<td>6 (16.2)</td>
<td>8 (21.6)</td>
<td>68*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Further comments or thoughts about deaf education (n=21)</th>
<th>Program and Curriculum and Assessment</th>
<th>Communication/Language</th>
<th>Teacher Recruitment and Certification</th>
<th>Teaching and Learning in K-12 field</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 (71.4)</td>
<td>2 (9.5)</td>
<td>4 (19.0)</td>
<td>3 (14.3)</td>
<td>4 (19.0)</td>
<td>28*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do you have any thoughts or comments you wish to share about deaf education? (n=13)</th>
<th>Program and Curriculum and Assessment</th>
<th>Communication/Language</th>
<th>Teacher Recruitment and Certification</th>
<th>Teaching and Learning in K-12 field</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 (61.5)</td>
<td>2 (15.4)</td>
<td>3 (23.1)</td>
<td>5 (38.5)</td>
<td>2 (15.4)</td>
<td>20*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current issues in preparing teachers for students who are deaf or hard of hearing are: (n=20)</th>
<th>Program and Curriculum and Assessment</th>
<th>Communication/Language</th>
<th>Teacher Recruitment and Certification</th>
<th>Teaching and Learning in K-12 field</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 (35.0)</td>
<td>8 (40.0)</td>
<td>4 (20.0)</td>
<td>4 (20.0)</td>
<td>4 (20.0)</td>
<td>27*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>Program and Curriculum and Assessment</th>
<th>Communication/Language</th>
<th>Teacher Recruitment and Certification</th>
<th>Teaching and Learning in K-12 field</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>57 (62.6)</td>
<td>28 (30.8)</td>
<td>22 (24.2)</td>
<td>18 (19.8)</td>
<td>18 (19.8)</td>
<td>143*</td>
</tr>
</tbody>
</table>

Note: * Due to multiple responses, the total exceeds the total number of responses shown in the left column.

Table 4.36: What recommendation would you make regarding Deaf Education in the United States today?
For the first follow-up question, *Further comments or thoughts about deaf education*, 21 respondents made comments; 71.4% were classified as program recommendations. For the second follow-up question, *Final thoughts or comments that they would like to share*, 61.5% of the responses were identified as program recommendations. In the semi open-ended question of Part I of the survey, 35% of the respondents commented about Program related issues, and 40% mentioned curriculum and assessment related issues as current issues in preparing teachers for students who are deaf or hard of hearing.

Because of strong trends in the program recommendations found among the respondents' comments (nearly three-quarters of the responses), further classification of the program recommendation category was performed. Table 4.37 shows the distribution of the recommendations in this category.

In total, 57 comments were classified as program recommendations. Among these 57 comments (from 37 respondents), the following four sub-categories emerged: a) structure, b) professional support, c) administrative support, and d) faculty proficiency. Program structure recommendations (i.e., program philosophy, goals, relationships with K-12 schools, etc.) comprised 66.7% (38 statements) of the statements related to program recommendations, 15.8% (9) were related to administrative support, 28.1% (16) to professional support, and 10.5% (6) to faculty proficiency. Recommendations and comments related to program structure issues were found frequently throughout the responses to the open-ended and semi open-ended questions.
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Program</th>
<th>Structure</th>
<th>Admin Support</th>
<th>Professional Support</th>
<th>Faculty Proficiency</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>What recommendation would you make regarding deaf education in the United States today? (n=37)</td>
<td>27 (73.0)</td>
<td>19 (70.4)</td>
<td>7 (25.9)</td>
<td>10 (37.0)</td>
<td>2 (7.4)</td>
<td>38*</td>
</tr>
<tr>
<td>Further comments or thoughts about deaf education (n=21)</td>
<td>15 (71.4)</td>
<td>8 (53.3)</td>
<td>1 (6.7)</td>
<td>5 (33.3)</td>
<td>2 (13.3)</td>
<td>31*</td>
</tr>
<tr>
<td>Do you have any thoughts or comments you wish to share about deaf education? (n=13)</td>
<td>8 (61.5)</td>
<td>7 (87.5)</td>
<td>0 (0)</td>
<td>1 (12.5)</td>
<td>0 (0)</td>
<td>8*</td>
</tr>
<tr>
<td>Current issues in preparing teachers for students who are deaf and hard of hearing are: (n=20)</td>
<td>7 (35.0)</td>
<td>4 (57.1)</td>
<td>1 (14.3)</td>
<td>0 (0)</td>
<td>2 (28.6)</td>
<td>7*</td>
</tr>
<tr>
<td>Total</td>
<td>57 (62.6)</td>
<td>38 (66.7)</td>
<td>9 (15.8)</td>
<td>16 (28.1)</td>
<td>6 (10.5)</td>
<td>84*</td>
</tr>
</tbody>
</table>

Note: The numbers in brackets represent the percentile of recommendations within the program recommendations category for each question.
* Due to multiple categorization of responses, the total exceeds a total number of respondents shown in the left column.

Table 4.37: What recommendations did the TEDHH programs make?
Over 70% of the comments in responses to the first question in Part II were about program structure and 53.3% of the responses to the second query in Part II, 87.5% of the responses to the third query in Part II, and 57.1% of the responses to the semi open-ended questions in Part I were also classified as recommendations and issues related to program structure. The sub-categories, administrative support and professional support, were also mentioned frequently.

The content analysis suggests that many of the respondents were concerned about issues and made recommendations in the area of program structure. In the following section, the issues and recommendations related to Deaf Education today which were mentioned by the TEDHH programs (teacher educators who responded to the survey) are discussed.

In this area, the respondents most commonly pointed out issues related to curriculum. The respondents (teacher educators) discussed the following curriculum related issues: a) inappropriately trained teachers, b) difficulty in finding appropriate field-based / student teaching experience placements, c) meeting diverse needs of students, and d) the inadequacy of the preparation / training of itinerant teachers. For example, the respondents stated:

- The area of cochlear implantation is the most pressing concern today. Most teachers are inadequately prepared to help families. This issue will not be going away. Our current preparation models are woefully inadequate!
- Finding appropriate field experience placements.
- Better preparation for meeting the needs of diverse learners.
More emphasis on application of appropriate teaching methods, i.e., constructivist, hands-on learning.

One of the most pressing issues right now is itinerant service for d/hh and preparing teachers to serve in this role.

Preparation as itinerant teachers

More attention needs to be focus on parent/infant, early interaction and on the needs of children with less severe loss (hard of hearing), without making this a philosophy/approach debate, more attention needs to be given to amplification advances and the role of auditions in the education of d/hh children in all settings.

Balancing the multiplicity of training needs/topics with providing a program that can be completed in a reasonable time span (2yrs) - ASL - Multiple dis + deafness - oral/cochlear Implants - LD+ BD+ Deafness.

The respondents also made recommendations to resolve the issues mentioned above. For example, they suggested that programs should take a more comprehensive approach by using a birth–22 curriculum with emphasis on cultural diversity and all communicative modes. They also recommended increased emphasis on the skills needed by itinerant teachers and early interventionists. In terms of the larger picture, the programs wanted to "get politics out of communication and language issues … (and) follow the scholarly literature." Another suggested implementing a more constructionist education approach in Deaf Education.

Some programs strongly encouraged infusing research into the programs. Comments included:
• Quality research (& less arguing about communication methods) must occur but with only one-two faculty in low incidence areas, it is difficult to do all the teacher training and still find time to do research.

• An evidence-based approach to curriculum, instruction and assessment.

• There needs to be a stronger emphasis on research in deaf education. Prospective teachers should be able to conduct classroom research on their 'practices' and be able to read the research literature intelligently. Teacher educators need to engage in research and to be informed about research that guides their practices.

• There is a need for additional, well-designed research with an "open mind" to examining educational fields outside of deaf ed. For example, content area reading instructional strategies are very applicable but are often overlooked because they are not "labeled" as "deaf ed" - they are identical to many ESL strategies.

In the area of new technology, the programs recommended the following:

• More collaboration via technology - This would help with each of instructors at univ. level.

• Need quality distance education options to supply teachers in rural areas. I can provide coursework but can't provide practicum placements or supervision to students in rural areas.

In summary, many TEDHH programs (teacher educators) commented about aspects of program structure – the way programs are – such as program philosophy, goals, curricula, and instructional methodologies. However, the majority of the comments were strongly related to the other categories listed in Tables 4.31 and 4.32.
In unique comments in this category, the respondents pointed out the issues of inappropriately trained teachers, the need for make locations for field placements, meeting the needs of diverse learners, and the training / preparation of itinerant teachers. In addition, they reported the importance of using research-based instruction, curriculum, and assessment in their TEDHH programs. Further, they recommended that faculty in the programs conduct more research to support and guide their practice.

Administrative Support was another area identified by the respondents as an issue and for which they made some recommendations. For example, the respondents were concerned about the lack of administrative support, in particular, funding and recognition. For example, they expressed their concerns as follows:

- Our Deaf Ed Program is fighting an uphill battle w/ our administration as a needed program because of our "small" number of students. Ten graduate students are not considered enough. Somehow we need to show the importance of teacher preparation in Deaf Ed from a national perspective.

- Programs prohibit CED certification and thereby limit the number of students, which in turn can kill a program.

- Deaf Ed teacher prep programs are closing and the existing programs are having funding problems. Higher Education does not have the funding and support necessary - I have students but lack funding for faculty, secondary and infrastructure - Do more is a lot less.

Therefore, the TEDHH programs suggested:

- Help universities become aware that although this is a low incidence field, that only one professor for deaf education [is not sufficient].
• I think the State Department of Education should provide supplemental monetary, [and] support to the university, who are the only training program for deaf educators in the state.

However, as long as an "administration views [student] bodies as money … and wonders about the need for our program," one of the respondent points out, the future of any programs will not be bright.

Another area that was frequently discussed or mentioned in the comments was Professional Support. As issues related to professional support, the respondents mentioned difficulties in funding and following the guidelines for CED's program reviews. In addition, they also feared the consequences of governmental mandates such as No Child Left Behind (NCLB) Act. Specifically, they were afraid that the NCLB and high-stakes testing of prospective teachers might unintentionally prohibit teachers from being certified. Therefore, the programs' recommendations included:

• A Task Force on Deaf Education that addresses NCLB [content areas not only early childhood, audiology, cochlear implants, etc]

• Need to seriously examine what CED call comprehensive certification. [It is] very weak across the board surface set of requirements that produces teachers who do not have real depth in a particular area.

• We need to pool resources. [There are] too many organizations with a narrow focus. Not suggesting eliminating these groups, but they would be better served as special interest groups (SIG's) under one parent organization. One organization could be have more close-net, more money, etc.
• We should partner with ASHA -CCC-A, CCC- SLP, CCC-DE (Deaf Education). We need their science and political base.

• We need cross-disciplinary work - collaboration w/ people outside our field. We continue to use the same methodologies that haven't been effective to date.

• Need greater collaboration with colleagues in Special Ed & General Ed.

In conclusion, the TEDHH programs pointed out issues, related to professional support in the following areas: a) difficulty in gaining funding, b) "unrealistic" program review processes, and c) recent governmental mandates and their consequences that can impact on Deaf Education. They recommended stronger collaboration with people within and outside of Deaf Education, including other teacher educators, teachers, and local and national organizations.

The last area that emerged from the content analysis regarding issues and recommendations in Deaf Education was Faculty Proficiency. The TEDHH programs were concerned about the proficiency of faculty in higher education. They pointed out a recent lack of qualified faculty in Deaf Education, especially in oral programs. In addition, they were concerned about the lack of strong mentor teachers for the practicum and student teaching. Therefore, they recommended preparation of more Ph.D. or Ed.D.-level faculty with an appropriate knowledge-base. Further, they suggested creating additional doctoral training programs to prepare more qualified faculty.

In the program recommendation category, initial content analysis identified five themes among the recommendations: a) program, b) curriculum and assessment, c) communication / language, d) teacher recruitment and certification, and e) teaching and learning in the K-12 field. Among the five categories, curriculum and assessment...
recommendations made up the second largest category. Related to curriculum and assessment, the TEDHH programs posed the following issues: a) the need for high-stakes testing such as PRAXIS for prospective teachers, b) lack of content preparation as well as preparation in family relationships and new technology including cochlear implants, c) lack of exemplary placements, d) a too wide Pre-K to 12 licensure / certification range, and e) the preparation of itinerant teachers.

As many respondents pointed out, the requirement of high-stakes testing for prospective teachers in relation to the NCLB federal legislation was an issue because it could have the impact on teacher recruitment. Lack of content area preparation was also pointed out in relation to communication and language issues: for example, one respondent stated, "There tends to be too much emphasis on speech development and not on the development of the whole child," and another mentioned, "I see way too many teachers teaching language all day with some math thrown in and very little science if at all." In relation to a Pre-K to 12 certification / licensure range, the difficulty of arranging suitable placements for field-based experience and student teaching were emphasized by the respondents.

In order to resolve these issues, the respondents made the following recommendations:

- Need to address the needs of: 1) students who are D/HH with additional disabilities, 2) students from culturally diverse families, and 3) students with cochlear implants.
- I strongly recommend that deaf education reconsider the pre-K to 12 licensure range. This is too wide of a span and is unrealistic for beginning teachers.
Another area of concern: There needs to be a stronger emphasis on research in deaf education. Prospective teachers should be able to conduct classroom research on their 'practices' and be able to read the research literature intelligently. Teacher educators need to engage in research and to be informed of research that guides their practices.

- There's definitely a need for our future teachers to have better knowledge in the content areas they are assigned to teach. Preparation programs need to think out of the box. There tends to be too much emphasis on speech development and not on the development of the whole child.

- An evidence-based approach to curriculum, instruction and assessment.

- More emphasis on child development and hearing child language acquisition.

- Need quality distance education options to supply teachers in rural areas. I can provide coursework but can't provide practicum placements or supervision to students in rural areas. Also, I don't know how to provide ADL classes on an outreach basis. I think the State Department of Education should provide supplemental monetary, [and] support to the university, who are the only training program for deaf educators in the state.

In summary, in relation to curriculum and assessment, the respondents from the 50 TEDHH programs were concerned about the consequences of high-stakes testing for prospective teachers although they agreed about the importance of accountability. They also strongly believed that the lack of content knowledge among teachers, difficulty in finding good student teaching / field-based experience placements, and the wide range of certification / licensure were issues that need to be resolved. Therefore, they
recommended strengthening the content area knowledge of prospective teachers by incorporating more evidence-based approach to instruction, and balancing the perspectives on the uniqueness of students who are deaf or hard of hearing with those on the child development and language acquisition of hearing children.

The third largest category of emerging recommendation themes was communication and language recommendations. The respondents seemed concerned about issues related to communication and language: a) differences in language, communication modes, and philosophies (ASL / English, Oral / Manual, Total Communication / Oralism) and their impact on teacher preparation,\(^{17}\) b) the signing fluency of preservice teachers, and c) competencies in signed language and reading instruction.

Many comments in this category concerned differences based on language, communication modes, philosophies in Deaf Education. The respondents from the TEDHH programs mentioned the impact of arguments regarding philosophical differences and different approaches which have continued for a long time to dominate the field and separate teachers, teacher educators, and researchers. Although some of the respondents requested that more emphasis be place on hard of hearing students and an Oralism-based education approach, the signing fluency of teachers is always an issue in Deaf Education. Further, perhaps, due to the current strong emphasis on reading instruction in any education field, the respondents also pointed out the importance of reading instruction and assessment for students who are deaf or hard of hearing. The

\(^{17}\) Definition for the classification based on Paul and Jackson (1993).
respondents pinpointed the inadequacy of the reading instruction on the current situation. For example, they stated:

- Consider ASL as a viable language to support learning English. All reading methodologies are sound-based, require memorization of words (restrictional reading comprehension and fluency). There are also no assessments available that guide the deaf child.

In relation to the teacher recruitment, and the communication and language recommendations, the following comments were interesting in their analysis of the future:

- I wonder if deaf ed is losing some of its appeal among our target audience -- high school students interested in majoring in it -- due to the declining of sign in some settings, the increasing incidence of inclusion, etc. What we are finding is that many students envision themselves as teachers in traditional, self-contained settings using sign language, and their jobs are harder and harder to come by.

Few of my students are initially attracted to resource, inclusion, or connotative roles where sign language isn't used, but more and more positions are of this nature - so, I'm wondering whether the changes we are seeing here in North Carolina toward more "oral" and "hearing" settings will result in fewer students choosing to major in deaf education.

- Hearing parents in the 21st century will want their children to learn to listen. Sign communication will continue to be an important option, but will represent a very small portion of the future "marketplace."

In response to the above issues, the respondents made the following recommendations:
• Get politics out of communication and language issues and follow the scholarly literature. Implement constructionist education more fully in deaf education.

• Get this language thing straight - that is, use ASL/Signed English /TC/oral. Forget all the in-betweens. It confuses families, children, teachers, etc. Children need a communication language that is consistent in its rules so they can learn.

• A more comprehensive approach – using a Birth-22 curriculum w/full info on culture and ALL communication modes.

• Require a standard of ability to communicate prior to graduation. Eliminate provisional and intern certificates. Teachers should be fully certified before they are let loose on kids.

• That more professionals in the field would seriously examine the use of and teaching of ASL in order to utilize second language acquisition of English and literacy of children who are deaf. Teachers should also teach conceptually appropriate grade level info.

Many respondents appeared to accept the fact that it is time to end the arguments over philosophical issues of communication and languages to be used in classroom instruction, ASL or English, in Deaf Education. However, in regard to the language / communication philosophies of Deaf Education, one group of respondents appeared to suggest keeping all the major communication philosophies in their preparation of future teachers, yet narrowing down or focusing on several limited communication modes based on the philosophies that supports them (ASL / English, Oral / Manual, Total Communication / Oralism, Oralism, etc.) when preparing teachers; the other group argued to eliminate all the in-between approaches and emphasize a single communication
tools and communication philosophy that supports. At a more practical level, the respondents also recommended ensuring the signing fluency and communication ability of future teachers prior to their graduation from higher education. Further, they suggested examining seriously the use of ASL in instruction.

In the category of Communication and Language Recommendations, the field of Deaf Education is still separated in many ways. For example, one group of respondents were concerned about and strongly recommended the following:

- 1) Increase competency in all levels of communication in our classroom teachers - ASL / Aural - oral, Cued Speech, etc.
- 2) Enhance strategies for collaboration.
- 3) Infuse more content knowledge into programs - math, read, etc.

However, another group of the respondents wrote:

- Teachers cannot possibly meet all the demands: Oral, Cued Speech, ASL, and Signed English have all been found in a single classroom. Is a comprehensive software product a workable solution?

The last two categories that emerged from the content analysis were a) teacher recruitment and certification and b) teaching and learning in the K-12 field. The same number of comments was found for these two categories. Issues classified under teacher recruitment and certifications were: a) the shortage of qualified teacher candidates, b) the too wide range of certification / licensure, c) the broad-based and alternative certification, and d) the impacts of the NCLB requirements on teacher recruitments.

The critical shortage of teachers has been discussed in the literature, and consistent results were found in this content analysis. In this particular study, the respondents seemed to connect the current shortage of qualified teachers, including
teachers who are Deaf, with the NCLB requirements, and they make predictions regarding the future impact of these requirements on TEDHH programs. Some respondents simply stated their concern about the teacher shortage as in the following:

- 1. We have got to increase the pool of qualified teacher candidates. 2. The literacy rates of Deaf H.SD. Graduates must improve.

- Find ways to continue to attract interested students to pursue licensure

Some expressed concern about how to maintain the number of students attracted to their programs at suitable levels, as in the following:

- With no true parent organization, it is difficult to recruit and maintain students, especially when you are competing with ASHA (NSSLHA).

- I wonder if deaf education is losing some of its appeal among our target audience -- high school students interested in majoring in it -- due to the declining [use of signing] in some settings, the increasing incidence of inclusion, etc. What we are finding is that many students envision themselves as teachers in traditional, self-contained settings using sign language, and their jobs are harder and harder to come by. Few of my students are initially attracted to resource, inclusion, or connotative roles where sign language isn't used, but more and more positions are of this nature - so, I'm wondering whether the changes we are seeing here in North Carolina toward more "oral" and "hearing" settings will result in fewer students choosing to major in deaf education.
In relation to the NCLB, some respondents expressed such concerns as:

- How will the NCLB requirements for highly qualified teachers impact programs? We already require a large number of hours / units which is discouraging to some potential teacher candidates.

- Governmental mandates regarding the high-stakes testing of prospective teachers may have the unintended consequence of prohibiting deaf teachers from becoming certified. We are not opposed to "accountability" - but we do need alternative measures that are more authentic (as opposed to the Praxis assessments).

In order to resolve the issues listed above, the respondents recommended the following:

- I strongly recommend that deaf education reconsider the Pre-K to 12 licensure range. This is too wide a span and is unrealistic for beginning teachers.

- Need 3 certification - Premiar, Elementary /Middle School, High School

- Teachers need to be adequately prepared in all subjects. State certifications need to reflect this (Elementary Certification in Deaf Education and Secondary Certification in Deaf Education - not K-12) unless [there is] general education certification in those areas.

- Require a standard of ability to communicate prior to graduation. Eliminate provisional and intern certificates. Teachers should be fully certified before they are let loose on kids.

- There needs to be a stronger emphasis on research in deaf education. Prospective teachers should be able to conduct classroom research on their 'practices' and be
able to read the research literature intelligently. Teacher educators need to engage in research and to be informed of research that guides their practices.

Teacher recruitment and certification seemed to be an issue in the current TEDHH programs. The difficulty associated with such issues was a concern about other factors such as program structure, communication and language, collaboration, and governmental and national organizations' standards / requirements, etc. Unless they recruit new teacher candidates, TEDHH programs will not gain administrative support and professional support. As discussed in the other recommendation categories, without such support, programs will need to change their structure or cease to exist. Certification seems to be a major factor that could shake the current program structures. One such factor is, as the respondents repeatedly reported in the scale section as well as in the open-ended questions, that a K-12 certification / licensure range is too broad, and that is an issue. Classroom teachers of students who are deaf or hard-of-hearing work with teachers who are certified or licensed in general education. Their co-workers are prepared and certified / licensed in students' grade levels and/or in the subject areas that they teach. Instruction at elementary and secondary school levels is different, and so is the instruction for teacher preparation at these different levels. Instructions need to be customized to fit the students' needs. However, such customized preparation in Deaf Education would requires dynamic changes in program structures which could require administrative and professional support. The respondents appeared to be struggling with balancing these concerns.

The last category of the emerging themes of issues and recommendations was teaching and learning in the K-12 field. For the most part, the issues identified in this
category have been discussed in the previous sections: a) the definition of "highly qualified teachers" and shortage of such teacher candidates, b) lack of competency in communication (i.e., ASL, Aural-Oral, Cued Speech, Signed English, etc.), c) collaboration with specialists (i.e., pathologists, audiologists, etc), and d) working with families.

To resolve these issues, the respondents' recommendations were: a) to increase the pool of qualified teacher candidates, b) to consider and use ASL as a viable language to enhance English learning, c) to develop literacy and reading assessment and measurement tools that can be used for students who are deaf or hard of hearing, and d) to release teachers from decision-making roles. As discussed elsewhere, identification and pooling of qualified teacher candidates are important issues. Although the TEDHH programs are struggling to identify, prepare, and pool such qualified teacher candidates and classroom teachers, in order to pursue the same goal, government and national organizations appear to have raised the bar by identifying, mandating, and enforcing standards. This seems to lead to another issue in teacher recruitment. Teacher educators in Deaf Education perceived the strong emphasis on the high quality of classroom teachers by government and national organizations as a threat to future recruitment of teacher candidates.

The recommendation regarding acceptance of ASL as a viable language to enhance English learning is a sound recommendation only if we can resolve the issues of difficulty in preparing teachers with appropriate ASL communication levels for instruction in a short period of time. Related issues regarding ASL skills were identified
by the respondents and have been discussed in the communication and language
recommendation. However, many experts will agree on the following recommendation:

- More professionals in the field should seriously examine the use of and teaching of ASL in order to utilize second language acquisition of English and [to improve the] literacy of children who are deaf. Teachers should also teach conceptual appropriate grade level info; and

- All reading methodologies are sound-based, require memorization of words (restriction reading comprehension and fluency). There are also no assessments available that guide the deaf child from ASL to English. Students learn to translate rather than [to] read and write.

**Conclusions**

The current TEDHH programs appear to operate their programs in a variety of ways. Although many of them (over 80% of the programs) have sought similar accreditations from the same national organizations as well as from each state, their program characteristics (represented by term system, program size, faculty information, etc.), curriculum characteristics (represented by number of courses and hours in General, Professional, and Subject Matter Education, as well as to complete the programs), and program evaluation characteristics (represented by state and national accreditations, and the programs' self-evaluations) appeared to exhibit wide variation. Insights regarding current issues in Deaf Education and recommendations for the field were also inconsistent in the majority of the contents. However, a majority of respondents appeared to agree on one thing; as one respondent noted, we were writing a book entitled "Closing the Gap and Accountability in Teacher Education Programs." How much of a
gap we had was partially revealed in Chapter 4, and how can we close the gap will be discussed in Chapter 5.
CHAPTER 5

CONCLUSIONS

Summary

The focus of this study was, by taking a census of the teacher preparation programs in the U.S. for prospective teachers of students who are deaf or hard of hearing (TEDHH programs), to explain and describe the overall nature of these teacher preparation programs. The center of attention was the following three areas of study requirements: (1) general education, (2) professional education, and (3) majors or areas of concentration. Further, the study focused on identification of factors impacting the current development of the TEDHH programs. Recommendations to resolve issues and problems based on the survey study are presented in this chapter.

The specific research questions posed by the study were:

1. What are the current characteristics of the TEDHH institutions?

2. What are the current characteristics of the teacher education program curricula for the prospective teachers of students who are deaf or hard of hearing in each of the three broad areas of ‘teacher-education’ requirements: (1) General Education, (2) Professional Education, and (3) a third program component called “Majors,” “areas of concentration,” “areas of emphasis,” and so forth?
3. How do the programs conduct an evaluation of the teacher education program (e.g., exit interviews, deaf and hard of hearing students' performances, etc.)?

4. What issues related to deaf education in the U.S. do teacher educators perceive as critical, and what recommendations do they make?

There were four major variables for this study: a) program characteristics, b) curriculum characteristics, c) program evaluation characteristics, and d) perceptions of Teacher Educators. Findings related to the variables of interest are as follows.

**Program Characteristics**

The majority of the TEDHH programs (90% of the 50 TEDHH respondent programs) utilized a semester term system. The average number of students enrolled in the programs was 35.33. Among them, the programs reported that an average of 9.48 students would graduate from the programs in the 2004-2005 school year. The TEDHH programs had 5.57 faculty in Deaf Education on average; however, over 50% of the programs reported that they had fewer than three faculty members in their programs.

When the distribution of the faculty in Deaf Education was examined, the current TEDHH programs consisted of, on average, 2.06 full-time faculty in the Deaf Education programs, 1.23 full-time faculty who taught both Deaf Education and other education courses, 1.61 part-time faculty, 2.30 adjunct faculty, and 2.39 faculty in other instructional positions in Deaf Education. The other instructional positions included ASL instructors or lecturers and audiology instructors.

**Curriculum Characteristics**

The TEDHH programs required prospective teachers to take an average of 58 credit hours to complete their programs. Although the programs utilized three different
term systems (semester, trimester, and quarter systems), 90% of them utilized a semester
term system; thus, credit hour conversion of the requirements for trimester and quarter
term systems was conducted to base all the requirements of term systems on the semester
credit system for statistical purposes.

In order for a prospective teacher to receive a teaching certification or licensure,
the TEDHH programs required an average of 12.83 courses with 43.31 credit hours in
General Education, 9.94 courses with 24.84 credit hours in Professional Education, and
13.38 courses with 38.39 credit hours in Subject Matter Education. Further, 96% of the
programs required other field-based experiences prior to student teaching experience.
The requirements for such experiences were, on average, 3.15 courses with 17.10 credit
hours. For the student teaching experience, an average of 2.00 courses with 25.69 credit
hours were required.

**Program Evaluation Characteristics**

Over 80% of the TEDHH programs currently held national accreditation. The
National Council for the Accreditation of Teacher Education (NCATE) and the Council
on Education of the Deaf (CED) were the two major organizations that rendered
accreditation to the programs. Over 75% of the programs had been accredited by
NCATE while 69% had been accredited by CED. There were various combinations of
accreditations, but a combination of accreditation from NCATE and CED were the major
type. Over 45% of the programs had been accredited by these two organizations.
Among them, over 50% held a combination of accreditations from NCATE, CED, and
the Council of Exceptional Children.
Over 93% of the programs were accredited by the respective states. Ninety-one percent of the programs reported that they conducted self-evaluations. Among those who conducted self-evaluations, 25% conducted evaluations to report to both state / national organizations and their own universities or colleges. An additional 37.5% prepared evaluation reports only for submission to the state / national organizations, and another 37.5% prepared them at the request of entities in their universities, including departments, colleges, or graduate schools.

For self-evaluations, many reported utilizing surveys. Other instrumentations used included interviews and meetings or advisory boards. With respect to respondents for their self-evaluations, the programs frequently used their current students and post-graduates. They occasionally contacted employers of their post-graduates and / or their own current faculty.

Perceptions of Teacher Educators Regarding TEDHH Programs Development

According to the scale results, TEDHH programs perceived state standards and recruitment of teachers and teacher educators in Deaf Education as the most pressing issues that need to be resolved. Certification and national accreditation requirements as well as collaboration with and among teachers were next, and, finally, collaboration among higher education faculty and university / college requirements were also considered pressing issues.

Content analysis of the verbatim comments in response to the open-ended questions indicated that many TEDHH programs had pointed out issues and made recommendations in the area of program structure. Such issues were most commonly related to program curricula. The programs (teacher educators) listed the following
curriculum related concerns: a) inappropriately trained teachers, b) difficulty in finding appropriate field-based / student teaching experience placements, c) meeting the diverse needs of students, and d) the inadequacy of preparation / training of itinerant teachers.

The respondents also made recommendations to resolve the above issues. For example, they suggested that programs should take a more comprehensive approach by adopting a birth –22 curriculum emphasizing cultural differences and all communicative modes. They also recommended increased emphasis on the skills needed by itinerant teachers and early interventionists. In terms of the larger picture, the respondents stated that there was a need to "get politics out of communication and language issues … [and] follow the scholarly literature." One respondent suggested implementing a more constructionist education approach in Deaf Education. Some respondents strongly encouraged infusing research into the programs. Others suggested the enhancement and use of more technology in the programs as a way of enhancing “quality distance education options to supply teachers in rural areas.”

Conclusions

Teacher Education is a very delicate as well as complicated business. It involves multiple layers of stakeholders and participants. This study made such complications and the fragility of the programs apparent. Based on the results, the following conclusions emerged. First, the study revealed that there were significant similarities in the teacher educators' perceptions of issues in spite of the diversity of the programs. The results showed diversity among the current TEDHH programs in program, curriculum, and program evaluation characteristics. Some of the specific differences observed at the program level were the number of students enrolled in and graduating from the programs.
and the number of faculty members involved in the programs. Although the vast majority of the programs (90%) utilized a semester term system, some still kept their traditions of trimester or quarter systems. The programs also operated at three levels: Graduate, Undergraduate and both Graduate and Undergraduate levels. There was a wide range in the number of students enrolled in the programs (4 to 135), and likewise in the number of graduating students (none to 37).

Regarding the curriculum characteristics, the proportions of General, Professional and Subject Matter education requirements were diverse in terms of the number of courses and credit hours required. For example, the number of courses required in Professional Education ranged from none to 23, and the required credit hours ranged from none to 86. Similar results were observed in General and Subject Matter Education requirements. Further, the program requirements for field-based and student teaching experiences differed among the programs. Although 96% of the programs required field-based experiences prior to student teaching, there were some that had no such requirements whereas others required nine or more courses.

The proposed evaluation plans including self-evaluations also showed the diversity of the programs. Over 80% of the programs were nationally accredited, and more than 90% were accredited by the respective states. However, their self-evaluation plans, which are required by national as well as state accreditations, differed in their duration, instrumentation, and samples of self-evaluations.

Although diversity among the TEDHH programs was apparent in the characteristics of the programs, curricula, and program evaluations, the teacher educators expressed similar concerns with the issues identified. Similarities of their perceptions of
issues were observed in the following areas in particular: state standards, recruitment, and administrative and professional support. Many of the teacher educators suggested in both the scale and verbatim sections that state standards for beginning teachers and the recruitment of prospective teachers as well as teacher educators were the most pressing issues. In particular, the teacher educators reported a critical shortage of teachers in the field who can teach students who are deaf or hard of hearing and instruct prospective teachers as cooperating teachers as well. Further, the teacher educators pointed out the shortage of instructors in higher education, especially those who are competent in American Sign Language. Beyond agreeing about such shortages of teachers and teacher educators, the teacher educators expressed their concerns and recommendations for active recruitment of prospective teachers.

The second conclusion the study demonstrated the disparity between what the literature identified and what the teacher educators expressed were the issues and problems. Although the literature touches on some issues and problems similar to those suggested by the teacher educators, the concerns of the teacher educators, particularly in Deaf Education, are actually different. For example, the literature emphasizes the issues of national and state standards, shortages of teachers and teacher educators, and collaboration between teachers and teacher educators in general and special education. The teacher educators responded in the scale section of the study that they felt that such issues were pressing issues. However, when they were asked to respond to further follow-up questions in the form of verbatim comments, they revealed greater concerns with philosophical issues related to communication and language issues, specifically issues related to the knowledge and skills required for teachers of students who are deaf.
or hard of hearing. In addition, the teacher educators expressed concerns regarding administrative and professional supports (i.e., funding issues caused by limited student enrollment, limited faculty numbers, etc.). It is apparent that there was a disparity between what the literature informs us and what the teacher educators expressed as issues and problems.

Third, the study revealed an unreasonable ratio between the number of faculty members involved in the TEDHH programs and the number of courses that they actually taught. The programs required about 9 courses in Professional Education, 13 in Subject Matter Education, 3 in field-based experiences, and an additional 2 in student teaching experiences on average. Such courses were generally taught by six or fewer faculty members in Deaf Education. Further, considering the fact that over 50% of the programs reported having fewer than three faculty members in their programs, it is evident that on average, three or fewer faculty members taught at least 27 courses in the Professional and Subject Matter Education (Deaf Education) requirements. The ratio between the number of faculty members and the courses that they were required to teach was an unreasonable mismatch in seeking a high quality of instruction.

Finally, it was apparent that the TEDHH programs kept high standards by receiving national and local accreditations. The study showed that in Deaf Education, over 80% of the programs were nationally accredited and more than 90% were accredited by the respective states. Such results prove that the TEDHH programs maintain high standards in their programs. In addition, to keep such high standards, over 90% of the programs conducted or were in the process of conducting self-evaluations.
Recommendations and Implications

Based on the results of this research, the following recommendations and implications are suggested:

What is meant by "qualified teachers for students who are deaf or hard of hearing" should be more clearly defined.

Since the implementation of the No Child Left Behind federal legislation, "highly qualified teacher" has become a key term in the education community. Identification of what makes the teachers "qualified," specifically in the education of students who are deaf or hard of hearing, will assist teacher educators, teacher preparation programs, and other stakeholders to focus on the preparation of more highly qualified teachers and contribute to the field.

Following the line of recommendations regarding teacher qualifications, some of the most frequently cited issues of concern in teacher preparation at the TEDHH programs were communication and language related issues (ASL, Signing, Total Communication, Oral, etc.). In order to resolve such issues, it might be best that the stakeholders communicate with each other in greater depth and find a way to collaborate with each other more effectively. Otherwise, communication and language issues will always be discussed and will never be resolved.

Teacher educators should find ways to build better teacher education programs based on research in the characteristics of "highly qualified" teachers for students who are deaf or hard of hearing.

Teacher education programs and teacher educators ought to find ways to better prepare teachers based on research that enables us to identify highly qualified teachers of
students who are deaf or hard of hearing. One of the ultimate goals of the Teacher Education programs is to prepare teachers who are capable of teaching students and contributing to their lives. In order to pursue such a goal, as some of the respondents of this study pointed out, teacher educators and researchers need to engage in more research to determine what makes individuals "highly qualified" teachers in Deaf Education. Further, based on such research findings, teacher educators in the TEDHH programs should rebuild their programs.

Teacher education programs should recruit teachers to the Ph.D. programs and to become teacher educators.

Once the TEDHH programs have been rebuilt, one of the most important components of the programs will be highly competent teacher educators who can support the programs effectively. The TEDHH programs desperately need to recruit faculty members, (especially future higher education faculty) who have the competence to respond to the needs of the field. Further, the programs need cooperating teachers in Deaf Education who are excellent as well as competent. As the respondents of the study recommended, we need these two populations for better TEDHH programs.

Schools and teacher education programs should actively recruit more prospective teachers for the students who are deaf or hard of hearing.

Finally, there is the recommendation to recruit new teachers to the field in Deaf Education. The critical shortage of classroom teachers was reported to be a pressing issue in both the literature and this study. The field needs to recruit more new teachers. The following recruitment strategies are recommended:
• Recruit teacher candidates from the pool of teachers who have already been certified in other areas (i.e., other special education areas and/or general education).

• Recruit more teacher candidates from among the Deaf.

• Conduct more specific recruitment in high schools, especially targeting those who have been teaching ASL as a foreign language.

• Consider alternative certification targeting teacher candidates who have extensive experience with children and adults who are deaf or hard of hearing as well as diverse students' needs.

• Recruit teacher candidates from foreign countries by targeting individuals who have extensive experience in the instruction of students.

**Areas for Future Research**

In order to prepare teachers for students who are deaf or hard of hearing who are better qualified to meet the current needs of students, it is apparent that the field needs more research. Based on this study, the following are some recommended future areas of study:

**Teacher Qualifications**

Several respondents pointed out issues in the qualifications of teacher candidates and teachers. An ultimate goal of teacher education is to prepare teachers who are capable of good teaching. The goal of TEDHH programs is the same. In order to prepare the teacher candidates to become "highly qualified" teachers, it is very important to understand the following:
1. What are the characteristics of "highly qualified" teachers for students who are deaf or hard of hearing?

2. What are the interpretations of the teacher educators in TEDHH programs regarding "highly qualified" teachers for students who are deaf or hard of hearing?

3. What makes it possible to prepare teacher candidates to be "highly qualified" teachers for students who are deaf or hard of hearing?

4. What are the characteristics of "highly qualified" teacher candidates?

5. Is it reasonable to prepare "highly qualified" teacher candidates for all developmental age ranges (K-12 or PreK-12)?

6. Is it possible for TEDHH programs to effectively prepare teacher candidates for all developmental age ranges?

Recruitment of Teacher Candidates

The critical shortage of classroom teachers was reported to be one of most pressing issues in this study. It has also been reported frequently elsewhere. In order to resolve this issue, recruitment of teacher candidates is critical. For greater success in recruiting candidates who can better serve students who are deaf or hard of hearing and become "highly qualified" teachers for their students, the following research needs to be conducted:

1. What are the best ways to recruit more "highly qualified" teacher candidates?

2. What prohibits the recruitment of more "highly qualified" teacher candidates for the TEDHH programs?
3. How can we resolve issues in recruiting teacher candidates for the TEDHH programs?

4. Who are the individuals currently enrolled in the TEDHH programs?

5. What do teacher educators, researchers, and teachers in the field know about the individuals currently enrolled in the TEDHH programs?

6. What are the best ways to retain teacher candidates in the TEDHH programs and prepare them as "highly qualified" teachers?

Recruitment of Teacher Educators

One of the important components of any teacher education program is the teacher educator. Teacher educators are the foundation of the programs. This study indicated that the critical shortage of instructors in higher education in the field of Deaf Education was one of most pressing issues in TEDHH programs. As several respondents pointed out, the programs need additional "competent" teacher educators in higher education as well as expert teachers in classrooms as cooperating teachers. The implementation of the No Child Left Behind federal legislation required "highly qualified" teachers in every classroom; it can be easily assumed, then, that the next requirement will be highly qualified teacher educators in every teacher education program to prepare teacher candidates as "highly qualified" teachers.

In order to respond to this issue, the recruitment of teacher educators is critical. The following are recommended research areas related to this issue:

1. What are the best ways to recruit more "competent" or "highly qualified" teacher educators, including university faculty and instructors as well as cooperating teachers?
2. What are the best ways to recruit more "qualified" field-based and student
   teaching experience sites?

   The teacher educators are also prepared in the TEDHH programs but at selected
   institutions, those having Ph.D. / Ed.D. programs. In order to understand the quality of
   future teacher educators, we need to understand the current Ph.D / Ed.D. program(s). In
   relation to this study, the following additional research is recommended:

3. Who is currently enrolled in Ph.D. / Ed.D. Programs?

4. What competencies, skills, knowledge, and dispositions are necessary to enable a
   candidate to become a future teacher educator and a researcher in the field of
   Education?

Currently, there are at least 75 active TEDHH programs in the U.S. As of
September, 2004, there were 80 listed programs. However, when this study was
concluded in March 2005, at least 5% of the programs had either been closed or were not
accepting students. As repeatedly stated in the pages above, the shortage of classroom
teachers and instructors at the level of higher education in Deaf Education is critical.
However, the programs appear to prepare a very limited number of teacher candidates,
and it can be assumed that the same situation exists for teacher educators. In view of
such a situation, more and more programs may be forced to close due to their very
limited student populations. This leads to the ultimate questions of:
Do we need TEDHH programs in the future? If not, what can replace the TEDHH
programs?
Limitations of the Study

The limitations of the study were described in Chapter 1. In this section, additional limitations which emerged from the data analysis are discussed.

As mentioned in Chapter 1, the data were subject to the limitations inherent in self-reporting instruments such as misinterpretation of the questionnaire, non-responses to particular questions, and inadequate responses by the respondents. Several respondents responded to the questions with illogical responses (i.e., a large number of students, required credit hours and courses, etc.). For several questions, some respondents did not provide any responses. Further, for the questions requiring their verbatim responses, some respondents chose not to respond to the questions, and others provided responses that were irrelevant to the questions. Such responses caused difficulty in the analysis. Therefore, although these are the kinds of errors that are known to occur when any self-reporting instruments are used, it is recommended that either more examples be included in the questionnaire or other types of instruments be applied to make it possible to triangulate the data and to gain results that have more validity and reliability.
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220


National Survey

of

Teacher Preparation Programs for

Beginning Teachers of Students Who are Deaf and Hard-of-hearing

The Ohio State University
Your institution has been identified as having a teacher education program in deaf education. The following questions will help us in understanding the deaf education programs in your institution. All materials are confidential. Under no circumstances will names and responses be connected.

Part I

PROGRAM CHARACTERISTICS

1. At your institution, what are the minimum number of hours that students are required to take to receive teacher certification/licensure in deaf education?

______________ TOTAL HOURS

2. Is your institution (circle one) on a:
   a. SEMESTER SYSTEM
   b. TRIMESTER SYSTEM
   c. QUARTER SYSTEM
   d. OTHER (Please identify)____________________________________________________

3. Approximately how many students are:
   currently enrolled in your deaf education program? ________________________________
   graduating 2004-2005 school year in your deaf education program? ________________

4. How many faculty members are:
   currently teaching in your deaf education program? ________________________________

5. How many faculty members have:
   full-time faculty positions in your deaf education program? _______________________
   full-time faculty positions who teaches both deaf education and other education courses? ______
   part-time faculty positions in your deaf education program? _______________________
   adjunct faculty positions in your deaf education program? _______________________
   other instructional positions in your deaf education program? _______________________

   These other instructional positions are (please identify):

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

225
6. How many courses are required for a teacher certification/licensure in your deaf education program as:

   General Education courses (i.e., English, Humanities/Fine Arts, Social Science/History, Science, Mathematics, Oral Communication, and Health/Physical Education)?
   __________________ COURSES - __________________ TOTAL COURSE HOURS

   Professional Education courses (Foundation courses, Educational Psychology, Educational Technology, Educational measurement, Curriculum, Methods, and Classroom management)?
   __________________ COURSES - __________________ TOTAL COURSE HOURS

   Subject Matter Education courses (i.e., aural habilitation, audiology, speech pathology, audiometry and hearing aids, teaching academic subjects to the hearing impaired, education and guidance of the hearing impaired, and oral, manual, and total methods of communication)?
   __________________ COURSES - __________________ TOTAL COURSE HOURS

7. Prior to Student Teaching, are students required to do field experiences?
   a. YES
   b. NO  SKIP to 9

8. (If YES) How many courses are required for deaf education students?
   __________________ COURSES - __________________ TOTAL COURSE HOURS

9. How many Student Teaching courses are required for deaf education students?
   __________________ COURSES - __________________ TOTAL COURSE HOURS
   Please give details: ____________________________________________________________
   __________________________________________________________________________

10. Is your deaf education program nationally accredited?
    a. YES
    b. NO  SKIP to 12

11. (If YES) Which national organization accredited your deaf education program? (Circle all that apply)
    a. NCATE (National Council for the Accreditation of Teacher Education)
    b. CEC (Council for Exceptional Children)
    c. CED (Council on Education of the Deaf)
    d. OTHER (Please identify) ________________________________________________
12. Is your deaf education program state accredited?
   a. YES
   b. NO

13. Does your program conduct self-evaluations?
   a. YES
   b. NO  SKIP to 17

14. (If YES) How does your program conduct self-evaluations?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

15. When was the last self-evaluation conducted in your program? ___________________

16. How often does your deaf education program conduct self-evaluation?

__________________________________________________________________________

17. Please rate the following statements according to your level of agreement:

Current issues in preparing teachers for students who are deaf and hard of hearing are:

NCATE/CEC REQUIREMENTS FOR BEGINNING TEACHERS

0 Not an issue  1 Least Pressing Issue  2  3  4  5 Most Pressing Issue

STATE REQUIREMENTS FOR BEGINNING TEACHERS

0 Not an issue  1 Least Pressing Issue  2  3  4  5 Most Pressing Issue

REQUIREMENTS FROM YOUR INSTITUTION (COLLEGE/UNIVERSITY)

0 Not an issue  1 Least Pressing Issue  2  3  4  5 Most Pressing Issue
Please rate the following statements according to your level of agreement:

Current issues in preparing teachers for students who are deaf and hard of hearing are:

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<th>Statement</th>
<th>Rating Options</th>
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<tbody>
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<td>CRITICAL SHORTAGE OF CLASSROOM TEACHERS IN DEAF EDUCATION</td>
<td></td>
</tr>
<tr>
<td>CRITICAL SHORTAGE OF HIGHER EDUCATION INSTRUCTOR IN DEAF EDUCATION</td>
<td></td>
</tr>
<tr>
<td>COLLABORATION WITH GENERAL ELEMENTARY/SECONDARY CLASSROOM TEACHERS</td>
<td></td>
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<tr>
<td>COLLABORATION WITH K-12 CLASSROOM TEACHERS IN DEAF EDUCATION</td>
<td></td>
</tr>
<tr>
<td>COLLABORATION WITH GENERAL ELEMENTARY/SECONDARY INSTRUCTORS IN HIGHER EDUCATION</td>
<td></td>
</tr>
<tr>
<td>TOO BROAD K-12 CERTIFICATION/LICENSURE RANGE IN DEAF EDUCATION</td>
<td></td>
</tr>
<tr>
<td>OTHER (Please specify: ___________________________________________________)</td>
<td></td>
</tr>
</tbody>
</table>
Part II

DEMOGRAPHIC INFORMATION AND PROFESSIONAL INSIGHTS

Please answer the following questions regarding your personal characteristics and experiences.

1. Are you an / a …? (Check all that apply)
   - INSTRUCTOR
   - LECTURER
   - ASSISTANT PROFESSOR
   - ASSOCIATE PROFESSOR
   - FULL PROFESSOR
   - DEAF EDUCATION COORDINATOR or ADMINISTRATOR
   - DEPARTMENT CHAIR or EQUIVALENT
   - OTHER (Please identify)

2. What recommendation would you make regarding deaf education in the United States today?

3. Further comments or thoughts about deaf education:

4. Please return the survey with a copy of your deaf education program sheet.

Thank you for your participation!
Do you have any thoughts or comments you wish to share about deaf education?
APPENDIX B

COVER LETTER
September 20, 2004

Dear [Title] [Contact_person],

Greeting from the Ohio State University. You have been selected to represent your teacher preparation program in Deaf Education in the Teacher Preparation Curriculum Study being conducted at the Ohio State University. You will have a very important role in the study. Your response will represent all Teacher Preparation programs for deaf and hard of hearing teachers.

The purpose of the study is to understand the current nature of teacher preparation programs, which prepare prospective teachers of deaf and hard of hearing students in the following three areas of studies: (1) general education requirements, (2) professional education requirements, and (3) majors or areas of concentration. The secondary purpose of the study is to identify issues and problems associated with program development and to suggest recommendations for policy makers and program developers of teacher education programs, specifically, for the teachers of students who are deaf and hard of hearing students.

The enclosed questionnaire will require approximately 30 minutes of your time to complete. To assist you in completing your questionnaire, I am enclosing a sample of tea and coffee. Your assistance in this study will be greatly appreciated. I am asking you to complete the questionnaire and return it in the enclosed stamped envelope. Although your questionnaire has been coded for follow-up purposes, all materials are confidential. Under no circumstances will names and responses be connected. The purpose of the study is to gain understanding of the current nature of teacher preparation programs of prospective teachers of deaf and hard of hearing students in the above three areas and to identify issues and problems associated with program development.

If you have any questions, please feel free to call me at (614) 799-1298 or email me at nagata.3@osu.edu. Thank you for your assistance with this important study.

Sincerely,

[Signature]

Noriko Nagata
Ph.D. candidate
APPENDIX C

PRE-MAILING POSTCARD
Dear «Title» «Contact_person»,

You have been selected to participate in the Teacher Preparation Curriculum Study, a research study being conducted at the Ohio State University.

In a few days, you will receive a questionnaire from the study. Please assist us by completing the questionnaire and then returning it in the envelope provided.

Thank you for your time and participation to the study.

Noriko Nagata
Ph.D. candidate
APPENDIX D

NON-RESPONDENT POST CARD AND EMAIL REMINDER
Please Help!

Dear Dr. ,

Your response is important so please return the Teacher Preparation Curriculum Study questionnaire. If you missed the October deadline, please return it any way. We need your input and shall greatly appreciate receiving it any time more convenient to you. If you have already returned it, thank you for your assistance.

Noriko Nagata
Ph.D. candidate
Dear [Name],

Greetings from the Ohio State University.

About a month ago, I sent a questionnaire to you related to the teacher preparation curriculum and program development in deaf education. At this time, I have not received our questionnaire. I need your assistance. Only through responses from teacher educators like you, can we obtain information about the current nature of deaf education teacher preparation programs. Please help make this possible, by responding today. Your views and opinions are important.

If you recently mailed your packet, thank you. If you have not, please consider providing your insights on current deaf education teacher preparation programs. I would appreciate receiving it by Thanksgiving.

If you have any questions, please feel free to call me at (614) 799-1298 or email me at nagata.3@osu.edu. Thank you for your assistance with this important study.

Sincerely,

Noriko Nagata
Ph.D. candidate
nagata.3@osu.edu
Dear Dr. ,

Greeting from the Ohio State University.

In last September, I sent a questionnaire to you related to the teacher preparation curriculum and program development in deaf education. At this time, I am trying to gain follow-up information. I need your assistance. Only through responses from teacher educators like you, can we obtain information about the current nature of deaf education teacher preparation programs. Please help make this possible, by responding today. Your views and opinions are important.

I attached the questionnaire in word format. Please consider providing your insights on current deaf education teacher preparation programs. I would appreciate receiving it as soon as possible.

If you have any questions, please feel free to call me at (614) 799-1298 or email me at nagata.3@osu.edu. Thank you for your assistance with this important study.

Sincerely,

Noriko Nagata
Ph.D. candidate
nagata.3@osu.edu
APPENDIX E

SECOND MAILING COVER LETTER
November 18, 2004

Dear Dr. «Contact_person»,

About six weeks ago, I sent a questionnaire to you related to the teacher preparation curriculum and program development in deaf education. At this time, I have not received our questionnaire. I need your assistance. Only through responses from teacher educators like you, can we obtain information about the current nature of deaf education teacher preparation programs. Please help make this possible, by responding today. Your views and opinions are important.

If you recently mailed your packet, thank you. If you have not, I am enclosing another copy of the questionnaire and a return envelope. Please consider providing your insights on current deaf education teacher preparation programs. I would appreciate receiving it by November 30, 2004.

If you have any questions, please feel free to call me at (614) 799-1298 or email me at nagata.3@osu.edu. Thank you for your assistance with this important study.

Sincerely,

Noriko Nagata
Ph.D. candidate
APPENDIX F

THANK YOU POST CARD
Dear «Title» «Contact_person»,

Thank you very much for your participation in the Teacher Preparation Curriculum Study questionnaire. Your participation assists us to understand the current nature of teacher preparation programs, which prepare prospective teachers of deaf and hard of hearing students.

Noriko Nagata
Ph.D. candidate