COMPETENCIES NEEDED BY TEACHERS
OF THE HEARING IMPAIRED

DISSERTATION

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By

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ABSTRACT

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The problem with which this investigation is concerned is that of the competencies which are needed by teachers of the hearing impaired in 1980. A survey instrument containing 92 competency statements that were originally developed by Romaine Mackie in a study she conducted in 1956, was utilized in this inquiry. Subjective judgments as to the importance of the competency statements were made by current teachers of the hearing impaired and administrators of programs for hearing impaired students. In addition, the teachers rated their self-proficiency in each of the competencies.

Using a two-tailed t-test, each of the 92 competency items was tested to determine whether a statistically significant difference existed between the means in the ratings of (a) Importance and Proficiency by the teachers, (b) various competency items by sub-populations of the teacher group, and (c) Importance by the teachers and administrators. A Spearman Rank Correlation Coefficient was calculated to determine the correlation of the rankings of the importance of the competencies by teachers and administrators.

The teachers in this investigation rated as highest in importance the ability of a teacher to use direct intervention techniques to meet the needs of hearing impaired students. The teachers placed high importance on the ability to work with parents directly or as a member of a professional team in helping parents to effectively deal with having a hearing impaired child in the family; however, they did not consider themselves equally as proficient
in these competencies. The teachers consistently rated themselves lower in their own Proficiency with a competency than they rated the Importance of the competency.

The differences in the (a) importance of the ability to use sign language and the manual alphabet in teaching between groups of teachers who graduated before and after January 1, 1970, and (b) proficiency in the ability to teach speech and language between teachers with the BA/BS degree and those with the MA/MS degree, were not considered to be significantly different.

An item-by-item analysis revealed that there was a significant difference in the mean ratings of only 19 of the 92 competencies at the .01 level between teachers and administrators; however, there was a significant correlation between how the rank orders of the groups compared.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>LIST OF TABLES</th>
<th>iii</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II. LITERATURE REVIEW</td>
<td>5</td>
</tr>
<tr>
<td>Competency-Based Teacher Education</td>
<td></td>
</tr>
<tr>
<td>in Special Education</td>
<td></td>
</tr>
<tr>
<td>Development of Competencies Needed</td>
<td></td>
</tr>
<tr>
<td>by Teachers of the Deaf/Hearing</td>
<td></td>
</tr>
<tr>
<td>Impaired</td>
<td></td>
</tr>
<tr>
<td>Competencies and Accountability in</td>
<td></td>
</tr>
<tr>
<td>Teacher Education</td>
<td></td>
</tr>
<tr>
<td>III. DESIGN AND PROCEDURES</td>
<td>21</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td></td>
</tr>
<tr>
<td>Hypotheses</td>
<td></td>
</tr>
<tr>
<td>Subjects</td>
<td></td>
</tr>
<tr>
<td>Instrumentation</td>
<td></td>
</tr>
<tr>
<td>Administrative Procedures</td>
<td></td>
</tr>
<tr>
<td>The Sample Returns</td>
<td></td>
</tr>
<tr>
<td>Statistical Procedures</td>
<td></td>
</tr>
<tr>
<td>Limitations</td>
<td></td>
</tr>
<tr>
<td>Basic Assumptions</td>
<td></td>
</tr>
<tr>
<td>Significance of the Study</td>
<td></td>
</tr>
<tr>
<td>IV. REPORT OF THE FINDINGS</td>
<td>36</td>
</tr>
<tr>
<td>Report of Demographic Information</td>
<td></td>
</tr>
<tr>
<td>Comparison of the Ratings of 92 Competency Items by Teachers in the Present and Mackie (1956) Studies</td>
<td></td>
</tr>
<tr>
<td>Comparison of the Ratings of Importance and Proficiency in 92 Competencies Needed by Teachers of the Hearing Impaired by the Teachers who Participated in this Study</td>
<td></td>
</tr>
<tr>
<td>Competencies in Which There Was a Significant Difference Between Ratings of Importance and Self-Ratings of Proficiency</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE OF CONTENTS—Continued

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IV. REPORT OF THE FINDINGS—Continued</strong></td>
<td></td>
</tr>
<tr>
<td>Comparison of the Ratings of the Importance of Competencies Needed by Teachers of the Hearing Impaired with Ratings of Self-Proficiency in Sub-Populations of the Teacher Group</td>
<td></td>
</tr>
<tr>
<td>Comparison of the Ratings of the Importance of Competencies Needed by Teachers of the Hearing Impaired by Teachers and Administrators in Programs for Hearing Impaired Students</td>
<td></td>
</tr>
<tr>
<td>Competencies in Which Ratings by Teachers and Administrators Showed a Significant Difference</td>
<td></td>
</tr>
<tr>
<td><strong>V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS. . . .130</strong></td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td></td>
</tr>
<tr>
<td>Conclusions</td>
<td></td>
</tr>
<tr>
<td>Recommendations</td>
<td></td>
</tr>
</tbody>
</table>

**APPENDICES**

**REFERENCES**
TABLE OF CONTENTS

LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of Survey Instruments Returned</td>
<td>28</td>
</tr>
<tr>
<td>2.</td>
<td>Dividing Points Between Competency Ratings</td>
<td>29</td>
</tr>
<tr>
<td>3.</td>
<td>Age Group of the Teacher Respondents</td>
<td>36</td>
</tr>
<tr>
<td>4.</td>
<td>Highest Degree Completed by Teacher Respondents</td>
<td>37</td>
</tr>
<tr>
<td>5.</td>
<td>Major Area of Study by Teachers Before Entering Their First Professional Position</td>
<td>38</td>
</tr>
<tr>
<td>7.</td>
<td>Educational Settings in Which Teachers of the Hearing Impaired are Functioning</td>
<td>40</td>
</tr>
<tr>
<td>8.</td>
<td>Distribution of Mean Ratings for Importance and Proficiency in the Scott Study and Number of Competencies Falling into Each Category</td>
<td>41</td>
</tr>
<tr>
<td>9.</td>
<td>Comparison of Rank Order of Importance of 92 Competencies Needed by Teachers of the Hearing Impaired Between the Mackie (1956) and Scott Studies</td>
<td>43</td>
</tr>
<tr>
<td>10.</td>
<td>Comparison of Rank Order of Proficiency in 92 Competencies Needed by Teachers of the Hearing Impaired Between the Mackie (1956) and the Present Study</td>
<td>55</td>
</tr>
<tr>
<td>11.</td>
<td>Comparison of Rankings of Importance of 92 Competencies by Teachers of the Hearing Impaired with Their Rankings of Proficiency in Each Competency—Present Study</td>
<td>68</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>12. Competencies Rated by Teachers of the Hearing Impaired in Which Ratings of Importance Were Significantly Different Than Self Ratings of Proficiency</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>14. Comparison of the Ratings in Proficiency of the Ability to Teach Speech and Language Between Teachers with a BA/BS Degree and Teachers with a MA/MS Degree Who Have Six or More Years of Teaching Experience</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>15. Comparison of the Top Twenty Competencies in the Rankings of Importance of Competencies Needed by Teachers of the Hearing Impaired Between Day and Residential School Teachers</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>16. Comparison of Rankings of Importance of Competencies Between Teachers of the Hearing Impaired in Self-Contained Classes and Those Working in Other Settings with the Hearing Impaired</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>17. Comparison of the Rank Order of Importance of Competencies Needed by Teachers of the Hearing Impaired as Rated by Teachers and Administrators of Programs for the Hearing Impaired</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>18. Competencies in which There was a Significant Difference in the Ratings of Importance by Teachers of the Hearing Impaired and Administrators</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td>19. Correlation Between Teachers and Administrators on Rankings of Importance</td>
<td>129</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

In the past few years much has been written that calls for massive revisions in the curriculum and focus of training in teacher preparation programs (Corrigan, 1976; Denemark, Morsink, & Thomas, 1979; Hammermeister, 1976; Howsam, Corrigan, Denemark, & Nash, 1976; Reynolds, 1979; Ryan, 1979). Colleges and universities with teacher education programs have been criticized for being slow to respond in addressing the rapidly changing needs of the students who are currently in the educational system (Corrigan, 1976; Denemark, et al., 1979; Mulhern, 1978). In an attempt to respond to this type of criticism, institutions offering teacher preparation programs have explored the concept of Competency-Based Teacher Education (Houston, 1974; Houston & Howsam, 1972; Schmeider, 1973). It has seemed logical that if teacher educators could agree upon the qualities that a teacher should possess when completing a teacher preparation program, then the program could be designed to include the competencies which would develop the knowledge, skills, and attitudes required.

In the 1950s Romaine Mackie directed a series of studies which dealt with qualification and preparation of teachers of exceptional children. One of the reports written as a
result of these studies (Mackie, 1956) included competencies needed by teachers of children who are deaf. Mackie's study contained a list of 92 competencies that were considered to be important for teachers of the deaf to possess.

The present study replicated the 92 competency items which were originally used by Mackie and were rated by teachers of the hearing impaired and administrators of programs for hearing impaired students. The purposes of this study were to determine (a) the ways in which teachers of the hearing impaired in 1980 rated the 92 competency items, (b) if significant differences existed between the ratings of the importance of the competencies by the teacher respondents in this investigation and their self-ratings of proficiency in each competency, (c) if significant differences existed between the ratings of selected competencies by sub-populations of the teacher respondent group, (d) if significant differences existed between the ratings of the importance of the competencies by sub-populations of the teacher group, and (e) if significant differences existed in the ratings of the importance of the competencies between the teachers and administrators.

The staff at the United States Office of Education cooperated with many specialists in the area of Deaf Education in developing the list of competencies used by Mackie in her study. These competencies were prepared on an
inquiry form which was sent to the teachers of the deaf who were selected to participate in the study. Each teacher rated the importance of the competency and his/her proficiency with each competency. The design of Mackie's study called for teachers of the deaf to supply the information requested on the inquiry form. By providing guidelines and a quota for each state, Mackie made an effort to secure a representative sampling of superior teachers of the deaf throughout the United States.

The number of students enrolled in special education facilities for the deaf and the child population in each state were factors on which the state quotas were based. Each State Department of Education was sent guidelines for selecting the superior teachers of the deaf, as identified by selected program supervisors, in each state. The guidelines required that (a) a teacher must currently be teaching in a classroom with deaf students and be considered a superior teacher by his/her supervisor, (b) a teacher must have special training to teach deaf students, and (c) the selections should include teachers who were in a variety of educational settings, such as day and residential schools, working with different age levels of students, teaching in private and public institutions, and in rural and urban settings. Initially, a total of 233 names of teachers from throughout the United States were submitted by the State Departments of Education. All of these teachers met the
guidelines specified by Mackie. Of the 233 inquiry forms sent to these teachers, Mackie received 139 responses. Of these, she was able to use 100 teacher response forms in reporting the results of the study.

Since 1956 no comprehensive study has investigated the competencies needed by teachers of the deaf/hearing impaired in today's education programs. In order to develop certain competencies in their students, teacher preparation programs in the education of the hearing impaired must be aware of the knowledges and skills that their graduates will need once they are in an actual teaching situation. The study reported herein replicated the competencies on the inquiry form used by Mackie (1956) to determine the way in which teachers of the hearing impaired and administrators of programs for hearing impaired students in 1980 rate the importance of these competencies. In addition to rating the importance of each competency, the teachers rated their own proficiency in each competency.
CHAPTER II

LITERATURE REVIEW

For the purposes of this investigation, the review of related literature was restricted to (a) a rationale for Competency-Based Teacher Education, (b) the use of competency-based education in teacher preparation programs in Special Education, (c) the development of competencies needed by teachers of the deaf/hearing impaired, and (d) competencies and accountability in teacher education.

Competency-Based Teacher Education

Competency-Based Teacher Education (CBTE) has been defined as a program which (a) is specific about the competencies that students enrolled in the program will demonstrate, (b) is specific about the criteria that will be used in assessing the students' attainment of these competencies, and (c) holds the student accountable for acquiring specified competencies (Cooper & Weber, 1973; Elam, 1971; Hall & Jones, 1976; Houston & Howsam, 1972). Some proponents of CBTE have noted that in such a program there are several components: (a) essential characteristics such as competencies to be demonstrated by the learner, specification of the criteria used in assessing the competencies, means of assessing student performance stated in explicit terms, and
determination of the rate of student progress by demonstrated competency rather than by time or completion of specific coursework, (b) implied characteristics such as personalization and individualization of instruction, feedback as a guide in the learning experience, the entire program is systemic, emphasis placed on exit rather than entrance requirements, modularization of instruction, and the student being held accountable for his/her own performance, and (c) related and desirable characteristics such as field-centered programs, a broad base for decision making, a focus on knowledges, skills, and concepts to be learned in a specific setting, teachers and students contribute to the design of the instructional system, and research components included in the program (Elam, 1971; Houston, 1974; Houston & Howsam, 1972).

Not all writers have cited the same essential program characteristics. In 1974, Burdin listed the four basic characteristics he considered essential for a CBTE program to be (a) a specification of the competencies to be mastered, (b) assessment of the outcomes of the program, (c) the use of technology, and (d) individualization primarily through the use of flexible time requirements for completion of the program. Houston and Howsam (1972) have listed six characteristics of a competency-based program: (a) the listing of student objectives in specific behavioral terms, (b) specific procedures for the assessment of whether
students meet the criterion levels stated in the objectives, (c) the provision of alternate instructional modes and learning activities through which students obtain information, (d) making all objectives, criteria, assessment procedures and activities public, (e) using competency criteria to assess learning experiences, and (f) the student's own accountability for meeting the criteria of the objectives.

Implied characteristics of a CBTE program noted by many writers (Cooper & Weber, 1973; Elam, 1971; Houston & Howsam, 1972), are (a) individualized instruction, (b) feedback mechanisms to the student regarding progress being made, (c) modular and/or systematized programming, (d) emphasis on exit and not entrance requirements, and (e) that both the student and the program be held accountable for the demonstrated competence of the student at the completion of the program.

Rosner (1972) writes that four conditions must be met in the acquisition of specific teacher competencies: (a) measures must be developed which will demonstrate the degree to which mastery has been acquired, (b) there must be instructional materials developed which will guide the acquisition of specific competencies, (c) there must be opportunities for the student to quickly put the learned information into practice, and (d) there must be incentives developed which will motivate the students to acquire the specific knowledges and skills.
Not only is there a lack of consensus as to the characteristics and essential components of a Competency-Based Teacher Education program, but the interpretation of these characteristics has varied from institution to institution as programs implement CBTE (Kay, 1975; Roulhac & Bullock, 1975; Schmeider, 1973; Tom, 1977). The apparent failure of programs to delineate what characterized a CBTE program before implementing such a program may have created some of the confusion about what actually constitutes a CBTE program (Roulhac & Bullock, 1975).

There is considerable concern in the field of education about what competencies are considered to be essential for a teacher to possess (Burdin, 1974; Cortese, 1974; Hall & Jones, 1976; McDonald, 1974; Schmeider, 1973; Tom, 1977). Some advocates of CBTE think that all teachers must acquire certain important behaviors (Broudy, 1972; Elam, 1971; Houston & Bowsam, 1972; Reynolds, 1979). Several critics have argued that competencies tend to be derived from the rewording of traditional university program goals or administrator's checklists into behavioral objectives (Burdin, 1974; Hammermeister, 1976; Hermanowicz, 1978; Stedman, 1979; Tom, 1977). Supported by Shores, Cegelka, and Nelson (1973) is the consensus that teacher competencies should evolve from classroom needs of students. McDonald (1974) questions whether it is feasible to develop competencies that all teachers should possess, given their diverse
locations and assignments. Smith (1971) concluded that few teaching skills can be empirically established while Elam (1971) questioned the availability of instruments that can be used to measure teacher performance.

Critics of the CBTE concept conclude that many CBTE programs virtually ignore the affective domain because it is difficult to measure and state in behavioral terms (Potter, 1974; Tom, 1977). However, there are writers who include the affective domain in educational programming. Kibler, Barker, and Miles (1970) indicate that developing behavioral objectives for the affective domain has been difficult due to the problems encountered in attempting to measure and observe feelings and emotions. Many authors propose that the evaluation conducted to determine success in achieving goals and objectives in the affective domain would involve a constant search to find both overt and covert responses in individuals which indicate either a negative or a positive feeling toward some object or activity (Kibler, et al., 1970; Krathwohl, Bloom, & Masia, 1973; Gephart, Ingle, & Marshall, 1976; McAshan, 1974). Krathwohl, et al. (1973) write about three criteria which are necessary in order for affective goals and objectives to be realized: (a) clear definitions of the goals and objectives, (b) the provision of learning experiences which will enable the student to develop in the desired direction, and (c) some systematic method must be available for appraising the extent to which students grow in the desired ways.
Burdin (1974) and Stedman (1979) note that in addition to the problem of determining what competencies to include in a CBTE program, one must also consider the problems with securing appropriate funding for the implementation of the program and finding accurate ways to assess student performance in meeting the criteria. Hall and Jones (1976) believe that for CBTE programs to flourish, then there must be more adequate assessment of goal achievement. They postulate that students must be learning what is expected of them and the goals and objectives of the programs must meet the needs of these students and their future pupils.

Rosner and Kay (1974) have written about five problems which are often found in CBTE programs: (a) a lack of a consistent definition, (b) the demands for research by teacher educators have not been met, (c) it has not been determined that the identified competencies will contribute to making a whole teacher, (d) the cost creates economic problems in some universities and colleges, and (e) it is difficult to determine a manageable set of competencies for a teacher education program.

No research has been conducted to report the major characteristics of a CBTE program (Hermanowicz, 1978; Tom, 1977), or to assess whether a program is based on a CBTE model. Authors continue to call for adequate research in determining the adequacy of competency-based education in the teacher education field (Hall & Jones, 1976; Roulhac &
Bullock, 1975; Stedman, 1979; Tom, 1977). Kaplan (1978) also points to a lack of research that demonstrates whether competencies can be identified and assessed. He notes that to date no one has been able to define "teaching" and, therefore, list the competencies needed by one who plans to be a teacher. Kaplan writes that it still remains to be determined whether CBTE is a fad or the promise of the future.

**Competency-Based Teacher Education in Special Education**

Special Education teacher preparation programs have also been a part of the CBTE movement, but to a much less degree. Connor (1976) indicated that the criteria established by the Bureau of Education for the Handicapped (BEH) for the allocation of training grants to colleges and universities has exerted strong influence on the teacher education programs. He noted that in evaluating such programs, BEH uses the evidence of institutional commitment, library and physical resources, the training and experience of faculty, selection of students, stated goals and specific behaviorally stated objectives, and program details including field experiences, as the basis for judging programs as recipients of personnel preparation grants. As in many of the regular education teacher education programs, the focus in special education CBTE programs has been primarily on the competencies needed by teachers (Bullock, Dykes, & Kelly, 1974; Bullock &
Whelan, 1971; Dorwood, 1963; Hewett, 1966; Mackie, Kvaraceus, & Williams, 1957). Shores, Cegelka, and Nelson (1973) reported in a review of the literature, that teacher competencies tended to be derived from expert opinions rather than the direct observation of teacher behavior. These authors further noted that often the competencies listed in special education teacher preparation programs are not behaviorally stated or evaluated as to whether or not they have a positive impact on child performance. Some programs have included models for special education teacher preparation that have focused on the teacher's acquisition of skills rather than on how these skills will contribute to child performance (Lilly, 1971; Schwartz, 1967).

Hewett (1966) proposed seven competencies which he determined to be needed by teachers of emotionally disturbed children: (a) objectivity, (b) flexibility, (c) structure, (d) resourcefulness, (e) social reinforcement, (f) curriculum expertise, and (g) being an intellectual model. He indicated that these competencies should be developed in the students during their teacher preparation program.

Different authors have written about teacher education programs in special education which are competency-based (Bruininks, 1977; Edgar & Neel, 1979; Robie, Pierce, & Burdett, 1979). Reporting on the faculty at the University of Florida in the Area of Education of the Emotionally Disturbed and Socially Maladjusted in their attempts to
develop a comprehensive list of competencies that would relate to emotionally disturbed children and youth, Bullock, Dykes, and Kelly (1974) indicated that 123 competency goal statements were identified and assigned to the required course structure.

Edgar and Neel (1979) reported on a teacher preparation program that was established at the University of Washington to train teachers to work with learning disabled and emotionally disturbed children. These authors collected data on fourteen graduate students during their course work, student teaching, and then following their employment as teachers. They indicated that students must be assessed in all three phases for a thorough evaluation of a truly evolving CBTE preparation program.

Schwartz and Oseroff (1975) expressed concerns about CBTE in special education teacher preparation programs. They noted that CBTE requires that the program be able to define explicitly teacher competencies or behaviors that are related to student growth and that these competencies must be demonstrated in school settings. Schwartz and Oseroff noted that CBTE has too much packaged/modularized material and that faculty members and students do not have enough interaction. They are concerned that the student will not be adequately prepared for classroom teaching in such a program. Shores, Cegelka, and Nelson (1973) have called for more research in the area of CBTE in special education.
Wixson (1975) conducted a study in order to obtain preliminary data regarding practicing teachers' evaluations of special education courses presented in a competency-based, performance criterion referenced format. The results of his study indicated a high level of acceptance of CBTE programs by preservice students.

There is a general recognition of the need for greater precision and systematization in teacher preparation programs in special education if instruction of exceptional children is to be improved. Questions still remain on how to prepare teachers to accommodate to the required mobility in a fluctuating job market and how to best serve students in a society which has rapidly changing value systems (Connor, 1976).

**Development of Competencies Needed by Teachers of the Deaf/Hearing Impaired**

Relatively little has been written in the field of Deaf Education regarding the competencies that are needed by teachers of the deaf/hearing impaired. Until approximately 50 years ago there were no accepted, uniform standards for teachers of the deaf (Maile, 1978). Prior to 1940 the preparation of teachers of the deaf was almost entirely provided on an inservice basis by schools for the deaf (Quigley, 1964). The beginning teacher was assigned to a master teacher in the school. Eventually some schools for the deaf began to do training in a more formalized manner and to
associate with institutions of higher education (Quigley, 1964).

In 1956, Romaine Mackie published the results of a study conducted to determine the competencies needed by teachers of the deaf. Her study had teachers rank a list of 92 competencies in terms of the importance of each competency. In addition, Mackie had 10 members of a competency committee write a statement concerning the skills, knowledges, and abilities that they regarded as essential for a teacher of the deaf to possess. She found that both the teachers of the deaf and the committee of experts noted that the successful teacher of the deaf would be one who had developed a wide range of specialized competencies.

In 1964, a National Conference was held in Virginia Beach, Virginia to discuss the preparation of teachers of the deaf. At this conference the participants could not agree on the proportion of liberal arts and education background that a teacher of the deaf must possess. Some participants believed that teachers of the deaf should have the equivalent of an undergraduate major in liberal arts with varying amounts of specialized preparation in teaching the deaf superimposed on this base. These participants thought that the amount of specialized preparation would be determined by the age and grade levels at which the person planned to teach. Others at the conference expressed the opinion that less than a major in a content area was
sufficient, but that all teachers should have a common core of knowledges and skills about deaf children regardless of the age and grade they chose to teach.

Northcott (1971) investigated competencies needed by teachers of hearing impaired infants. It was her contention that these teachers needed competencies specific to the age group with which they would be working and thus needed preparation programs that were different from those in operation at that time. Northcott noted that the certification standards for teachers of the hearing impaired were predicated upon the inflexible measures of course titles and hours of credit. She recommended that universities and colleges should be permitted to design unique and individualized programs that emphasized coursework of an interdisciplinary nature. In 1976 a conference was held in Atlanta, Georgia dealing with personnel preparation in serving hard-of-hearing children. At that conference Hammermeister (1976) called for teacher preparation programs in Deaf Education to accept the challenge of restructuring their curricula to insure that preservice teachers attain the basic skills, attitudes, and competencies needed for working with hearing impaired children in a rapidly changing school environment.

Maile (1978) noted that although the Council on Education of the Deaf (CED) established certification criteria for teachers of the deaf in 1972, this organization has no
legal sanction to enforce the standards. He did note that although only seven of the 50 states meet three or more of the six CED standards, 51 of the 71 teacher preparation programs in Deaf Education have been approved by the Council on Education of the Deaf.

**Competencies and Accountability in Teacher Education**

The demand for accountability in teacher education programs is being pressed from all sides by taxpayers, businesses, government, and consumer groups (Piccolino, 1977). Teacher education programs must be held accountable for the quality of the students whom they graduate (McDonald, 1978; Reynolds, 1979; Ryan, 1979).

In attempting to define the parameters of the accountability of teacher education programs, a number of writers have called for the delineation of specific competencies which must be mastered by students in the programs (Coker, 1976; Cooper, Jones, & Weber, 1973; McDonald, 1978; Mulhern, 1978). Cooper et al. (1973) postulate three kinds of teacher competencies: (a) knowledge competencies which specify the cognitive material that the student is expected to demonstrate, (b) performance competencies which are specific about the attitudes and teaching behaviors the student is expected to demonstrate, and (c) consequence competencies which specify the behaviors of pupils that indicate the teaching effectiveness of the student.
Mulhern (1978) notes that teacher education programs must be evaluated as to their goals and content. He proposes that the goals be stated so as to reflect the accountability issue if the prospective teacher is to deal with it in the public school setting. He advocates that the preparation program spell out the specific skills and behaviors that the students must acquire.

Reynolds (1979) writes that, in general, teachers have not had the kinds and levels of preparation that are essential for dealing within the regular school setting with the full range of differences found among the total population of children. He suggests ten clusters of capabilities that represent professional competence for teachers: (a) a thorough knowledge of curriculum, (b) the ability to teach basic skills, (c) skills in classroom management, (d) the ability to engage in professional consultation and communication, (e) the ability to form meaningful teacher-parent-student relationships, (f) the ability to facilitate adequate student-student relationships, (g) a knowledge of exceptional children, (h) the knowledge of making pertinent referrals, (i) skills with individualized teaching, and (j) a set of professional values.

According to Berwald (1979), not all beginning teachers need a vast number of common competencies. In teacher education she notes that experience has demonstrated that it is not necessary to teach each competency directly to the
students when dealing with students who demonstrate intelligence, initiative, and resourcefulness.

Ryan (1979) proposes that teacher educators should take great care when building their curricula. He thinks they should select the principles, values, skills, theories, and strategies which are most important and should be sure that the students who graduate from the program have mastered them.

Soar (1973) noted that the traditional and most widely used strategy in evaluating teacher competence is the assessment of the quality of the teacher preparation program within which the teacher is trained. He postulated that this has led to the movement toward CBTE.

A real and pressing evaluation need in any type of teacher preparation program is the need to assess the competencies that are acquired by program graduates (Brinkerhoff, 1978). According to Brinkerhoff, there are five steps a program should pursue in assessing the competencies which are to be included: (a) identify the competency, (b) analyze the competency, (c) select the measurement modes to be used, (d) define all variables, and (e) construct an instrument which will measure the competency acquisition. He proposes that each teacher preparation program, whether competency-based or traditional, must determine as objectively as possible, what its graduates have learned.
McDonald (1978) recommends that teacher educators choose those components of teaching performances which probably are critical and have these components as competencies. He notes that it is these components which should be at the core of the teacher education program and should be the primary basis on which student teachers are evaluated.
CHAPTER III

DESIGN AND PROCEDURES

The following terms are used throughout this study and are thus defined:

1. A hearing impaired student is one who has a hearing loss which results in an educational and developmental handicap. This term includes those students who may be classified as hard-of-hearing or deaf (Davis & Silverman, 1978).

2. Deaf students are those whose hearing acuity is not functional for the ordinary purposes of life (Newby, 1964).

3. Hard-of-hearing students are those whose hearing acuity is functional for the ordinary purposes of life, with or without the use of a hearing aid (Newby, 1964).

4. A teacher is an individual who is providing direct services to hearing impaired students and who holds professional certification in the education of the hearing impaired (Northcott, 1971).

5. An administrator is an individual who is listed in the 1980 Directory of Programs and Services for the Deaf in the United States published by the American Annals of the Deaf as the person in charge of the program for the hearing impaired which was chosen for this study.

6. Language is a structured system of arbitrary vocal, graphic, and/or gestured symbols used in interpersonal
communication and which catalogues the processes of human communication (American Speech and Hearing Association, 1967).

7. Speech is behavior which is related to the motor activity and perceptual processes of the speaker through which language is transmitted (Calvert & Silverman, 1975).

8. Total Communication is a philosophy in which an individual has the right to use the full spectrum of communication available, including but not limited to speech-reading, formal sign language, fingerspelling, and the use of residual hearing (Denton, 1972).

Statement of the Problem

If teacher preparation programs in the education of the hearing impaired are going to develop certain kinds of knowledges and skills in their students by providing a set of competencies the students must attain before completing the program, then it is essential that these knowledges and skills be ones that the student will need once in the actual teaching situation. This study investigated the competencies needed by teachers of the hearing impaired in 1980 by using an instrument developed by Romaine Mackie in 1956 (Appendix A), in which teachers of the deaf rated the importance of 92 competencies and their proficiency in each competency.

Hypotheses

This study examined whether significant differences existed between the perceptions of the importance of
competencies needed by teachers of the deaf as rated by teachers and administrators in programs for the hearing impaired. In addition, this study tested whether significant differences existed in the ratings of the importance of competencies among certain sub-populations of the teacher group. Also tested was whether there were statistically significant differences between the teachers' average ratings of importance of each competency and average ratings of proficiency in each competency. The level of significance is reported in Chapter IV for the hypotheses which follow.

Ho 1: There is a difference between the means of each of the 92 competency items in the ratings of the Importance of each competency as stated as necessary by teachers of the hearing impaired, and their self-rating of Proficiency in each of these competencies.

Ho 2: There is a difference between the means of the importance of competencies needed in the areas of sign language and/or manual communication skills between the teachers of the hearing impaired who completed teacher preparation programs before January 1, 1970 and those who completed programs after January 1, 1970.

Ho 3: There is a difference between the means of proficiency ratings of competencies related to the teaching of speech and language between teachers with the baccalaureate degree in the education of the hearing impaired with six or
more years of teaching experience, and teachers with the master's degree in such programs who have six or more years of teaching experience.

Ho. 4: There is a difference between the means of each of the top 20 items in the ratings of Importance of each competency needed by teachers of the hearing impaired, between teachers employed in day school programs and those employed in residential schools for the hearing impaired.

Ho 5: There is a difference between the means of each of the top 20 items in the ratings of the Importance of competencies needed by teachers of the hearing impaired, between teachers working in self-contained classes for hearing impaired students and teachers delivering services to hearing impaired students in other settings.

Ho 6: There is difference between the means in the ratings of Importance of each of the 92 competencies needed by teachers of the hearing impaired, as rated by administrators of programs for the hearing impaired and teachers in programs for hearing impaired students.

Ho 7: There is a difference in the rankings of the Importance of the 92 competencies on the inquiry form between administrators of programs for the hearing impaired and teachers of hearing impaired students.

Subjects

The population for this study was taken from information contained in the 1980 Directory of Programs and Services for
the Deaf in the United States published by the *American Annals of the Deaf* and included (a) approximately 3,000 teachers representing the state schools for the deaf in the United States, (b) approximately 2,000 teachers representing the two largest day school programs for the hearing impaired in each state with the exception of the states of Alaska, Delaware, Hawaii, Maine, Montana, Nevada, New Hampshire, North Carolina, North Dakota, Rhode Island, South Dakota, Tennessee, Utah, Vermont, West Virginia, and Wyoming who have less than two programs listed in the Directory, and (c) the individuals who are the designated administrators of the state schools and day school programs included in the study. The sample for this study consisted of teachers from the above listed programs for the hearing impaired who agreed to participate and the administrators who were contacted in each program.

**Instrumentation**

The instrument used in this study was an inquiry form containing 92 competency statements that were developed and used by Romaine Mackie in a 1956 study dealing with competencies needed by teachers of the deaf. Two separate instruments were used in this investigation. The form sent to teachers of the hearing impaired contained two pages of requested demographic information. Not all of the demographic data obtained were used in this study. In addition,
the form required the teachers to rate the Importance of each of 92 competencies and their Proficiency in each competency (Appendix D). The form sent to the administrators of programs for the hearing impaired contained the identical 92 competencies which were on the teachers' form, but the administrators were required to rate only the Importance of the competencies (Appendix E). Furthermore, no demographic information was obtained from the administrators.

In determining whether each of the 92 competencies on the inquiry form was considered an appropriate and valid item prior to mailing the forms to the teachers and administrators, eight experts in the field of deaf education were asked to rate each item as being either "appropriate" or "inappropriate." Four of the experts were teacher educators in the education of the hearing impaired with a combined experience of 78 years in working with the hearing impaired. Two of these experts were teaching in university programs in Texas, one was teaching in a university program in Iowa, and one in such a program in Maryland. Four of the experts were principals of programs for hearing impaired students. Two were principals of day school programs in Texas, one was the principal of a residential school in Indiana, and one the principal of a residential school in New York.

None of the 92 items was rated as "inappropriate" by all of the experts and 88 of the competencies were rated as "appropriate" by more than half of the experts. In addition,
the experts were asked to add any competencies they felt should be included on the inquiry form; however, there was no competency listed by more than one expert. Therefore, no additional competencies have been added to the 92 items developed by Mackie.

Mackie had the teachers rate the Importance of each competency on a 4-point scale and their Proficiency in each competency on a 3-point scale. Since there has been no statistical comparison done in the ratings of Proficiency between the Mackie study and the present investigation, the teachers in this study were required to rate their Proficiency in each competency on a 4-point scale which allowed for use of the raw data.

Administrative Procedures

The procedures used in collecting the data for this investigation are as follows.

1. Each of the designated administrators from the programs for the hearing impaired which were included in this research study was sent a letter which briefly explained the purpose of this project (Appendix B). Also included was a sign-up sheet for the names and summer addresses of four teachers from each program who would be willing to participate in the study and who (a) provided direct services to hearing impaired students and (b) held professional certification in the education of the hearing impaired.
2. Once the names and addresses of the teachers who agreed to participate in the study were received, a letter explaining the purpose of the study (Appendix C) and a copy of the instrument (Appendix D) was sent to each teacher. Stamped, pre-addressed envelopes were included for returning the completed instrument.

3. A follow-up letter (Appendix E) and a copy of the instrument (Appendix F) was sent to the administrators who were initially contacted. Stamped, pre-addressed envelopes were included for returning the completed instrument.

4. Confidentiality was assured to each individual who would respond to the survey instrument.

The Sample Returns

As a result of the initial mailing to administrators of programs for hearing impaired students, the names of 352 teachers of the hearing impaired were received. Each of these individuals was sent a letter explaining the study (Appendix C) and a copy of the survey instrument (Appendix D). In addition, the 138 administrators who were contacted initially, were sent a letter and a copy of the instrument designed for administrators.

Information contained in Table 1 indicates the number of instruments returned which were utilized. Of the 490 instruments initially mailed, 305 were returned by the teacher and administrator participants. This provided a
total response rate of 62%. All of the instruments which were returned were usable in the data analysis.

Table 1

<table>
<thead>
<tr>
<th>GROUP</th>
<th>NUMBER MAILED</th>
<th>NUMBER RETURNED</th>
<th>PERCENTAGE RETURNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators</td>
<td>138</td>
<td>70</td>
<td>51</td>
</tr>
<tr>
<td>Teachers</td>
<td>352</td>
<td>235</td>
<td>67</td>
</tr>
</tbody>
</table>

TOTAL 490 305 62

Statistical Procedures

Each of the 92 competencies included in the survey instrument was rated in two ways by the teacher respondents: (a) rating each item as "Not Important," "Less Important," "Important," or "Very Important," and (b) rating their proficiency in each competency as "Not Prepared," "Fair," "Good," or "Very Good." The Importance of each competency was also rated by the administrators on the same 4-point scale used by the teachers.

The average Importance of each competency was computed in the same manner used by Mackie (1956). A value of 4 was assigned to "Very Important," 3 to "Important," 2 to "Less Important," and 1 to "Not Important." In computing the
rating of Proficiency in each competency, the value of 4 was assigned to "Very Good," 3 to "Good," 2 to "Fair," and 1 to "Not Prepared."

In determining the dividing points between each competency rating, the divisions which were used in the Mackie study were also used in this investigation. Table 2 represents these dividing points.

Table 2
Dividing Points Between Competency Ratings

<table>
<thead>
<tr>
<th>MEAN SCORE</th>
<th>RATINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.50</td>
<td>Very Important/Very Good</td>
</tr>
<tr>
<td>2.50-3.49</td>
<td>Important/Good</td>
</tr>
<tr>
<td>1.50-2.49</td>
<td>Less Important/Fair</td>
</tr>
<tr>
<td>1.50</td>
<td>Not Important/Not Prepared</td>
</tr>
</tbody>
</table>

The mean and rank order of each of the 92 competencies was computed for the ratings of Importance as determined by both teachers of the hearing impaired and administrators of programs for hearing impaired students, and the mean and rank order of the degree of Proficiency in each competency as determined by teachers. The Standard Deviation was used in those cases where two competencies received the same mean score in either the rankings of Importance or Proficiency.
For purposes of preparing the data for comparison, the categories which were used are as follows:

1. teachers who completed teacher preparation programs in the education of the hearing impaired prior to January 1, 1970;

2. teachers who completed teacher preparation programs in the education of the hearing impaired since January 1, 1970;

3. teachers employed in day school programs for the hearing impaired;

4. teachers employed in residential school programs for the hearing impaired;

5. teachers of the hearing impaired who have completed the baccalaureate degree only and who have six or more years of teaching experience;

6. teachers of the hearing impaired who have completed the master's degree and who have six or more years of teaching experience;

7. teachers of the hearing impaired teaching in settings other than self-contained classes for hearing impaired students;

8. teachers of the hearing impaired who currently are teaching in self-contained classes for hearing impaired students;

9. administrators in state residential and day school programs for the hearing impaired.
For the purposes of statistical analysis, the data were treated as if it were continuous. In comparing the rankings of Importance and Proficiency of the top 20 competencies in the teacher group (Hypothesis 1), a two-tailed correlated t test (Siegel, 1956) was used to test whether population means were different. The two-tailed correlated t test was also used when comparing the mean ratings of various subpopulations of the teacher group on selected competencies (Hypotheses 2-5), as well as in comparing the mean ratings of Importance of the competencies between the administrators and teachers (Hypothesis 7). A Spearman Rank Correlation Coefficient (Roscoe, 1975) was computed to compare the rankings between the teachers in programs for the hearing impaired and administrators in such programs on the Importance of the 92 competency items (Hypothesis 7).

Limitations

The competency statements which were used in this investigation were limited to the 92 original statements used by Romaine Mackie in her 1956 study. The wording of all items has remained unchanged in this inquiry.

Basic Assumptions

The research conducted by Mackie in the 1950's dealing with the qualification and preparation of teachers of exceptional students has demonstrated that teachers of the hearing impaired who currently are delivering services to
hearing impaired students as well as administrators of programs for hearing impaired students, can subjectively evaluate the relative importance of competencies that are related to their work. Therefore, it was assumed that the respondents in this study responded honestly to the items on the instrument, and further, it was assumed that the respondents were in a position to make judgments regarding what competencies are needed by effective teachers of hearing impaired students.

**Significance of the Study**

This study focused on competencies needed by teachers of the hearing impaired in 1980. In 1956, Romaine Mackie conducted a survey in which she determined the competencies needed by teachers of the deaf at that time and had teachers rate each competency in terms of Importance and their own Proficiency in the competency. The following are the 10 competencies in Mackie's study which were rated as "Most Important" for teachers of the deaf to possess:

1. The ability to teach language development by one or more methods such as the Fitzgerald Key, Barry Five Slate, Wing's Symbols, and the Natural Method;

2. The ability to teach speech development and voice improvement to deaf pupils by one or more methods, such as the elements, syllables, whole words, kinesthetic, and auditory methods;
3. The ability to recognize the individual differences of each deaf pupil and to make provision for these;

4. The ability to help deaf children develop socially acceptable patterns of personal hygiene and behavior;

5. The ability to recognize possible causes of social, educational, and emotional maladjustments of deaf children, and to participate in planning courses of action aimed at alleviating these;

6. The ability to enunciate clearly and pronounce correctly;

7. A knowledge and/or understanding of the significance of the amount of usable hearing;

8. The ability to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities;

9. The ability to help parents get information which will assist them in facing the problems arising from having a deaf child in the family;

10. The ability to counsel deaf children with respect to their emotional problems and personal attitudes toward their handicap (Mackie, 1956).

Mackie surveyed 100 teachers of the deaf not only to determine the rankings of Importance of the competencies on her inquiry form, but also to determine the self-competence/proficiency that teachers of the deaf who had graduated from
Teacher preparation programs in the education of the hearing impaired rated themselves as having in each competency. Since 1956 no comprehensive study has investigated whether the competencies rated then are still pertinent, whether the importance of various competencies has changed, and whether the proficiency that teachers today feel they have in certain competencies remains the same as it did nearly 25 years ago.

Teacher preparation programs in the education of the hearing impaired must determine the competencies that a teacher of the hearing impaired will need and then these must be incorporated into the existing program if they are not currently provided. This study is significant in that it will provide the field of deaf education with information as to changes in the competencies which are perceived to be needed by teachers of the hearing impaired which have occurred during the past 25 years. In addition, it will provide teacher preparation institutions with information as to current competency needs relative to teachers working in programs for hearing impaired students which should provide impetus for change to take place in the teacher education programs, which will in turn have a positive effect on the instruction of hearing impaired students in our schools.
CHAPTER IV

REPORT OF THE FINDINGS

In 1956, Romaine Mackie investigated competencies that were needed by teachers of the deaf at that time. This study replicated the 92 competency items contained on the survey instrument used by Mackie in her investigation, in an effort to determine how teachers and administrators in programs for the hearing impaired rated these same competencies in 1980.

This chapter contains a report of the ratings by a group of 235 teachers as to the Importance of the 92 competency items originally used by Mackie and their self-ratings of Proficiency in each competency. In addition, the ratings of Importance of each competency by 70 administrators of programs for hearing impaired students is also reported.

Also contained in this chapter is a comparison of the Importance of the competencies as rated by the administrators and teachers, as well as comparisons between the teachers' ratings in the present study and the Mackie study, and comparisons of the ratings of competencies in various sub-populations of the teacher group.

Report of Demographic Information

The survey instrument that was mailed to teachers in
programs for the hearing impaired requested that they respond to the Importance of the 92 competency items as well as to rate their Proficiency in each competency. In addition, the instrument that was sent to teachers requested that they provide information regarding their teaching experience, certification, present teaching assignment, as well as other demographic information before responding to the 92 competency items. All 235 of the teachers who responded to the survey instrument provided the requested preliminary information. This demographic data is summarized in the section of this report that follows.

Age of Teacher Respondents

Of the 235 teachers who participated in this study, the largest percentage (37) was in the 26 to 30 years of age group and the smallest percentage (4) was in the 46 to 50 years of age group (See Table 3).

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25 years of age</td>
<td>37</td>
<td>16</td>
</tr>
<tr>
<td>26-30 years of age</td>
<td>89</td>
<td>38</td>
</tr>
<tr>
<td>31-35 years of age</td>
<td>41</td>
<td>17</td>
</tr>
<tr>
<td>36-40 years of age</td>
<td>25</td>
<td>11</td>
</tr>
<tr>
<td>41-45 years of age</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>46-50 years of age</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>over 51 years of age</td>
<td>17</td>
<td>7</td>
</tr>
</tbody>
</table>
Academic Preparation of Teacher Respondents

As shown in Table 4, of the 235 teachers participating in this study, 84 (36%) of the teacher respondents reported that they had completed a bachelor's degree. The other 151 (64%) reported that they had completed a graduate program, with 148 (63%) having completed a master's degree, and three (1%) the doctoral degree.

Table 4

Highest Degree Completed By Teacher Respondents

<table>
<thead>
<tr>
<th>DEGREE</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA/BS</td>
<td>84</td>
<td>36</td>
</tr>
<tr>
<td>MA/MS</td>
<td>148</td>
<td>63</td>
</tr>
<tr>
<td>Ph.D./Ed.D.</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Major Area of Study Prior to First Teaching Position

In responding to a question regarding their major area of study prior to entering their first professional position, the largest number of the teacher respondents, 83 (35%) reported that they had concentrated their study in the area of elementary education for the hearing impaired. Thirty-nine (17%) of the teachers had concentrated their study in the area of elementary education for normally hearing children. As shown in Table 5, a sizeable number of the teacher respondents (40) checked the "Other" category.
Table 5

Major Area Of Study By Teachers Before Entering Their First Professional Position

<table>
<thead>
<tr>
<th>MAJOR AREA</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Childhood Education, &quot;normal&quot; children</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Early Childhood Education, hearing impaired children</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Elementary Education, &quot;normal&quot; children</td>
<td>39</td>
<td>17</td>
</tr>
<tr>
<td>Elementary Education, hearing impaired children</td>
<td>83</td>
<td>35</td>
</tr>
<tr>
<td>Secondary Education, &quot;normal&quot; children</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Secondary Education, hearing impaired children</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Speech and Hearing</td>
<td>29</td>
<td>12</td>
</tr>
<tr>
<td>Audiology</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>40</td>
<td>17</td>
</tr>
</tbody>
</table>

A closer look at the responses of the teachers who checked the "Other" category and who specified their major area of study, revealed that nine studied in the area of Special Education and the remainder in various specialized programs, such as English, Psychology, Sociology, and so on.

A total of 148 (63%) of the respondents indicated that they had had teaching experience with normally hearing students, while 87 (37%) reported no experience in teaching students with normal hearing.

Certification of Teacher Respondents

One of the criteria required of each teacher who participated in this study, was that s/he possess certification
as a teacher of the hearing impaired. In addition, the teachers were asked to indicate their current major category of certification. This information is reflected in Table 6.

Table 6

Current Major Category Of Certification Held In The Education Of The Hearing Impaired By The Teacher Respondents

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth to Three Years (0-3)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Preschool (3-6)</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Elementary</td>
<td>36</td>
<td>15</td>
</tr>
<tr>
<td>Kindergarten through Grade 12 (K-12)</td>
<td>152</td>
<td>66</td>
</tr>
<tr>
<td>Birth through Grade 12 (0-12)</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>3</td>
</tr>
</tbody>
</table>

The major category of certification held by the teachers was kindergarten through grade 12 for 154 (65.5%) of the 235 respondents to the survey instrument. Thirty-six (15%) held certification in teaching the elementary grades, which is the second largest category. Only two of the teacher respondents reported that they were certified to teach hearing impaired children in the range of from birth to three years of age.

Educational Setting In Which Teacher Respondents Were Employed

The teachers in this investigation were requested to note the type of educational setting in which they were currently employed (see Table 7).
Table 7
Educational Settings in Which Teachers of the Hearing Impaired in This Investigation Were Functioning

<table>
<thead>
<tr>
<th>SETTING</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential School</td>
<td>100</td>
<td>43</td>
</tr>
<tr>
<td>Special Day School Program</td>
<td>29</td>
<td>12</td>
</tr>
<tr>
<td>Center of Two or More Special Classes in a Regular School</td>
<td>55</td>
<td>23</td>
</tr>
<tr>
<td>Single Special Class in a Regular School</td>
<td>22</td>
<td>9</td>
</tr>
<tr>
<td>Itinerant Program</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>7</td>
</tr>
</tbody>
</table>

One hundred (43%) of the teachers reported that they were teaching in a residential school for the hearing impaired, which was the largest category. The second largest category consisted of the 55 (23%) teachers who reported that they were teaching in a center of two or more special classes of hearing impaired students in a regular school. Of the teachers who checked the "Other" category, eight were in resource rooms, two were in demonstration classes for the hearing impaired, and two were teaching in classes where there was reverse mainstreaming with students who have normal hearing.

Comparison of the Ratings of 92 Competency Items by Teachers in the Present Study and Teachers in the Mackie (1956) Study

Romaine Mackie (1956) had 100 teachers of the deaf rate the Importance of 92 competencies and their own Proficiency
in each competency. The current investigation required 235 teachers of the hearing impaired in 1980 to rate these same 92 competencies in Importance and their own Proficiency with each competency item. The mean score for each competency was calculated for the areas of Importance and Proficiency. The competencies were then rank ordered for both Importance and Proficiency according to the mean scores.

The range of mean ratings for the 92 competencies by category and the number of competencies falling into each category is illustrated in Table 8. These categories, which were established in the Mackie study, will be used for discussion purposes throughout this Chapter and in Chapter V.

Table 8

Distribution of Mean Ratings for Importance and Proficiency in the Present Study and Number of Competencies Falling Into Each Category

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>RANGE OF MEAN RATINGS</th>
<th>NUMBER REPORTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Important</td>
<td>3.50-Above</td>
<td>3.504-3.923</td>
</tr>
<tr>
<td>Important</td>
<td>2.50-3.499</td>
<td>2.534-3.487</td>
</tr>
<tr>
<td>Less Important</td>
<td>1.50-2.499</td>
<td>1.987-2.409</td>
</tr>
<tr>
<td>Not Important</td>
<td>Below 1.499</td>
<td></td>
</tr>
<tr>
<td>Very Good</td>
<td>3.50-Above</td>
<td>3.549-3.637</td>
</tr>
<tr>
<td>Good</td>
<td>2.50-3.499</td>
<td>2.532-3.470</td>
</tr>
<tr>
<td>Fair</td>
<td>1.50-2.499</td>
<td>1.614-2.494</td>
</tr>
<tr>
<td>Not Prepared</td>
<td>Below 1.499</td>
<td>0.000-1.361</td>
</tr>
</tbody>
</table>
Using the range of mean ratings, all 92 items have been identified by the category into which it falls, in the areas of Importance and Proficiency. These data are presented as Appendix G.

The present study showed that teachers of the hearing impaired considered 25 of the 92 competencies as "Very Important." Of these 25, 16 were also considered as "Very Important" by teachers of the hearing impaired in the study conducted by Mackie.

Importance of Competency Items

A statistical comparison of the ratings and rankings of the competencies by teachers in the Mackie study and this investigation was not possible since the raw data from the Mackie study were not available to use in the analysis. However, there was a listing of the rank order of the competencies rated in the study by Mackie. These rankings made it possible to compare the rank order of competencies rated by the teachers in Importance in the original study and the ratings of the items by the teachers in this inquiry.

The data presented in Table 9 reflects that the ability to teach language development and speech and voice improvement (See Table 9, Rank ordered Items 25 & 29 in the present study), were considered as "Important" by the teachers; however, the same competencies were ranked as first and second ("Very Important") in importance by the teachers in the Mackie study. Also still "Important" but noticably
Table 9
Comparison of Rank Order of Importance of 92 Competencies Needed by Teachers of the Hearing Impaired Between the Mackie (1956) Study and the Present Study

<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>8</td>
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<td>Ability to participate with other members of a professional team in helping parents with problems related to their deaf child's school placement.</td>
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<td>9</td>
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<td>A knowledge and/or understanding of the significance of age of onset of deafness.</td>
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<td>Ability to participate with other members of a professional team in helping parents with problems related to their deaf child's limitations and potentialities.</td>
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<td>Ability to participate with other members of a professional team in helping parents with problems related to their deaf child's social and emotional problems.</td>
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<td>Ability to counsel deaf children with respect to their emotional problems and personal attitudes toward their handicap.</td>
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<tr>
<td>13</td>
<td>37</td>
<td>Ability to work as a member of a team with other professional workers (such as medical and psychological personnel) in making a case study of a deaf child aimed at planning a program suited to his needs and abilities.</td>
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<td>Ability to provide opportunities for a wide range of social experiences for deaf pupils in order to further their social and intellectual development.</td>
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### Table 9—Continued

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<td>16 6 Ability to enunciate clearly and pronounce correctly.</td>
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<td>17 22 Ability to help deaf children use visual clues in analyzing a situation and in communicating with others.</td>
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<td>18 14 Ability to counsel deaf children with respect to their social problems.</td>
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<td>19 26 Ability to counsel deaf children with respect to their educational problems.</td>
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<td>20 21 A knowledge and/or understanding of the possible effect of the socio-economic conditions and emotional climate of the home on the deaf child's social, emotional, and intellectual development.</td>
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<td>21 20 Ability to encourage and create situations in school in which deaf children have an opportunity to converse naturally and freely with normally hearing persons.</td>
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<tr>
<td>22 19 Ability to provide for deaf pupils opportunities in the curriculum for experiences in health education (healthful living, etc.).</td>
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<td>23 11 Ability to create a wide range of visual experiences to compensate for the deaf child's hearing disability.</td>
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lower in ranking in this investigation than in the Mackie study, was a teacher's ability to write clearly on charts, paper and blackboard (Table 9, rank ordered Item 42 in the present study). The most drastic drop from the top 25 "Very
Important" items in the study by Mackie was a knowledge of the materials useful in teaching lipreading to the deaf (Table 9, rank ordered Item 76 in the present study) which is in the lower part of the "Important" category in this study.

The teachers in both studies rated high in Importance the ability of a teacher to individualize instruction for hearing impaired children and to help them to develop socially and emotionally (Table 9, rank ordered Items 1, 2, 4, 6, & 14 in the present study). Also considered as "Very Important" was the ability of the teacher to work as a member of an interdisciplinary team in helping parents to cope with having a hearing impaired child in the family and to meet the child's needs in the home (Table 9, rank ordered Items 8, 10, 11, & 34 in the present study).

The ability to use the manual alphabet and sign language in teaching (Table 9, rank ordered Items 45 & 46 in the present study) were rated as "Important" by the teachers in this inquiry. In the Mackie study, the ability to use the manual alphabet was rated as "Less Important," and the ability to use sign language in teaching was the lowest rated competency, receiving a rating of "Not Important."

Teachers in both studies gave low ratings in Importance to the ability of teachers to administer different types of tests to hearing impaired students (Table 9, rank ordered Items 75, 83, 85, & 91 in the present study), which may reflect the need for an individual who is trained in test
administration to work with hearing impaired students in these areas. Teachers in both studies also rated as "Less Important" the knowledge of techniques for teaching blind and athetoid students (Table 9, rank ordered Items 87 & 89 in the present study).

Proficiency in Competency Items

This investigation further revealed that teachers of the hearing impaired rated themselves as "Very Good" in their self-ratings of proficiency in only four of the 92 competency items (See Table 10).

TABLE 10

Comparison of the Rank Order of Proficiency in 92 Competencies Needed by Teachers of the Hearing Impaired Between the Mackie Study and the Present Study

<table>
<thead>
<tr>
<th>RANK ORDER OF PROFICIENCY</th>
<th>PRESENT STUDY</th>
<th>MACKIE STUDY</th>
<th>COMPETENCY</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Ability to enunciate clearly and pronounce correctly.</td>
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<td>7</td>
<td>7</td>
<td>A knowledge and/or understanding of the significance of age at onset of deafness.</td>
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<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>A knowledge and/or understanding of the significance of amount of usable hearing.</td>
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<td>RANK ORDER OF PROFICIENCY</td>
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<tr>
<td>4</td>
<td>5</td>
<td>Ability to recognize the individual differences of each deaf pupil and to make provision for these.</td>
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<tr>
<td>5</td>
<td>10</td>
<td>Ability to organize and carry out field trips.</td>
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<tr>
<td>6</td>
<td>49</td>
<td>Ability to operate filmstrip and motion picture projectors and other visual aids.</td>
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<tr>
<td>7</td>
<td>4</td>
<td>Ability to write clearly (cursive and manuscript styles) on charts, paper, and blackboard.</td>
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<tr>
<td>8</td>
<td>2</td>
<td>Ability to help deaf children develop socially acceptable patterns of personal hygiene and behavior.</td>
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<tr>
<td>9</td>
<td>14</td>
<td>Ability to develop and make use of individual educational records of deaf children.</td>
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<tr>
<td>10</td>
<td>9</td>
<td>Ability to create a wide range of visual experiences to compensate for the deaf child's hearing disability.</td>
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<tr>
<td>11</td>
<td>45</td>
<td>Ability to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities.</td>
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<tr>
<td>12</td>
<td>39</td>
<td>Ability to organize and develop a curriculum around socially useful and meaningful central themes or units of experience.</td>
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- **A knowledge and/or understanding of sources of procurement of special education materials and equipment for deaf children.**
- **Ability to draw educational interpretations from audiograms.**
- **Ability to interpret educational programs for, and the problems and abilities of the deaf to the general public.**
- **Ability to participate with other members of a professional team in helping parents with problems related to their deaf child’s social and emotional problems.**
- **Ability to provide deaf pupils with opportunities in the curriculum for experiences in health education.**
- **A knowledge and/or understanding of reference materials and professional literature on the education and psychology of the deaf.**
- **Ability to administer standardized group achievement tests.**
- **A knowledge and/or understanding of the educational provisions for deaf children under existing Federal, State, and local laws and regulations.**
Table 10—Continued

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<td>53 65</td>
<td>Ability to teach a multi-grade class of deaf children.</td>
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<td>Ability to administer to deaf children individual diagnostic tests of reading and arithmetic disability.</td>
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<td>Ability to draw educational interpretations from otological and other medical reports.</td>
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<td>Ability to give first aid to hearing aids.</td>
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<td>57 53</td>
<td>A knowledge and/or understanding of the locations of services offered deaf children and their parents by non-school organizations, such as clinics, health departments, and vocational rehabilitation agencies.</td>
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<td>Ability to provide deaf pupils with opportunities in the curriculum for experiences in physical education.</td>
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<td>Ability to teach deaf pupils with multiple atypical conditions such as giftedness, mental retardation, visual loss.</td>
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<td>60 54</td>
<td>Ability to provide deaf pupils with opportunities in the curriculum for experiences in dramatic arts.</td>
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<td>61 57</td>
<td>Ability to counsel deaf children with respect to their vocational problems and life goals.</td>
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<td>A knowledge and/or understanding of the general plan of medical treatment of the different types of hearing disabilities.</td>
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<td>63 41</td>
<td>Ability to plan and carry out an assembly program.</td>
</tr>
<tr>
<td>64 64</td>
<td>A knowledge and/or understanding of the methods of hearing testing and the various instruments used for this purpose.</td>
</tr>
<tr>
<td>65 88</td>
<td>Ability to provide deaf pupils with opportunities in the curriculum for experiences in domestic arts.</td>
</tr>
<tr>
<td>66 62</td>
<td>Ability to take responsibility for, or to assist with, one or more of such activities as the Boy or Girl Scouts and photographic clubs.</td>
</tr>
<tr>
<td>67 60</td>
<td>A knowledge and/or understanding of the findings of research studies which have bearing on the education, psychology, and social status of the deaf.</td>
</tr>
<tr>
<td>68 67</td>
<td>Ability to participate with other members of a professional team in helping parents with problems related to their deaf child's occupational placement.</td>
</tr>
<tr>
<td>69 83</td>
<td>Ability to provide deaf pupils with opportunities in the curriculum for experiences in fine arts.</td>
</tr>
<tr>
<td>RANK ORDER OF PROFICIENCY</td>
<td>COMPETENCY</td>
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<tr>
<td><strong>PRESENT STUDY</strong></td>
<td><strong>MACKIE STUDY</strong></td>
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<td><strong>71</strong></td>
<td><strong>75</strong></td>
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Table 10—Continued

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<tr>
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Table 10—Continued

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<td>90</td>
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</table>

Although no statistical comparison has been made between the study conducted by Romaine Mackie and this investigation, data in Table 10 presents a comparison of the rank order of Proficiency in the competencies as rated by the groups of teachers in the two studies.

When the competency items were rank ordered, the teachers in the present study ranked their proficiency in interdisciplinary team work as 13th and 17th, while these same items were ranked 42nd and 44th by teachers in the Mackie study.
(1956) study. In the areas of the development of communication skills, teachers in the Mackie study ranked their proficiency as "Good" (Table 10, rank ordered Items 19, 48, & 76 in the present study), while the teachers in this investigation rated their proficiency as "Good" in the competencies ranked 19th and 48th, but only "Fair" in the competency which is ranked 76th.

Teachers of the hearing impaired in this study rated themselves as "Less Proficient" in the competencies relating to the ability to interpret the problems and abilities of the hearing impaired student to various groups (Table 10, rank ordered Items 18, 30, 35, & 39 in the present study), than did the teachers who participated in the study conducted by Mackie.

The teachers in this investigation rated themselves as more proficient in the use of the manual alphabet and sign language in teaching (Table 10, rank ordered Items 27 & 33 in the present study) than did the teachers in the Mackie study. Teachers in both groups rated themselves as "Not Good" in proficiencies which related to a knowledge of the techniques in teaching blind and athetoid students (Table 10, rank ordered Items 90 & 91 in the present study), as well as in the proficiency of the competency which related to the ability to use the visual speech technique developed by the Bell Telephone Laboratories (Table 10, rank ordered Item 92 in the present study).
A Comparison of the Ratings of Importance and Proficiency in 92 Competencies Needed by Teachers of the Hearing Impaired by the Teachers Who Participated in the Present Study

In this investigation, 235 certified teachers of the hearing impaired subjectively rated the relative importance of 92 competencies that are related to their work as well as their own proficiency in each competency. The mean of the Importance rating and Proficiency rating was calculated for each competency, and the 92 competencies were then rank-ordered in the area of "Importance" and in the area of "Proficiency". The 92 competency items and the rank order of each competency in the two areas is presented in Table 11.

Table 11
Comparison of Rankings of Importance of 92 Competencies Needed by Teachers of the Hearing Impaired with Their Rankings of Proficiency in Each Competency--Present Study

<table>
<thead>
<tr>
<th>RANK ORDER OF:</th>
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<td>RANK ORDER OF:</td>
<td>COMPETENCY</td>
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</tr>
<tr>
<td>IMPOR-¦ PROFI-¦ Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's social and emotional problems.</td>
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<td>TANCE ¦ CIENCY</td>
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<td>11  ¦ 40</td>
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<td>12  ¦ 46</td>
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<td>14  ¦ 29</td>
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<td>15  ¦ 9</td>
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<td>16  ¦ 1</td>
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<td>17  ¦ 31</td>
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<tr>
<td>18  ¦ 47</td>
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<tr>
<td>19  ¦ 36</td>
<td></td>
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<tr>
<td>Ability to counsel deaf children with respect to their educational problems.</td>
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<tr>
<td>Ability to develop and make use of individual educational records of deaf children.</td>
<td></td>
</tr>
<tr>
<td>Ability to counsel deaf children with respect to their social problems.</td>
<td></td>
</tr>
<tr>
<td>Ability to counsel deaf children with respect to their social problems.</td>
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<tr>
<td>RANK ORDER OF:</td>
<td>COMPETENCY</td>
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</tr>
<tr>
<td>IMPOR-TANCE</td>
<td>PROFICIENCY</td>
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<td>20</td>
<td>16</td>
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<tr>
<td>21</td>
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<td>41</td>
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<td>19</td>
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<td>25</td>
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<td>27</td>
<td>44</td>
</tr>
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<td>28</td>
<td>5</td>
</tr>
</tbody>
</table>

A knowledge and/or understanding of the possible effects of the socio-economic conditions and emotional climate of the home on the deaf child's social, emotional, and intellectual development.

Ability to encourage and create situations in school in which deaf children have an opportunity to converse naturally and freely with normally hearing persons.

Ability to provide for deaf pupils opportunities in the curriculum for experiences in health education.

Ability to create a wide range of visual experiences to compensate for the deaf child's hearing disability.

Ability to counsel deaf children with respect to their vocational problems and life goals.

Ability to teach language development by one or more methods, such as the Fitzgerald Key, Barry Five Slate, Wing's Symbols, the Natural Method.

Ability to cooperate with special teachers and regular school personnel in developing an integrated program for each deaf pupil.

A knowledge and/or understanding of the educational provisions for deaf children under existing Federal, State, and local laws and regulations.

Ability to organize and carry out field trips.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Importance</th>
<th>Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>48</td>
<td>Ability to teach speech development and voice improvement to deaf pupils by one or more methods such as the elements, syllables, whole words, kinesthetic, auditory method.</td>
</tr>
<tr>
<td>30</td>
<td>15</td>
<td>Ability to draw educational interpretations from case records and histories.</td>
</tr>
<tr>
<td>31</td>
<td>26</td>
<td>A knowledge and/or understanding of the general meaning of the diagnosis and the prognosis for each individual deaf pupil in the class.</td>
</tr>
<tr>
<td>32</td>
<td>18</td>
<td>Ability to interpret educational programs for teachers of normally hearing children.</td>
</tr>
<tr>
<td>33</td>
<td>37</td>
<td>A knowledge and/or understanding of the sources of procurement of special educational materials and equipment for deaf children.</td>
</tr>
<tr>
<td>34</td>
<td>68</td>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's occupational placement.</td>
</tr>
<tr>
<td>35</td>
<td>14</td>
<td>A knowledge and/or understanding of the methods and/or techniques of teaching the so-called normal child.</td>
</tr>
<tr>
<td>36</td>
<td>38</td>
<td>Ability to draw educational interpretations from audiograms.</td>
</tr>
<tr>
<td>37</td>
<td>28</td>
<td>Ability to draw educational interpretations from psychological reports.</td>
</tr>
<tr>
<td>38</td>
<td>6</td>
<td>Ability to operate filmstrip and motion picture projectors, and other visual aids.</td>
</tr>
</tbody>
</table>
TABLE 11--Continued

RANK ORDER OF:

<table>
<thead>
<tr>
<th>COMPETENCY</th>
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<tbody>
<tr>
<td>IMPOR-TANCE</td>
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</table>

| 39 | 58 | Ability to provide for deaf pupils opportunities in the curriculum for experiences in physical education (including play and recreation). |
| 40 | 30 | Ability to interpret educational programs for, and the problems and abilities of the deaf to normally hearing children. |
| 41 | 39 | Ability to interpret educational programs for, and the problems and abilities of the deaf to the general public. |
| 42 | 7  | Ability to write clearly (cursive and manuscript styles) on charts, paper, and blackboard. |
| 43 | 57 | A knowledge and/or understanding of the locations of services offered by non-school organizations such as clinics, health departments and vocational rehabilitation agencies, for deaf children and their parents. |
| 44 | 60 | Ability to provide for deaf pupils opportunities in the curriculum for experiences in dramatic arts (play-acting). |
| 45 | 33 | Ability to use sign language in teaching. |
| 46 | 27 | Ability to use the manual alphabet in teaching. |
| 47 | 42 | A knowledge and/or understanding of the reference materials and professional literature on the education and psychology of the deaf. |
| 48 | 24 | Ability to draw educational interpretations from reports of social workers. |
TABLE II--Continued

<table>
<thead>
<tr>
<th>RANK ORDER OF:</th>
<th>COMPETENCY</th>
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<tbody>
<tr>
<td>IMPOR-TANCE</td>
<td>PROFICIENCY</td>
</tr>
<tr>
<td>49</td>
<td>59</td>
</tr>
<tr>
<td>Ability to teach deaf pupils with multiple atypical conditions such as giftedness, mental retardation, visual loss, etc.</td>
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<tr>
<td>50</td>
<td>21</td>
</tr>
<tr>
<td>A knowledge and/or understanding of the causes of the various types of hearing disability.</td>
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<tr>
<td>51</td>
<td>54</td>
</tr>
<tr>
<td>Ability to administer to deaf children individual diagnostic tests of reading and arithmetic disability.</td>
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<tr>
<td>52</td>
<td>55</td>
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<tr>
<td>Ability to draw educational interpretations from otological and other medical reports.</td>
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<tr>
<td>53</td>
<td>65</td>
</tr>
<tr>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in domestic arts (cooking, sewing, etc.).</td>
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<tr>
<td>54</td>
<td>51</td>
</tr>
<tr>
<td>Ability to operate amplifiers and other audio-aids.</td>
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<td>56</td>
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<tr>
<td>Ability to give first aid to hearing aids.</td>
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<tr>
<td>56</td>
<td>45</td>
</tr>
<tr>
<td>A knowledge and/or understanding of the purposes, services and locations of national organizations concerned with the education and/or general welfare of the deaf such as the Council for Exceptional Children, the Volta Association, and the Convention of American Instructors of the Deaf.</td>
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<tr>
<td>57</td>
<td>89</td>
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<tr>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in industrial arts (woodworking, power tools, etc.).</td>
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<td>RANK ORDER OF:</td>
<td>IMPOR-TANCE</td>
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Table 11—Continued

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<th>COMPETENCY</th>
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<td>IMPOR-TANCE</td>
<td>PROFI-CIENCY</td>
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<tr>
<td>67</td>
<td>70</td>
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<tr>
<td></td>
<td>A knowledge and/or understanding of the methods and/or techniques of teaching the mentally retarded child.</td>
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<tr>
<td>68</td>
<td>77</td>
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<tr>
<td></td>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in arts and crafts (leatherworking, weaving, etc.).</td>
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<tr>
<td>69</td>
<td>82</td>
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<tr>
<td></td>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in music (rhythm, instrumental).</td>
</tr>
<tr>
<td>70</td>
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<td></td>
<td>Ability to teach a multi-grade classs of deaf children.</td>
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<tr>
<td>71</td>
<td>76</td>
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<tr>
<td></td>
<td>Ability to teach speech reading (lipreading) by one or more methods such as Nitchie, Jena, Kinzie, Newer, Mulle-Walle, and so on.</td>
</tr>
<tr>
<td>72</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>A knowledge and/or understanding of the general plan of medical treatment of the different types of hearing disabilities.</td>
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<tr>
<td>73</td>
<td>80</td>
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<td></td>
<td>Ability to contribute to community leadership in establishing an educational program for deaf children.</td>
</tr>
<tr>
<td>74</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>A knowledge and/or understanding of the methods and/or techniques of teaching the gifted child.</td>
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<td>Ability to administer to deaf children standardized group achievement tests.</td>
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<td>76</td>
<td>72</td>
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<td>A knowledge and/or understanding of the materials useful in teaching lipreading to the deaf.</td>
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<td>IMPOR-TANCE</td>
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| 77  | 66  | Ability to take responsibility for, or to assist with one or more of such activities as the Boy or Girl Scouts, photographic club, and so on. |
| 78  | 83  | Ability to administer to deaf children individual performance tests of mental ability. |
| 79  | 64  | A knowledge and/or understanding of the methods of hearing testing and the various instruments used for this purpose. |
| 80  | 81  | Ability to work with architects and school administrators in planning and securing classroom and other special school equipment and housing facilities for deaf children. |
| 81  | 52  | A knowledge and/or understanding of the history of education of the deaf. |
| 82  | 78  | A knowledge and/or understanding of the factors involved in fitting hearing aids. |
| 83  | 85  | Ability to administer to deaf children group nonlanguage tests of mental ability. |
| 84  | 87  | Ability to administer an educational program for deaf children (selection of personnel, finance, organizing and integrating services, reporting, recording, and so on). |
| 85  | 63  | Ability to plan and carry out an assembly program. |
Table 11—Continued

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<th>RANK ORDER OF:</th>
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Providing For The Individual Differences and Needs of Hearing Impaired Students

The six competencies which received the highest ratings of Importance by the teacher respondents related to either direct intervention procedures which could be used in meeting the individual needs of hearing impaired students, or knowledges and techniques which could be used to meet these individual needs (Table 11, rank ordered Items 3, 4,
The competency which received the highest ranking related to a teacher's ability to recognize the individual differences of each deaf pupil and to make provision for these. Also highly rated (Table 11, rank ordered Items 2 & 6 in Importance column) were the abilities of the teacher to provide for individual differences in the curriculum on the basis of the hearing impaired student's needs and potentialities and around socially useful units.

Of these six competencies which the teachers rated highest in Importance, the first one was the only competency in which the teachers rated their Proficiency as "Very Good". When the competency items were rank ordered, the ability to recognize possible causes of social and emotional maladjustments of deaf students and to participate in planning courses of action aimed at alleviating these received a ranking of fourth in Importance but the Proficiency ranking was only 22nd. Also showing a difference between Importance and Proficiency rankings were competencies related to a teacher's ability to organize and develop a curriculum (a) for deaf students of the basis of their individual needs and potentialities (2nd in Importance and 11th in Proficiency), and (b) around socially useful and meaningful central themes of experiences (6th in Importance and 12th in Proficiency).

Included within the competencies that were rated in the top 25 in Importance by the teachers, were eight competencies
which dealt with various abilities of a teacher to assist and/or counsel hearing impaired students in various areas. The ability to help deaf students to develop acceptable patterns of behavior as well as being able to counsel them regarding their attitudes toward their handicap (Table 11, rank ordered Items 5 & 12 in Importance column) were seen as important competencies for teachers to possess. When the competencies were rank ordered, the competency rank ordered 12th in Importance which dealt with a teacher's ability to counsel deaf students with respect to their emotional problems and personal attitudes toward their handicap, received a Proficiency ranking of only 46th. This difference indicates that although the teachers thought this competency was "Very Important," they did not consider themselves equally as proficient in this area. The ability to counsel hearing impaired students in respect to their social problems received an Importance ranking of 18th but a Proficiency ranking of 47th. An Importance ranking of 19th with a Proficiency ranking of 36th was given to a teacher's ability to counsel with hearing impaired students with respect to their educational problems. Likewise, the importance of the ability to counsel deaf students with their vocational problems was ranked as 24th while the teachers' own proficiency with this competency was ranked as 61st.

Three additional competencies in this area dealt with the teacher's ability to provide for a wide range of social and
visual experiences for the deaf student. These competencies were ranked as 14th and 17th in Importance and 29th and 31st in Proficiency respectively. The only competency to receive a higher rating in Proficiency than Importance was the ability of the teacher to create a wide range of visual experiences to compensate for the deaf student's hearing disability. This competency was ranked 10th in Proficiency but only 23rd in Importance.

Home-School-Community Relationships

Teachers of the hearing impaired are often called upon to serve as members of an interdisciplinary professional team in working with the parents of a hearing impaired student. The teachers in this study emphasized the importance of teachers being able to participate with other members of a professional team in helping parents with problems related to the hearing impaired student. Although teachers rated the importance of being able to help parents get information which would aid them in the deaf student's school placement as "Very Important," (Table 11, rank ordered Item 8 in Importance column), they rated their own proficiency in this area as only "Good." When the competencies were rank ordered, there was a wide gap between Importance and Proficiency in the rankings of 10th and 11th given the Importance of having the ability to work with other members of a professional team in helping parents with problems related to (a) the deaf child's limitations and potentialities, and (b) his/her
social and emotional problems, and the self-ratings of 34th and 40th in Proficiency given by the teachers to these two competencies. The ability of a teacher to participate with other members of a professional team in helping parents with problems related to the student's occupational placement was ranked only 34th in Importance, while the Proficiency with this competency was ranked 68th.

Not only are teachers required to serve as members of a professional team, they are often required to assist the parents of a hearing impaired student get information which will enable them to cope with having this child in the family. In this investigation this competency was ranked as seventh in Importance and 32nd in the teachers' Proficiency in this competency.

Although the teachers in this inquiry noted that it is important for them to be able to work on a professional team and with parents of hearing impaired students, they placed less importance on the knowledge of the locations of community agencies which provide services to hearing impaired students and their parents (Table 11, rank ordered Item 43 in Importance column), and the knowledge of the purposes and services of national organizations concerned with the education of the deaf (Table 11, rank ordered Item 56 in Importance column). The teachers rated themselves as "Good" in their proficiency in each of these competencies. Rated lower in Importance by the teachers was the ability to work with the
P.T.A. and other school organizations, (Table 11, rank ordered Item 65 in Importance column), while the teachers rated themselves more proficient in this competency than they rated the Importance of the item.

With the advent of Public Law 94-142, teachers of exceptional students are often placed in regular schools but in special classes within these schools. In this type of setting, teachers of hearing impaired students could expect to be called upon to interpret the problems and abilities of the hearing impaired student to a number of different groups of people. The teachers in this study rated as "Very Important" the ability to interpret the problems and abilities of the hearing impaired student to teachers of normally hearing students (Table 11, rank ordered Item 32 in Importance column). The teachers rated themselves higher in Proficiency in this item than in the Importance of the competency. Rated lower, but still as important competencies were the ability to interpret such information to (a) normally hearing children, (b) the general public, and (c) non-professional school workers (Table 11, rank ordered Items 40, 41, & 61 respectively in Importance column). In each competency the rating of Proficiency was higher than the rating of Importance by the teachers.

Communication and Technical Knowledge

Teachers of the hearing impaired are responsible for teaching speech and language development to their students.
The importance of the ability to teach language development was ranked 25th when the competency items were rank ordered, and the ability to teach speech was ranked 29th. Although neither of these competencies were rated as "Very Important" by the teachers who participated in this study, they did fall in the "Important" category. The teachers rated themselves as more proficient in the ability to teach language than in the ability to teach speech and voice improvement.

A knowledge and understanding of the significance of the amount of usable hearing the hearing impaired student has, was rated very high in Importance and in their Proficiency in the competency by the teachers (Table 11, rank ordered Item 3 in Importance column). Although this information would be essential in teaching auditory training to hearing impaired students, the competency related to such training was rated much lower in Importance by the teachers (Table 11, rank ordered Item 60 in Importance column).

The teachers rated the ability to teach speechreading (lipreading) low in the category of "Importance," (Table 11, rank ordered Item 71 in Importance column), and their Proficiency was rated as "Fair." Rated even lower was the importance of having a knowledge of materials which would be useful in teaching the hearing impaired student (Table 11, rank ordered Item 76 in Importance column), and again this competency received a Proficiency rating of "Fair."
The age of onset of a hearing loss is very significant in the hearing impaired child's ability to acquire and use language. Although the knowledge and understanding of this significance was ranked ninth when the competency items were rank ordered, the ability to teach language development was ranked only 25th. The teachers rated themselves as "Very Good" in proficiency with the ability to understand the significance of the age of onset of the hearing loss, and "Good" in the proficiency to teach language development.

With the increasing use of Total Communication in programs for the hearing impaired during the past ten years, teachers in these programs are required to be able to use the manual alphabet and sign language in their teaching. When the ratings of Importance and Proficiency of these competencies were rank ordered, the Importance of the ability to use the manual alphabet and sign language in teaching were ranked 45th and 46th. The Proficiency ranks of these two competencies were higher than the Importance ranks, receiving ranks of 33rd and 27th respectively in Proficiency.

A majority of the students who are placed in special classes for the hearing impaired, are fitted with hearing aids. The teachers in this study rated the ability to give "first aid" to hearing aids as "Important" (Table 11, rank ordered Item 55 in Importance column), but gave a much lower rating to the knowledge and understanding of the factors involved in fitting hearing aids (Table 11, rank ordered
Item 82 in Importance column), and rated as "Less Important" a knowledge of the basic theory of electronics as applied to hearing aids (Table 11, rank ordered Item 86 in Importance column). The teachers rated themselves as "Good" in the proficiency of being able to give "first aid to hearing aids, but only "Fair" in the knowledge of the (a) factors involved in fitting hearing aids and (b) basic theory of electronics as applied to hearing aids (Table 11, rank ordered Items 82 & 86 in Importance column).

When the competencies were rank ordered, the competency of having a knowledge and understanding of the diagnosis and prognosis of the individual hearing impaired students in the class was ranked 31st in Importance and 26th in Proficiency. Lower in ranking was a related competency dealing with recent developments in theories on the diagnosis and treatment of different conditions resulting in deafness, ranked 66th in Importance and 71st in Proficiency. Ranked 72nd in Importance and 62nd in Proficiency was having a knowledge of the general plan of medical treatment of the different types of hearing disabilities. Two of the lowest ranked competencies in Importance and Proficiency dealt with very technical knowledge. Ranked as 86th in Importance and 86th in Proficiency was the competency relating to a teacher's knowledge of the basic theory of electronics and the ability to administer a pure-tone audiometric test was the 91st ranked competency in Importance and the 84th in Proficiency.
Curriculum Development and Methods of Teaching

A number of the competency items on the inquiry instrument related to the ability of teachers of the hearing impaired to develop various opportunities within the curriculum for the students in their classes to acquire knowledges and skills in a variety of areas. The teachers placed high importance on the ability to organize and develop a curriculum around socially useful and meaningful central themes or units (Table 11, rank ordered Item 6 in Importance column). The competencies that related to the teacher's ability to provide experiences in the curriculum for the hearing impaired student to gain knowledge in a number of specific areas were quite varied in their ratings of Importance and Proficiency. Experiences in health education were considered to be "Very Important" and were ranked 22nd, while experiences in physical education were considered "Important" and were ranked 39th. Also of importance were curriculum experiences in the dramatic arts (Table 11, rank ordered Item 44 in Importance column), domestic arts (Table 11, rank ordered Item 53 in Importance column), and industrial arts (Table 11, rank ordered Item 57 in Importance column). Experiences in fine arts (Table 11, rank ordered Item 64 in Importance column), arts and crafts (Table 11, rank ordered Item 68 in Importance column), and music (Table 11, rank ordered Item 69 in Importance column) received relatively low ratings of Importance by the teachers. As
can been seen in Table 11, the teachers rated themselves lower in Proficiency in the competency than the Importance of the competency item, in all of the above competencies with the exception of the ability of provide experiences in fine arts, which received a higher rating of Proficiency than Importance.

When the competency items were rank ordered, a knowledge of the techniques of teaching the so-called normal child received a Proficiency ranking of 14th, but was ranked 35th in Importance. Lower rankings of Proficiency than Importance were given to competencies which related to a knowledge of the techniques used in teaching (a) a class of deaf pupils with multiple atypical conditions, (b) the socially and emotionally disturbed student, (c) the mentally retarded student, (d) the gifted student, (e) the athetoid student, and (f) the blind student (Table 11, rank ordered Items 49, 62, 67, 74, 87, & 88 in Importance column respectively).

The Ability to Administer Tests and Use Records

When the competencies were rank ordered, the ability to make use of the individual records of deaf students was rated 15th in Importance and 9th in Proficiency by teachers of the hearing impaired. Ranked lower in Importance and higher in Proficiency were the competencies relating to the ability to draw educational interpretations from (a) case histories and records (30th in Importance and 15th in Proficiency), (b) audiograms (36th in Importance and 38th in
Proficiency), and (c) otological and other medical reports (52nd in Importance and 55th in Proficiency). The ability to draw educational interpretations from reports of social workers (Table 11, rank ordered Item 48 in Importance column) was rated in the lower half of the 92 competency items in Importance and in the upper half in Proficiency.

The competency relating to the ability to administer individual diagnostic tests of reading and arithmetic disability (Table 11, rank ordered Item 51 in Importance column) was of moderate value in Importance and the teachers rated their Proficiency in this competency as "Good." Of relatively low value in Importance were the competencies relating to the teacher's ability to administer (a) standardized group-achievement tests (Table 11, rank ordered Item 75 in Importance column), (b) individual performance tests of mental ability (Table 11, rank ordered Item 78 in Importance column), and (c) group nonlanguage tests of mental ability (Table 11, rank ordered Item 83 in Importance column).

Personal Abilities and Skills

Teachers of the hearing impaired in the present study considered the ability to enunciate clearly and pronounce correctly "Very Important" (Table 11, rank ordered Item 16 in Importance column), and they rated this competency as the one in which they were most proficient. They rated as only "Important" the ability to write clearly on charts and papers (Table 11, rank ordered Item 42 in Importance column),
although this was a competency in which they considered themselves proficient. The ability to play a piano or direct a rhythm band (Table 11, rank ordered Item 92 in Importance column) was rated of virtually no importance as was the teacher's own ability to read lips (Table 11, rank ordered Item 88 in Importance column). Both of these items were rated as "Fair" in terms of the teacher's Proficiency in the competency.

In managing a classroom for hearing impaired students, teachers are often required to possess skills in operating various types of equipment. Teachers rated as "Important" the ability to operate filmstrip and motion picture projectors and other visual aids (Table 11, rank ordered Item 38 in Importance column), however; they considered the ability to operate amplifiers and other audio-aids "Less Important" (Table 11, rank ordered Item 54 in Importance column). The teachers rated themselves as "Good" in their proficiency in the competency related to operating visual aids, with it receiving the sixth highest rating in the area of Proficiency.

Competencies in Which There Was a Significant Difference Between Ratings of Importance and Self-Ratings of Proficiency

Ho 1: There is a difference between the means of the 92 competency items in the ratings of the Importance of each competency as stated needed by teachers of the hearing impaired, and their self-ratings of Proficiency in each of these competencies.

A comparison of the mean ratings of Importance with
the mean ratings of Proficiency on each of the 92 competency items (Hypothesis 1), revealed a difference which was statistically significant at the .001 level on 74 of the competencies. Four additional competencies showed a difference in the mean ratings which was statistically significant at the .01 level (See Table 12).

Table 12

Competencies Rated by Teachers of the Hearing Impaired in Which Ratings of Importance were Significantly Different from Self-Ratings of Proficiency

<table>
<thead>
<tr>
<th>SIGNIFICANCE ITEMS RANKED AS TO IMPORTANCE ON TABLE 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items Not Significant</td>
</tr>
<tr>
<td>16, 28, 38, 42, 50, 58, 61, 64, 65, 70, 79, 85, 88, 92</td>
</tr>
<tr>
<td>Items Significant at .01 Level</td>
</tr>
<tr>
<td>9, 30, 35, 48</td>
</tr>
<tr>
<td>Items Significant at .001 Level</td>
</tr>
<tr>
<td>1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32, 33, 34, 36, 37, 39, 40, 41, 43, 44, 45, 46, 47, 49, 51, 52, 53, 54, 55, 56, 57, 59, 60, 62, 63, 66, 67, 68, 69, 71, 72, 73, 74, 75, 76, 77, 78, 80, 81, 82, 83, 84, 86, 87, 89, 90, 91</td>
</tr>
</tbody>
</table>

In looking at those competencies which were ranked in the upper half of the 92 competency items, there was a statistically significant lower rating given in Proficiency than in Importance in 42 of the items. These related to the general areas of (a) providing for individual needs and differences of hearing impaired students, (b) home, school, and
community relationships, (c) teaching communication skills, and (d) the ability to administer tests and use records.

Many of the competency items were worded so as to reflect a broad knowledge background in a number of areas. The teachers' ratings reflected that although they rate themselves as Proficient in the knowledge of (a) the significance of the age of onset of deafness (Table 11, rank ordered Item 9 in Importance column), (b) the general meaning of the diagnosis and prognosis for the students in the class (Table 11, rank ordered Item 31 in Importance column), (c) techniques used to teach the so-called normal child (Table 11, rank ordered Item 35 in Importance column), (d) the causes of various types of hearing disability (Table 11, rank ordered Item 50 in Importance column), and (e) the anatomy of the hearing mechanism (Table 11, rank ordered Item 58 in Importance column), the ratings given to the Importance of these competencies was significantly lower.

It is beyond the scope of this study to identify the reasons for the variations between the ratings of Importance and Proficiency on the competencies. In general, the data revealed that the teachers rated themselves as more proficient in competencies they considered to be important, and less proficient in those competencies which they rated as less important.

The teachers in this study did not consider themselves Proficient in their abilities to (a) work as team members, (b) counsel with hearing impaired students, or (3) work
with the parents of hearing impaired children. They did consider themselves as Proficient in the ability to enunciate clearly and pronounce correctly.

A two-tailed correlated $t$-test computed on the means of each of the 92 competency statements revealed a statistically significant difference on 78 of the items. Therefore, Hypotheses 1 which stated that there is a difference between the means of each of the 92 competency items in the ratings of Importance and Proficiency by the teachers, is accepted.

Comparison of the Ratings of the Importance of Competencies Needed by Teachers of the Hearing Impaired with Ratings of Self-Proficiency in Sub-Populations of the Teacher Group

In order to further compare the responses given by teachers on the survey instrument used in this investigation, certain sub-populations of the teacher group were compared in their responses. For the purposes of the statistical analysis of these groups, the data were treated as if it were continuous.

Teachers Who Graduated Before and After 1970

Ho 2: There is a difference between the means of the importance of competencies needed in the areas of sign language and/or manual communication skills between the teachers of the hearing impaired who completed teacher preparation programs before January 1, 1970 and those who completed programs after January 1, 1970.

With the increasing use of Total Communication in classes for the hearing impaired during the last ten years,
this investigator analyzed the data to determine if there was a difference between the means of the ratings of Importance relating to the ability to use sign language and the manual alphabet in teaching, between teachers of the hearing impaired who completed teacher preparation programs before January 1, 1970 and those who completed programs after January 1, 1970. The information presented in Table 13 reflects the level of significance of the data obtained from 230 of the 235 teacher respondents on the two items delineated in Hypothesis 2. Group 1 consisted of 63 of the respondents who graduated before January 1, 1970 and Group 2 consisted of 167 teachers who graduated after January 1, 1970.

Table 13

Comparison of the Ratings of Importance of Competencies Relating to the Ability to use Sign Language and the Manual Alphabet in Teaching Between Teachers Who Graduated Before and After 1970

<table>
<thead>
<tr>
<th>COMPETENCY</th>
<th>MEAN GROUP 1 (N = 63)</th>
<th>MEAN GROUP 2 (N = 137)</th>
<th>LEVEL OF SIGNIFICANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to use sign language in teaching.</td>
<td>3.143</td>
<td>3.353</td>
<td>0.226</td>
</tr>
<tr>
<td>Ability to use the manual alphabet in teaching.</td>
<td>3.111</td>
<td>3.377</td>
<td>0.138</td>
</tr>
</tbody>
</table>
Although the significance levels are not high, from looking at the raw data one can see that the teachers who graduated after January 1, 1970 (Group 2) rated the two competencies higher than did those teachers who graduated before 1970 (Group 1).

Hypothesis 2, which stated that there is a difference between the means of the importance of competencies needed in the areas of sign language and the manual alphabet between teachers who graduated from teacher preparation programs before and after 1970, is rejected.

**Ratings of Proficiency in Speech and Language**

Ho 3: There is a difference between the means of Proficiency ratings of competencies related to the teaching of speech and language between teachers with the baccalaureate degree in the education of the hearing impaired with six or more years of teaching experience, and teachers with the master's degree in such programs who have six or more years of teaching experience.

Three of the competency items on the survey instrument related to the teacher's ability to teach speech and language development to hearing impaired students. Hypothesis 3 stated that there would be a difference between the means of proficiency ratings of competencies in the ability to (a) teach speech development and voice improvement, (b) use the visual speech technique developed by the Bell Telephone Laboratories, and (c) teach language development. The responses in Table 14 were tabulated from 44 teachers who
had a baccalaureate degree and six or more years of teaching experience (Group 1) and 76 teachers who had a master's degree and six or more years of teaching experience (Group 1).

Table 14

Comparison of the Ratings in Proficiency of the Ability To Teach Speech and Language Between Teachers with a BA/BS Degree and Teachers with a MA/MS Degree Who Have Six or More Years of Teaching Experience

<table>
<thead>
<tr>
<th>COMPETENCY</th>
<th>MEAN GROUP 1 (N = 44)</th>
<th>MEAN GROUP 2 (N = 76)</th>
<th>LEVEL OF SIGNIFICANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to teach speech development.</td>
<td>3.181</td>
<td>2.934</td>
<td>0.136</td>
</tr>
<tr>
<td>Ability to use Bell Telephone Visual Speech technique.</td>
<td>1.268</td>
<td>1.419</td>
<td>0.229</td>
</tr>
<tr>
<td>Ability to teach language development.</td>
<td>3.455</td>
<td>3.351</td>
<td>0.479</td>
</tr>
</tbody>
</table>

As can be seen from Table 14, the significance levels are not high in any of the three competency items. An examination of the means reveals that the teachers with the master's degree and six or more years of teaching experience (Group 2) rated their self-proficiency in the ability to teach speech and language development lower than did the teachers in Group 1.

Hypothesis 3 stated that there is a difference between the means of Proficiency ratings of the competencies related
to the teaching of speech and language by teachers with the baccalaureate degree and teachers with the master's degree all of whom have six or more years of teaching experience. Based on an analysis of the data obtained, this hypothesis is rejected.

Ratings By Teachers in Residential and Day Schools

Ho 4: There is a difference between the means of the top 20 items in the ratings of Importance of each competency needed by teachers of the hearing impaired, between teachers employed in day school programs and those employed in residential schools for the hearing impaired.

Romaine Mackie (1956) made comparisons in the responses of teachers in residential and day school programs as to the importance of competency items included on her survey instrument. In the present study, Hypothesis 4 stated that there is a difference between the means of the top 20 items in the ratings of the importance of competencies, between teachers working in day school programs, and those working in residential programs for the hearing impaired. One hundred of the teachers reported that they were employed in residential school and 132 teachers reported that they were employed in day school programs. The data presented in Table 15 reflects the comparison of the rankings of the importance of the top 20 competencies between these two groups of teachers.

As noted in Table 15, when the mean ratings of impor-
tance by each group was compared for each item, 6 of the competencies which were ranked in the top 20 revealed statistically significant differences at the .01 level.

Table 15
Comparison of Ratings of Importance of the Top 20 Competencies Needed by Teachers of the Hearing Impaired Between Day and Residential School Teachers

<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>RESIDENTIAL (N=132)</th>
<th>DAY (N=100)</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M=3.95</td>
<td>M=3.92</td>
<td>Ability to recognize the individual differences of each deaf pupil and to make provisions for these.</td>
</tr>
<tr>
<td>2**</td>
<td>M=3.58</td>
<td>M=3.83</td>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's limitations and potentialities.</td>
</tr>
<tr>
<td>3**</td>
<td>M=3.61</td>
<td>M=3.83</td>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's school placement.</td>
</tr>
<tr>
<td>4</td>
<td>M=3.79</td>
<td>M=3.83</td>
<td>A knowledge and/or understanding of the significance of the amount of usable hearing.</td>
</tr>
<tr>
<td>5</td>
<td>M=3.88</td>
<td>M=3.81</td>
<td>Ability to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities.</td>
</tr>
</tbody>
</table>

**Significant at the .01 level.
### Table 15—Continued

<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIDENTIAL DAY (N=132)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>M=3.63</td>
</tr>
<tr>
<td>9</td>
<td>M=3.81</td>
</tr>
<tr>
<td>ability to help parents get information which will assist them in facing the problems arising from having a deaf child in the family.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>M=3.11</td>
</tr>
<tr>
<td>55</td>
<td>M=3.80</td>
</tr>
<tr>
<td>ability to cooperate with special teachers and regular school personnel in developing an integrated program for each deaf pupil.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>M=3.57</td>
</tr>
<tr>
<td>22</td>
<td>M=3.79</td>
</tr>
<tr>
<td>ability to participate with other members of a professional team in helping parents with problems related to the deaf child's social and emotional problems.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>M=3.81</td>
</tr>
<tr>
<td>4</td>
<td>M=3.79</td>
</tr>
<tr>
<td>ability to recognize possible causes of social, educational, and emotional maladjustments of deaf children and to participate in planning courses of action aimed at alleviating these.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>M=3.59</td>
</tr>
<tr>
<td>14</td>
<td>M=3.78</td>
</tr>
<tr>
<td>ability to counsel deaf children with respect to their emotional problems and personal attitudes toward their handicap.</td>
<td></td>
</tr>
<tr>
<td>11**</td>
<td>M=3.58</td>
</tr>
<tr>
<td>21</td>
<td>M=3.77</td>
</tr>
<tr>
<td>ability to work as a member of a team with other professional workers (such as medical and psychological personnel) in making a case study of a deaf child aimed at planning a program suited to his needs and abilities.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>M=3.82</td>
</tr>
<tr>
<td>3</td>
<td>M=3.77</td>
</tr>
<tr>
<td>ability to help deaf children develop socially acceptable patterns of personal hygiene and behavior.</td>
<td></td>
</tr>
<tr>
<td>RANK ORDER OF IMPORTANCE</td>
<td>RESIDENTIAL DAY (N=132)</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>13 M=3.67</td>
<td>7 M=3.73</td>
</tr>
<tr>
<td>14** M=3.44</td>
<td>28 M=3.73</td>
</tr>
<tr>
<td>15** M=3.53</td>
<td>25 M=3.72</td>
</tr>
<tr>
<td>16** M=3.47</td>
<td>26 M=3.71</td>
</tr>
<tr>
<td>17 M=3.78</td>
<td>6 M=3.71</td>
</tr>
<tr>
<td>18 M=3.60</td>
<td>13 M=3.69</td>
</tr>
<tr>
<td>19 M=3.64</td>
<td>8 M=3.68</td>
</tr>
<tr>
<td>20** M=3.09</td>
<td>57 M=3.68</td>
</tr>
</tbody>
</table>
The competencies relating to the ability to work with or assist parents were rated higher by the residential school teachers (Table 15, rank ordered Items 2, 3, & 8 under Residential column) than by teachers in day school programs. Also, the residential school teachers considered as much more important than did teachers in day school programs, items that related to (a) providing information to regular school teachers regarding deaf students (Table 15, rank ordered Item 7 under Residential column), (b) the ability to create situations in school in which deaf students have an opportunity to converse naturally with normally hearing persons (Table 15, rank ordered Item 14 under Residential column), and (c) the ability to interpret educational programs for the deaf to teachers of normally hearing students (Table 15, rank ordered Item 20 under Residential column).

Teachers in residential schools placed less importance on the abilities to (a) help deaf students develop socially acceptable patterns of personal hygiene and behavior (Table 15, rank ordered Item 12 under Residential column), and (b) to provide opportunities for a wide range of social experiences for deaf students in order to further their social and intellectual development (Table 15, rank ordered Item 19 under Residential column), than did teachers in day school programs. Both groups of teachers were in agreement that the most important competency was the ability to recognize the individual differences of each deaf student and to make
provisions for these (Table 15, rank ordered Item 1 under Residential column).

Hypothesis 4 stated that there is a difference in the means of each of the top 20 competencies in the ratings of Importance between teachers in residential schools and teachers in day school programs. Since a statistically significant difference was found in only six of the 20 competencies, this hypothesis is rejected.

Ratings By Teachers of the Hearing Impaired in Self-Contained Classes Versus Those in Other Settings

Ho 5: There is a difference between the means of the top 20 items in the ratings of the Importance of competencies needed by teachers working in self-contained classes for hearing impaired students and teachers delivering services to hearing impaired students in other settings.

Public Law 94-142 stresses that whenever possible handicapped students should be educated with normal students. In the field of deaf education this has caused a decrease in the number of self-contained classes for the hearing impaired. Hypothesis 5 stated that there is a difference between the means of the top 20 items in the ratings of the importance of competencies needed by teachers of the hearing impaired, between teachers working in self-contained classes for hearing impaired students and teachers delivering services to hearing impaired students in other settings.

The data in Table 16 demonstrates the differences in the responses of the 130 teachers who reported that they work in
self-contained classes and the 105 who work in other settings. An examination of the data reveals that only four competencies had a level of significance at the .01 level. All of these competencies related to the teacher's ability to help the parents of hearing impaired students either directly or as a member of a professional team (Table 16, rank ordered Items 9, 11, 14, & 17 in Self-Contained Classes column). On each item, the teachers in self-contained classes rated the importance of the competency lower than did those who were delivering services to hearing impaired students in other settings.

**TABLE 16**

Comparison of Rankings of Importance of Competencies Between Teachers of the Hearing Impaired in Self-Contained Classes and Those Working in Other Settings With the Hearing Impaired

<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>SELF-CONTAINED CLASSES (N=130)</th>
<th>OTHER SETTINGS (N=105)</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Ability to recognize the individual differences of each deaf pupil and to make provisions for these.</td>
<td></td>
</tr>
<tr>
<td>M=3.94</td>
<td>M=3.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>Ability to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities.</td>
<td></td>
</tr>
<tr>
<td>M=3.86</td>
<td>M=3.81</td>
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</tr>
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### Table 16—Continued

<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELF-CONTAINED CLASSES (N=130)</td>
<td>OTHER SETTINGS (N=105)</td>
</tr>
<tr>
<td>3 M=3.82</td>
<td>15 M=3.75</td>
</tr>
<tr>
<td>4 M=3.80</td>
<td>10 M=3.78</td>
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<td>5 M=3.78</td>
<td>5 M=3.85</td>
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<td>7 M=3.67</td>
<td>16 M=3.75</td>
</tr>
<tr>
<td>8 M=3.66</td>
<td>12 M=3.76</td>
</tr>
<tr>
<td>9** M=3.65</td>
<td>6 M=3.85</td>
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<tr>
<td>10 M=3.65</td>
<td>25 M=3.63</td>
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**Table 16—Continued**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Competency</th>
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</thead>
<tbody>
<tr>
<td>11</td>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's school placement.</td>
</tr>
<tr>
<td>12</td>
<td>Ability to provide opportunities for a wide range of social experiences for deaf pupils in order to further their social and intellectual development.</td>
</tr>
<tr>
<td>13</td>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's social and emotional problems.</td>
</tr>
<tr>
<td>14**</td>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's limitations and potentialities.</td>
</tr>
<tr>
<td>15</td>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in health education (healthful living, etc.).</td>
</tr>
<tr>
<td>16</td>
<td>Ability to help deaf children to use visual clues in analyzing a situation and in communicating with others.</td>
</tr>
</tbody>
</table>
Table 16—Continued

<table>
<thead>
<tr>
<th>RANK ORDER</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>OF IMPORTANCE</td>
<td></td>
</tr>
<tr>
<td>SELF-CONTAINED CLASSES (N=130)</td>
<td>OTHER SETTINGS (N=105)</td>
</tr>
<tr>
<td>17**</td>
<td>7</td>
</tr>
<tr>
<td>M=3.59</td>
<td>M=3.81</td>
</tr>
<tr>
<td>18</td>
<td>13</td>
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<tr>
<td>M=3.58</td>
<td>M=3.75</td>
</tr>
<tr>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>M=3.58</td>
<td>M=3.73</td>
</tr>
<tr>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>M=3.58</td>
<td>M=3.46</td>
</tr>
</tbody>
</table>

**Significant at the .01 level.

Teachers working in self-contained classes placed more importance on the teacher's ability to organize and develop a curriculum for deaf students (a) on the basis of their individual needs and potentialities (Table 16, rank ordered Item 2 in Self-Contained Classes column), and (b) around socially useful and meaningful central themes (Table 16, rank ordered Item 6 in Self-Contained Classes column) than
did the teachers in other settings. Both groups of teachers rated the ability to recognize the individual differences of each deaf student and to make provisions for these differences as the most important competency for a teacher of the hearing impaired to possess.

Hypothesis 5 stated that there is a difference in the means of each of the top 20 competencies in the ratings of Importance between teachers in self-contained classes and those working in other settings with hearing impaired students. An examination of the data revealed that the differences in only four of these 20 competency items were statistically significant; therefore, this hypothesis is rejected.

Comparison of the Ratings of the Importance of Competencies Needed by Teachers of the Hearing Impaired By Teachers and Administrators in Programs for Hearing Impaired Students

In addition to the teachers who rated the importance of the 92 competency items on the survey instrument used in this investigation, 70 administrators of programs for the hearing impaired rated the importance of these competencies. The data in Table 17 reflect the comparison between the rankings of these competency items by teachers and administrators.

It is necessary to remember when comparing the responses of these two groups, that the teachers who responded in the present study made their judgments as to the relative importance of the competency statements with reference to their own present teaching position. Neither of the groups was asked to
add any competencies to the list on the survey instrument. It is possible that the administrators may have rated the importance of the competencies with a general educational program for hearing impaired students in mind, rather than focusing on a particular age group or academic setting.

Table 17
Comparison of the Rank Order of Importance of Competencies Needed by Teachers of the Hearing Impaired as Rated by Teachers and Administrators of Programs for the Hearing Impaired

<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEACHERS (N=235)</td>
<td>ADMINISTRATORS (N=70)</td>
</tr>
</tbody>
</table>

1 1  Ability to recognize the individual differences of each deaf pupil and to make provisions for these.

2 2  Ability to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities.

3 7  A knowledge and/or understanding of the significance of the amount of usable hearing.

4 5  Ability to recognize possible causes of social, educational, and emotional maladjustments of deaf children and to participate in planning courses of action aimed at alleviating these.

NOTE: The mean scores from which the rankings were derived are found in Appendices G and H.
<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEACHERS (N=235)</td>
<td>ADMINISTRATORS (N=70)</td>
</tr>
<tr>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>9</td>
<td>16</td>
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<tr>
<td>8</td>
<td>20</td>
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<tr>
<td>7</td>
<td>22</td>
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<tr>
<td>6</td>
<td>13</td>
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<tr>
<td>5</td>
<td>8</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>5</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to help deaf children develop socially acceptable patterns of personal hygiene and behavior.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Ability to organize and develop a curriculum around socially useful and meaningful central themes or units of experience.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>Ability to help parents get information which will assist them in facing the problems arising from having a deaf child in the family.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's school placement.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>A knowledge and/or understanding of the significance of the age of onset of deafness.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's limitations and potentialities.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>Ability to participate with other members of a professional team in helping with problems related to the deaf child's social and emotional problems.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>Ability to counsel deaf children with respect to their emotional problems and personal attitudes toward their handicap.</td>
<td></td>
</tr>
</tbody>
</table>
Table 17--Continued

<table>
<thead>
<tr>
<th>RANK ORDER</th>
<th>TEACHERS (N=235)</th>
<th>ADMINISTRATORS (N=70)</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to work as a member of a team with other professional workers in making a case study of a deaf child.</td>
<td>13</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Ability to provide opportunities for a wide range of social experiences for deaf pupils in order to further their social and intellectual development.</td>
<td>14</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Ability to develop and make use of individual educational records of deaf children.</td>
<td>15</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Ability to enunciate clearly and pronounce clearly.</td>
<td>16</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Ability to help deaf children use visual clues in analyzing a situation and in communicating with others.</td>
<td>17</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Ability to counsel deaf children with respect to their social problems.</td>
<td>18</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Ability to counsel deaf children with respect to their educational problems.</td>
<td>19</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>A knowledge and/or understanding of the possible effects of socio-economic conditions and emotional climate of the home on the deaf child's social, emotional, and intellectual development.</td>
<td>20</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Ability to encourage and create situations in school in which deaf children have an opportunity to converse naturally and freely with normally hearing persons.</td>
<td>21</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
Table 17—Continued

<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEACHERS (N=235)</td>
<td>Ability to provide for deaf pupils opportunities in the curriculum for</td>
</tr>
<tr>
<td>ADMINISTRATORS (N=70)</td>
<td>experiences in health education.</td>
</tr>
<tr>
<td>22</td>
<td>Ability to create a wide range of visual experiences to compensate for</td>
</tr>
<tr>
<td></td>
<td>the deaf child's hearing disability.</td>
</tr>
<tr>
<td>23</td>
<td>Ability to counsel deaf children with respect to their vocational problems</td>
</tr>
<tr>
<td></td>
<td>and life goals.</td>
</tr>
<tr>
<td>24</td>
<td>Ability to teach language development by one or more methods, such as the</td>
</tr>
<tr>
<td></td>
<td>Fitzgerald Key, Barry Five Slate, Wing's Symbols, the Natural Method.</td>
</tr>
<tr>
<td>25</td>
<td>Ability to cooperate with special teachers and regular school personnel</td>
</tr>
<tr>
<td></td>
<td>in developing an integrated program for each deaf pupil.</td>
</tr>
<tr>
<td>26</td>
<td>A knowledge and/or understanding of the educational provisions for deaf</td>
</tr>
<tr>
<td></td>
<td>children under existing Federal, State, and local laws and regulations.</td>
</tr>
<tr>
<td>27</td>
<td>Ability to organize and carry out field trips.</td>
</tr>
<tr>
<td>28</td>
<td>Ability to teach speech development and voice improvement to deaf pupils</td>
</tr>
<tr>
<td></td>
<td>by one or more methods such as the elements, syllables, whole words,</td>
</tr>
<tr>
<td></td>
<td>kinesthetic, auditory method.</td>
</tr>
<tr>
<td>30</td>
<td>Ability to draw educational interpretations from case records and histories</td>
</tr>
</tbody>
</table>
Table 17—Continued

<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>COMPETENCY</th>
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<td>RANK ORDER OF IMPORTANCE</td>
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<td>TEACHERS (N=235)</td>
<td>ADMINISTRATORS (N=70)</td>
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<td>TEACHERS (N=235)</td>
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Table 17—Continued

<table>
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<tbody>
<tr>
<td>TEACHERS (N=235)</td>
<td>ADMINISTRATORS (N=70)</td>
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<td>59</td>
<td>37</td>
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Table 17--Continued

<table>
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<th>RANK ORDER</th>
<th>TEACHERS (N=235)</th>
<th>ADMINISTRATORS (N=70)</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>67</td>
<td>68</td>
<td></td>
<td>A knowledge and/or understanding of the methods and/or techniques of teaching the mentally retarded.</td>
</tr>
<tr>
<td>68</td>
<td>78</td>
<td></td>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in arts and crafts (leatherwork, weaving, etc.)</td>
</tr>
<tr>
<td>69</td>
<td>73</td>
<td></td>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in music (rhythm, instrumental, etc.)</td>
</tr>
<tr>
<td>70</td>
<td>63</td>
<td></td>
<td>Ability to teach a multi-grade class of deaf children.</td>
</tr>
<tr>
<td>71</td>
<td>65</td>
<td></td>
<td>Ability to teach speech reading (lip-reading) by one or more methods such as Nitchie, Jena, Kinzie, Newer, Muller-Walle, and so on.</td>
</tr>
<tr>
<td>72</td>
<td>76</td>
<td></td>
<td>A knowledge and/or understanding of the general plan of medical treatment of the different types of hearing disabilities.</td>
</tr>
<tr>
<td>73</td>
<td>77</td>
<td></td>
<td>Ability to contribute to community leadership in establishing an educational program for deaf children.</td>
</tr>
<tr>
<td>74</td>
<td>70</td>
<td></td>
<td>A knowledge and/or understanding of the methods and/or techniques of teaching the gifted child.</td>
</tr>
<tr>
<td>75</td>
<td>54</td>
<td></td>
<td>Ability to administer to deaf children standardized group achievement tests.</td>
</tr>
<tr>
<td>RANK ORDER OF IMPORTANCE</td>
<td>COMPETENCY</td>
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<tr>
<td>TEACHERS (N=235)</td>
<td>ADMINISTRATORS (N=70)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>76</td>
<td>69 A knowledge and/or understanding of the materials useful in teaching lip-reading to the deaf.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>77</td>
<td>79 Ability to take responsibility for, or to assist with one or more of such activities as the Boy or Girl Scouts, photographic club, and so on.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>78</td>
<td>89 Ability to administer to deaf children individual performance tests of mental ability.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>75 A knowledge and/or understanding of the methods of hearing testing and the various instruments used for this purpose.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>83 Ability to work with architects and school administrators in planning and securing equipment and housing facilities for deaf children.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>71 A knowledge and/or understanding of the history of education of the deaf.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>81 A knowledge and or understanding of the factors involved in fitting hearing aids.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83</td>
<td>84 Ability to administer to deaf children group nonlanguage tests of mental ability.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84</td>
<td>90 Ability to administer an educational program for deaf children (selection of personnel, finance, organizing and integrating services, reporting, recording, and so on.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RANK ORDER OF IMPORTANCE</td>
<td>COMPETENCY</td>
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<td></td>
</tr>
<tr>
<td>TEACHERS (N=235)</td>
<td>ADMINISTRATORS (N=70)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85 80</td>
<td>Ability to plan and carry out an assembly program.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>86 88</td>
<td>Ability and/or understanding of the basic theory of electronics as applied to amplifiers and hearing aids.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>87 82</td>
<td>A knowledge and/or understanding of the methods and/or techniques of teaching the athetoid.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>88 87</td>
<td>Ability to read lips (teacher's own ability).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>89 85</td>
<td>A knowledge and/or understanding of the methods and/or techniques of teaching the blind.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90 86</td>
<td>Ability to use the visual speech technique developed by the Bell Telephone Laboratories.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>91 91</td>
<td>Ability to administer to deaf children pure-tone audiometric tests.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>92 92</td>
<td>Ability to play a piano and to develop and direct a rhythm band.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Providing for the Individual Differences and Needs of Hearing Impaired Students

Both the teachers and administrators rated the ability to recognize the individual differences of each deaf student and to make provision for these as the most important
competency. Both groups rated the ability to organize and develop a curriculum for deaf students on the basis of their individual needs and potentialities second in Importance when the competencies were rank ordered. The teachers' rated the ability to provide such curriculum modification around socially useful and meaningful central themes or units of experience (sixth), while the administrators rated this same competency lower in Importance (13th).

The respondents in the teacher group considered the importance of a teacher's ability to counsel deaf students in various areas considerably higher than the respondents in the administrators' group (Table 17, rank ordered Items 12, 18, 19, & 24 in the Teacher column).

Home-School-Community Relationships

Since the implementation of Public Law 94-142 in the public educational system, teachers of the hearing impaired have been required to be a part of teams of professionals who meet with parents to assist in the placement and educational programming for each individual hearing impaired student. Several competency statements used in this inquiry related to the importance of a teacher's ability to serve on such a team. The teachers rated the importance of the ability to participate with other members of a professional team in helping parents with problems related to the deaf child's (a) school placement (Table 17, rank ordered Item 8 in the
(b) limitations and potentialities (Table 17, rank ordered Item 10 in the Teacher column), (c) social and emotional problems (Table 17, rank ordered Item 11 in the Teacher column), and (d) occupational placement (Table 17, rank ordered Item 34 in the Teacher column), higher than the administrators on all four competency items.

Both the teachers and administrators placed only moderate importance on the knowledge of local services for the hearing impaired (Table 17, rank ordered Item 43 in the Teacher column) and the knowledge of national organizations that are concerned with the education of the deaf (Table 17, rank ordered Item 56 in the Teacher column). Neither group thought it was very important for the teachers to be able to work with the P.T.A. or other alumni groups associated with the school (Table 17, rank ordered Item 65 in the Teacher column).

Communication and Technical Knowledge

The teachers in programs for hearing impaired students rated the competencies relating to the importance of the ability to teach language development (Table 17, rank ordered Item 25 in the Teacher column) and speech development (Table 17, rank ordered Item 29 in the Teacher column) lower than did the administrators. Also the teachers indicated that the ability to teach auditory training was less important than did the administrator group (Table 17, rank ordered Item 60 in the Teacher column).
While the importance of the ability to use the manual alphabet and sign language in teaching were ranked 45th and 46th respectively by the teachers when the competencies were rank ordered, the administrators placed much more importance on these two competencies, ranking them 25th and 24th respectively. Neither of the groups placed much importance on the ability to teach speech reading.

Both groups agreed that it was "Very Important" that teachers have a knowledge about the significance of the amount of usable hearing (Table 17, rank ordered Item 3 in the Teacher column) and were in agreement that a knowledge of the significance of the age of onset of deafness was also "Very Important" (Table 17, rank ordered Item 9 in Teacher column).

The administrators and teachers were in agreement as to the low ratings given to (a) the ability to give "first aid" to hearing aids (Table 17, rank ordered Item 55 in the Teacher column), (b) a knowledge of the factors involved in fitting hearing aids (Table 17, rank ordered Item 82 in the Teacher column), and (c) a knowledge of the basic theory of electronics as applied to hearing aids (Table 17, rank ordered Item 86 in the Teacher column).

**Curriculum Development and Methods of Teaching**

Both the teachers and administrators were in agreement as to the relative importance of a teacher's ability to provide for the hearing impaired student experiences in the
curriculum in the areas of (a) health education, (b) physical education, (c) dramatic arts, (d) domestic arts, (e) industrial arts, (f) fine arts, (g) arts and crafts, and (h) music (Table 17, rank ordered Items 22, 39, 44, 53, 57, 64, 68, & 69 in the Teacher column respectively). Teachers rated the ability to provide the deaf student with a wide range of social experiences (Table 17, rank ordered Item 14 in the Teacher column) and the ability to create a wide range of visual experiences for the deaf child (Table 17, rank ordered Item 23 in the Teacher column) lower in Importance than the administrators rated these same competencies.

Moderate importance was placed by the administrators and the teachers on the knowledge of techniques used to teach (a) normal children, (b) the socially and emotionally disturbed child, (c) the mentally retarded child, and (d) the gifted child (Table 17, rank ordered Items 35, 62, 67, & 74 in the Teacher column respectively).

The Ability to Administer Tests and Use Records

While the teachers considered the ability to develop and make use of individual records of deaf students to be "Important" (Table 17, rank ordered Item 15 in the Teacher column), the administrators rated this same item as "Very Important." Additionally, the teachers placed less importance on the ability to draw educational interpretations from (a) audiograms, (b) psychological reports, (c) reports of social workers, and (d) otological and other medical
reports (Table 17, rank ordered Items 36, 37, 48, & 52 in the Teacher column respectively) than did the administrators.

Neither of the two groups rated the ability to administer (a) individual diagnostic tests of reading and arithmetic disability, (b) standardized group achievement tests, (c) individual performance tests of mental ability, and (d) group nonlanguage tests of mental ability (Table 17, rank ordered Items 51, 75, 78, & 83 in the Teacher column respectively), in the upper half of the 92 item competency list.

Competencies in Which Ratings by Teachers and Administrators Showed a Significant Difference

Ho 6: There is a difference between the means in the ratings of Importance of the 92 competencies needed by teachers of the hearing impaired, as rated by administrators of programs for the hearing impaired and teachers in programs for hearing impaired students.

The sixth hypothesis put forth in this study stated that there would be a difference between the Means in the ratings of Importance of each of the 92 competencies needed by teachers of the hearing impaired, as rated by the administrators and teachers who participated in this inquiry.

Comparison of the mean ratings by each group on the 92 competencies by use of a two-tailed correlated t test (Siegel, 1956) revealed a significant difference in 19 of the competencies at the .01 level. An examination of these 19 items indicated that 17 of them were rated significantly
lower by the administrators of programs for hearing impaired students than by the respondents in the teacher group (See Table 18).

Table 18

Competencies in Which There was a Significant Difference in the Ratings of Importance by Teachers of the Hearing Impaired and Administrators

<table>
<thead>
<tr>
<th>RANK ORDER</th>
<th>OF IMPORTANCE</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEACHERS</td>
<td>ADMINISTRATORS</td>
<td></td>
</tr>
<tr>
<td>4**</td>
<td>5</td>
<td>Ability to recognize possible causes of social, educational, and emotional maladjustments of deaf children.</td>
</tr>
<tr>
<td>M=3.77</td>
<td>M=3.70</td>
<td></td>
</tr>
<tr>
<td>7**</td>
<td>22</td>
<td>Ability to help parents get information which will assist them in facing the problems arising from having a deaf child in the family.</td>
</tr>
<tr>
<td>M=3.73</td>
<td>M=3.52</td>
<td></td>
</tr>
<tr>
<td>8**</td>
<td>20</td>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's school placement.</td>
</tr>
<tr>
<td>M=3.72</td>
<td>M=3.56</td>
<td></td>
</tr>
<tr>
<td>11**</td>
<td>27</td>
<td>Ability to participate with other members of a professional team in helping parents with problems related to the deaf child's social and emotional problems.</td>
</tr>
<tr>
<td>M=3.69</td>
<td>M=3.49</td>
<td></td>
</tr>
<tr>
<td>12**</td>
<td>32</td>
<td>Ability to counsel deaf children with respect to their emotional problems and personal attitudes toward their handicap.</td>
</tr>
<tr>
<td>M=3.68</td>
<td>M=3.40</td>
<td></td>
</tr>
</tbody>
</table>

** Significant at the .01 level.
Table 18—Continued

<table>
<thead>
<tr>
<th>RANK ORDER OF IMPORTANCE</th>
<th>COMPETENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEACHERS</td>
<td>ADMINISTRATORS</td>
</tr>
<tr>
<td>18**</td>
<td>39</td>
</tr>
<tr>
<td>Ability to counsel deaf children with respect to their social problems.</td>
<td></td>
</tr>
<tr>
<td>28**</td>
<td>51</td>
</tr>
<tr>
<td>Ability to organize and carry out field trips.</td>
<td></td>
</tr>
<tr>
<td>32**</td>
<td>52</td>
</tr>
<tr>
<td>Ability to interpret educational programs for, and the problems and abilities of the deaf to teachers of normally hearing children.</td>
<td></td>
</tr>
<tr>
<td>40**</td>
<td>55</td>
</tr>
<tr>
<td>Ability to interpret educational programs for, and the problems and abilities of the deaf to normally hearing children.</td>
<td></td>
</tr>
<tr>
<td>41**</td>
<td>64</td>
</tr>
<tr>
<td>Ability to interpret educational programs for, and the problems and abilities of the deaf to the general public.</td>
<td></td>
</tr>
<tr>
<td>42**</td>
<td>14</td>
</tr>
<tr>
<td>Ability to write clearly (cursive and manuscript styles) on charts, paper, and blackboard.</td>
<td></td>
</tr>
<tr>
<td>44**</td>
<td>60</td>
</tr>
<tr>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in dramatic arts (play-acting).</td>
<td></td>
</tr>
<tr>
<td>53**</td>
<td>59</td>
</tr>
<tr>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in domestic arts.</td>
<td></td>
</tr>
<tr>
<td>63**</td>
<td>61</td>
</tr>
<tr>
<td>A knowledge and/or understanding of the anatomy and physiology of the speech mechanism.</td>
<td></td>
</tr>
<tr>
<td>64**</td>
<td>74</td>
</tr>
<tr>
<td>Ability to provide for deaf pupils opportunities in the curriculum for experiences in fine arts.</td>
<td></td>
</tr>
</tbody>
</table>
The teachers gave significantly higher ratings to the importance of the ability of a teacher to be able to participate with other members of a professional team in helping parents with problems related to the deaf child's (a) school placement (Table 18, rank ordered Item 8 in the Teacher column), and (b) social and emotional problems (Table 18, rank ordered Item 11 in the Teacher column) than did the
administrators. Competencies relating to the ability to counsel deaf children with respect to their (a) emotional problems and personal attitudes toward their handicap (Table 18, rank ordered Item 12 in the Teacher column), and (b) social problems, (Table 18, rank ordered Item 12 in the Teacher column) were significantly higher rated by the teachers than the administrators. In addition, significantly higher ratings were given by the teachers to the competencies regarding the ability to interpret educational programs for, and the problems and abilities of the deaf to (a) teachers of normally hearing students (Table 18, rank ordered Item 32 in the Teacher column), (b) normally hearing students (Table 18, rank ordered Item 40 in the Teacher column), and (c) the general public (Table 18, rank ordered Item 41 in the Teacher column) than by the administrators.

Hypothesis 6 stated that there is a difference between the means in the ratings of Importance of each of the 92 competency items by teachers and administrators. Hypothesis 6 is rejected since an analysis of the data revealed a difference that was statistically significant in only 19 of the 92 competencies.

Ho 7: There is a difference in the rankings of the Importance of the 92 competencies on the inquiry form between administrators of programs for the hearing impaired and teachers of hearing impaired students.

The Spearman Rank Correlation Coefficient (Roscoe, 1975) was used to determine if there was a significant correla-
tion between the ranked importance of competencies by the teacher respondent group and the administrator respondent group on the 92 competency items. The results appear in Table 19.

Table 19

<table>
<thead>
<tr>
<th>Correlation Between Teachers and Administrators on Rankings of Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N = 92</strong></td>
</tr>
<tr>
<td><strong>Significance = 0.001</strong></td>
</tr>
</tbody>
</table>

Hypothesis 7 stated that there is a difference between the rankings of the administrators group and the rankings of the teacher group on the rankings of Importance of the 92 competencies on the inquiry form. Since the level of significance is at the .001 level, it may be concluded that there is a significant correlation between the way the two groups ranked the competency items in Importance. Therefore, Hypothesis 7 is accepted.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

An overall summary of this investigation will be presented in this chapter. A statement of the problem, the design of the study, and the report of the findings of the data analysis will be included. In addition, there will be a presentation of conclusions and recommendations that are relative to the findings of this inquiry.

Summary

There were no accepted, uniform standards which pertained to teachers of the hearing impaired until approximately 50 years ago (Maile, 1978). The only comprehensive study which has been conducted to determine what competencies are essential for teachers of the hearing impaired to possess, was conducted in 1956 by Romaine Mackie.

In 1971, Winifred Northcott investigated the competencies that are needed by teachers of hearing impaired infants. At that time Northcott noted that the certification standards for teachers of the hearing impaired were based on measures developed from course titles and hours of credit. She recommended that colleges and universities with teacher preparation programs in the education of the hearing impaired be allowed to develop individualized programs for their students based on needed competency areas.
Since the demand for accountability in teacher preparation programs is being pressed on all sides by taxpayers, businesses, government, and consumer groups (Piccolina, 1977), then teacher education programs should be held accountable for the quality of the students they graduate (McDonald, 1978; Reynolds, 1979; Ryan, 1979).

It is essential that the knowledges, skills, and abilities that are provided to students in teacher preparation programs for the hearing impaired be ones that the students will need once in a setting where they are delivering services to hearing impaired students. This investigator is in agreement with a number of writers (Coker, 1976; Cooper, Jones, & Weber, 1973; McDonald, 1978; Mulhern, 1978), who believe that there should be a delineation of specific competencies the students in the teacher preparation programs must master before they are graduated as certifiable teachers. Therefore, it is necessary to determine what educators in the field of deaf education consider to be the essential competencies needed by teachers of the hearing impaired.

Based on previous research (Mackie, 1956), it was assumed that teachers of the hearing impaired and administrators of programs for hearing impaired students could subjectively evaluate the relative importance of the 92 competency items on the survey instrument which was used in this investigation. Therefore, it has been further assumed
that the respondents in the study were in a position to make judgments regarding what competencies are needed by effective teachers of hearing impaired students.

Two hundred thirty-five certified teachers of the hearing impaired participated in this study along with 70 administrators of programs for hearing impaired students. The teachers provided demographic information about themselves, including but not limited to (a) their age, (b) highest degree completed, (c) major area of study, (d) years of teaching experience, (e) primary area of certification, and (f) type of educational setting in which they were currently delivering services to hearing impaired students. Each of the administrators responded only to the relative importance of the 92 competencies for teachers of the hearing impaired to possess.

The purposes of this study were to determine (a) the ways in which teachers of the hearing impaired in 1980 rated a set of 92 competencies which were used in a study conducted by Romaine Mackie in 1956, (b) if significant differences existed between the ratings of the importance of the competencies by the teacher respondents in this investigation and their self-ratings of proficiency in each competency, (c) if significant differences existed between the ratings of selected competencies by sub-populations of the teacher respondent group, (d) if significant differences existed between the ratings of the importance of the competencies by
sub-populations of the teacher group, and (e) if significant differences existed in the ratings of the importance of the competencies between the teachers and administrators.

The teachers rated the importance and their self-proficiency in each competency on a four-point scale, and the administrators rated the importance of each competency on a four-point scale. The mean rating of Importance and/or Proficiency was calculated for each competency item and then a rank order was determined for the (a) teachers' ratings of importance and self-proficiency, (b) administrators' ratings of importance, and (c) sub-populations of the teacher group in their ratings of various items.

Using a two-tailed correlated \( t \) test, each of the 92 competency items was tested to determine whether a statistically significant difference existed between the ratings of Importance and Proficiency by the teachers, as well as between ratings of various competency items in the sub-populations of the teacher group. This test was also used to ascertain if there was a statistically significant difference between the ratings of Importance of all the teachers and administrators. A Spearman Rank Correlation Coefficient was calculated to determine the correlation of the rankings of the importance of the competencies by teachers and administrators.

On the inquiry form sent to the teachers who agreed to participate in the investigation, some general questions
were asked which included their (a) age, (b) level of education, (c) educational setting in which they were functioning, and (d) major area of study. This information, which is presented in Tables 3-7 reflects the following:

1. The majority of the teacher respondents were in the age range of from 26 to 30 years of age.

2. Eighty-four of the teachers had completed a BA/BS degree program, and 44 of these individuals had six or more years of teaching experience.

3. Sixty-three of the teachers who responded had graduated prior to January 1, 1970, while the remainder (167) graduated subsequent to that time.

4. The majority of the teachers indicated that prior to their first professional position, their major area of study had been in the education of the hearing impaired. Twenty-three percent reported that their major area of study prior to their first professional position related to "normal" rather than hearing impaired students.

5. All teachers who responded to this survey instrument had to meet the criteria of holding professional certification to teach the hearing impaired. A majority were certified to teach hearing impaired students in grades K through 12.

6. Sixty-three percent of the teacher respondents indicated that they had teaching experience with normally hearing students.
7. Nearly one-half (100) of the teacher respondents reported that they were teaching in residential schools for the hearing impaired, with 132 working in day school programs.

8. One hundred thirty of the teachers reported that they were delivering services to hearing impaired students in self-contained classes.

Conclusions

This investigation examined the ratings of Importance and self-ratings of Proficiency that a group of teachers of the hearing impaired in 1980 gave to 92 competencies which were initially used by Romaine Mackie in a 1956 study. In addition, a group of administrators was also asked to respond to the Importance of the competency items for teachers of the hearing impaired to possess.

Comparison of Teachers' Rating

The first comparisons that were made in this study dealt with the responses of the teachers in the Mackie inquiry and in this investigation. No statistical comparison of the responses of the teachers in the two studies was conducted. Teachers in the Mackie study ranked the Importance of the abilities to teach speech and language much higher than the teachers in the present study. While teachers in both studies placed high importance on the teacher's ability to determine and meet the individual needs of each deaf student
in the class, the teachers in the present study placed much more importance on the ability to use sign language and the manual alphabet in teaching than those in the Mackie study. The teachers in both studies placed relatively low importance on the ability of a teacher to administer different types of diagnostic tests to hearing impaired students. The teachers in the present study consistently rated themselves higher in overall proficiency than the teachers in the Mackie study.

The means of Importance and Proficiency were calculated for each competency rated by the teacher respondents in this investigation. The competencies were then rank ordered in each area and the data were analyzed.

Teachers in the present study rated as highest in importance a teacher's ability to use direct intervention techniques to meet the needs of hearing impaired students. The ability to teach speech and language were not rated as "Very Important" by the teachers. The teachers placed high importance on the ability to work with parents directly or as a member of a professional team in helping them to effectively deal with having a hearing impaired child in the family; however, they didn't consider themselves equally as proficient in these competencies.

Ratings of relatively low importance were given to items dealing with technical knowledge relating to acoustics and hearing aids, as well as competencies dealing with knowing
methods for teaching students with handicaps other than deafness. Teachers gave low ratings to the ability to administer a number of diagnostic tests to hearing impaired students.

The most notable difference in ratings was in the area of working with parents. Although these competencies were considered as "Very Important" for a teacher to possess, the ratings of Proficiency in these competencies was considerably lower. The teachers in this study consistently rated themselves lower in Proficiency with a competency than they rated the Importance of the competency for a teacher of the hearing impaired to possess.

The differences in the (a) importance of the ability to use sign language and the manual alphabet in teaching between groups of teachers who graduated before and after January 1, 1970 and (b) proficiency in the ability to teach speech and language between teachers with the BA/BS degree and those with the MA/MS degree, were not considered to be significantly different.

There was a significant difference at the .01 level on 11 of the top 20 competency items, when comparing the ratings of Importance between teachers in day school programs with those in residential schools. These ratings revealed that (a) teachers in day schools placed more importance on the abilities to help deaf students in social and intellectual development than those in residential schools,
(b) teachers in residential schools placed more importance on the ability to work with regular teachers and the general public in helping them to understand the problems of the deaf than teachers in day schools, and (c) teachers in residential school programs felt that it was more important to be able to work with parents than those in the day schools.

There was a significant difference at the .01 level on only four of the top 20 competency items when comparing the ratings of Importance between teachers in self-contained classes for the hearing impaired and those delivering services to the deaf in other settings. This indicated that teachers in both settings were in agreement as to the Importance of the various competency statements for teachers of the hearing impaired.

Comparison of Teachers' and Administrators' Ratings

The teachers and administrators who participated in this study were required to rate the Importance of 92 competency items. Both the teachers and administrators rated the ability to recognize the individual differences of each deaf pupil and to make provisions for these as the most important competency.

The administrators considered the teacher's ability to counsel deaf students in various areas of considerably more importance than the teachers. The teachers rated the ability to work with members of a professional team in helping
parents higher in Importance than the administrators.

The administrators placed more importance on the ability to use sign language and the manual alphabet in teaching than did the teachers. Moderate importance was placed by both groups on a teacher's ability to work with students who had handicapping conditions other than deafness.

An overall comparison was made between the ratings of Importance of the 92 competency items by the administrators and the ratings of these same competencies by the teachers. Although the item-by-item analysis revealed that there was a significant difference in the mean ratings of only 19 of the 92 competencies at the .01 level, there was a significant correlation between how the two groups rated the 92 competency items. When the items were rank ordered, this correlation indicated that both groups were in agreement with the relative value of importance of the various competencies that are needed by teachers of the hearing impaired.

Recommendations

Teacher preparation programs in the education of the hearing impaired should carefully examine their curriculum to ensure that their students are acquiring the knowledges and skills they will need once they are in the actual teaching situation. The recommendations which follow are made on the basis of the findings of this investigation.
General Recommendations

1. As Northcott (1971) noted and this investigator concurs, the present certification standards for teachers of hearing impaired students certainly does not ensure that the students gain competence in any specific knowledges and skills. Based on the patterns of responses given by the teachers and administrators in this study, certifying bodies should reexamine the requirements currently necessary for certification as a teacher of the hearing impaired.

2. Teacher preparation programs must include courses which will allow students to become proficient in parent-professional communication strategies, an area in which the teachers in this investigation clearly indicated that they felt less than adequately prepared.

3. Teacher preparation programs should include coursework which will give the students in these programs the knowledges and abilities associated with working as a member of an interdisciplinary team.

4. School districts should provide inservice programs for the teachers of the hearing impaired which related to the teacher's ability to interpret the problems and abilities of the hearing impaired student to various groups of people. This is an area where it is imperative for teachers of the hearing impaired to be proficient given the impetus of Public Law 94-142, and yet the teachers in this study did not consider themselves as very proficient in these competencies.
Recommendations for Further Research

1. These competency items should be rated in Importance by faculty members of teacher education programs and then their responses compared to the data obtained in this study.

2. The amount of practicum experience acquired by students in teacher preparation programs and their subsequent ratings of self-proficiency in each of the 92 competencies should be examined.

3. Although the teachers who participated in this study were all certified teachers of the hearing impaired, further investigations should be conducted to examine the amount of coursework taken by teachers that is directly related to the hearing impaired, and their ratings of Importance and Proficiency of the competencies.

4. A group of parents of hearing impaired children should rate the Importance of each competency from their perceptions.

5. Special educators who are not deaf educators should rate the Importance of each competency item.
APPENDIX A

List of 92 Competencies Rated by Teachers of the Deaf

Which Were Included in the 1956 Study

Conducted by Romaine Mackie on

Competencies Needed by Teachers of the Deaf
THE ABILITY:
to administer to deaf children--
1. pure-tone audiometric tests.
2. standardized group achievement tests.
3. group nonlanguage tests of mental ability.
4. individual performance tests of mental ability.
5. individual diagnostic tests of reading and arithmetic disability.

to draw educational interpretations from--
6. audiograms.
7. otological and other medical reports.
8. psychological reports.
9. reports of social workers.
10. case records and histories.
11. to develop and make use of individual educational records of deaf children.
12. to recognize possible causes of social, educational, and emotional maladjustments of deaf children and to participate in planning courses of action aimed at alleviating these.
13. to recognize the individual differences of each deaf pupil and to make provision for these.
14. to teach speech development and voice improvement to deaf pupils by one or more methods such as the elements, syllables, whole words, kinesthetic, auditory method.
15. to use the visual speech technique developed by the Bell telephone laboratories.
16. to teach language development by one or more methods, such as the Fitzgerald Key, Barry Five Slate, Wing's Symbols, and the Natural Method.
17. to teach speechreading (lipreading) by one or more methods, such as Nitchie, Jena, Kinzie, Newer, Muller-Walle, and so on.
18. to teach auditory training by one or more methods, such as Goldstein's Acoustic Technique, the Whitehurst Method, and so on.
19. to help deaf children to use visual clues in analyzing a situation and in communicating with others.
20. to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities.
21. to organize and develop a curriculum around socially useful and meaningful central themes or units of experience.
to provide for deaf pupils opportunities in the curriculum for experiences in--

22. dramatic arts (play-acting, etc.).
23. arts and crafts (leatherwork, weaving, etc.).
24. fine arts (finger painting, clay modeling, etc.).
25. domestic arts (cooking, sewing, etc.).
26. industrial arts (woodworking, power tools, etc.).
27. music (rhythm, instrumental, etc.).
28. physical education (including play and recreation).
29. health education (healthful living, etc.).
30. to take responsibility for, or to assist with, one or more of such activities as the Boy or Girl Scouts, photographic club, and so on.
31. to plan and carry out an assembly program.
32. to organize and carry out field trips.
33. to encourage and create situations in school in which deaf children have an opportunity to converse naturally and freely with normally hearing persons.
34. to create a wide range of visual experiences to compensate for the deaf child's hearing disability.
35. to provide opportunities for a wide range of social experiences for deaf pupils in order to further their social and intellectual development.
36. to teach a multi-grade class of deaf children.
37. to teach deaf pupils with multiple atypical conditions such as giftedness, mental retardation, visual loss, etc.
38. to help deaf children develop socially acceptable patterns of personal hygiene and behavior.
39. to operate amplifiers and other audio-aids.
40. to operate filmstrip and motion picture projectors, and other visual aids.
41. to give first aid to hearing aids.
42. to work with architects and school administrators in planning and securing classroom and other special school equipment and housing facilities for deaf children.
43. to administer an educational program for deaf children (selection of personnel, finance, organizing and integrating services, reporting, recording, and so on).
44. to contribute to community leadership in establishing an educational program for deaf children.

...
49. to cooperate with special teachers and regular school personnel in developing an integrated program for each deaf pupil.

50. to work as a member of a team with other professional workers (such as medical and psychological personnel) in making a case study of a deaf child aimed at planning a program suited to his needs and abilities.

to participate with other members of a professional team in helping parents with problems related to the deaf child's—

51. limitations and potentialities.
52. social and emotional problems.
53. occupational placement.
54. school placement.
55. to help parents get information which will assist them in facing the problems arising from having a deaf child in the family.

to interpret educational programs for, and the problems and abilities of the deaf to—

56. the general public.
57. normally hearing children.
58. teachers of normally hearing children.
59. nonprofessional school workers such as bus attendants, school custodians, etc.

60. to work effectively with P.T.A., alumni groups, and other organizations associated with the school.

61. to read lips (teacher's own ability).
62. to use the manual alphabet in teaching.
63. to use sign language in teaching.
64. to enunciate clearly and pronounce correctly.
65. to write clearly (cursive and manuscript styles) on charts, paper, and blackboard.
66. to play a piano and to develop and direct a rhythm band.

A KNOWLEDGE AND/OR UNDERSTANDING OF:

67. the causes of the various types of hearing disability.
68. the general plan of medical treatment of the different types of hearing disabilities.
69. the general meaning of the diagnosis and the prognosis for each individual deaf pupil in your class.
70. recent developments in theories and controversies on diagnosis and treatment of different conditions resulting in deafness.

the significance of—

71. the age of onset of deafness.
72. the amount of usable hearing.
the anatomy and physiology of—
73. the speech mechanisms.
74. the hearing mechanisms.

75. the possible effect of the socio-economic conditions and emotional climate of the home on the deaf child's social, emotional, and intellectual development.
76. the basic theory of electronics as applied to amplifiers and hearing aids.

the methods and/or techniques of teaching—
77. the so-called normal child.
78. the gifted child.
79. the mentally retarded.
80. the blind.
81. the athetoid.
82. the socially and emotionally disturbed.
83. the methods of hearing testing and the various instruments used for this purpose.
84. the factors involved in fitting hearing aids.
85. the materials useful in teaching lipreading to the deaf.
86. reference materials and professional literature on the education and psychology of the deaf.
87. sources of procurement of special educational materials and equipment for deaf children.
88. the educational provisions for deaf children under existing Federal, State, and local laws and regulations.
89. the purposes, services and locations of national organizations concerned with the education and/or general welfare of the deaf such as the Council for Exceptional Children, the Alexander Graham Bell Association for the Deaf, and the Convention of American Instructors of the Deaf.
90. the locations of services offered by non-school organizations such as clinics, health departments and vocational rehabilitation agencies, for deaf children and their parents.
91. the findings of research studies which have bearing on the education, psychology and social status of the deaf.
92. the history of education of the deaf.
APPENDIX B

Initial Letter to Administrators of Programs for the Hearing Impaired and Sign-Up Sheet for Teachers of the Hearing Impaired Who Agreed to Participate in the Investigation
May 1, 1980

Dear

I am currently pursuing a doctoral study to analyze the competencies required by teachers of the hearing impaired. In a few weeks I will be mailing out a survey instrument to teachers who have professional certification in teaching the hearing impaired and who are currently delivering services to hearing impaired students.

I earnestly seek your cooperation in requesting the assistance of four teachers in your program who will be willing to take about 20-25 minutes of their time to complete the information contained in the survey instrument. Enclosed you will find a "sign-up" sheet for teachers, and an addressed, stamped envelope for your use in forwarding this sheet to me once completed.

Will you please send the names and addresses of the teachers who volunteer to participate by or before June 1, 1980. You and your teachers can be assured in advance of my interest in maintaining the confidentiality of all respondents.

Your cooperation in this endeavor is greatly appreciated.

Sincerely,

Paula L. Scott, Coordinator
Teacher Preparation Program in the Education of the Hearing Impaired
Texas Christian University

Home Address:
3731 Dryden Road
Fort Worth, TX. 76109
817/923-6523
TO: Teachers of the Hearing Impaired

FROM: Paula L. Scott, Coordinator
Teacher Preparation Program in the Education of the Hearing Impaired
Texas Christian University

RE: Competencies Needed by Teachers of the Hearing Impaired

If you will be willing to take 20-25 minutes of your time to complete a survey instrument dealing with competencies needed by teachers of the hearing impaired, will you please sign your name and summer address below. Once the instruments are mailed, you will be guaranteed of complete confidentiality in your responses.

Thank you for agreeing to volunteer for this project.

NAME

SUMMER ADDRESS

__________________________________________

__________________________________________

__________________________________________

__________________________________________

Home address:
3571 Dryden Road
Ft. Worth, TX 76109
817/923-8523
APPENDIX C

Letter to Teachers

of the Hearing Impaired
Dear

Thank you so much for agreeing to give your valuable time to complete the enclosed instrument. I am currently pursuing a doctoral study to analyze the competencies needed by teachers of the hearing impaired today. For the purposes of this instrument, the term "deaf" is used to refer to any students who have educationally significant hearing losses.

You will note that two basic categories of responses are asked for, through a simple process of circling an appropriate letter or number.

1. How important do you consider each competency on the attached list for a teacher of the hearing impaired/deaf?

2. How do you estimate or rate your own proficiency in each competence?

I can assure you of my interest in protecting your confidentiality as a respondent to the attached instrument.

Thank you for your cooperation and prompt response.

Sincerely Yours,

Paula L. Scott
3571 Dryden Road
Ft. Worth, TX 76109
817/923-6523

PLEASE RETURN INSTRUMENT

ON OR BEFORE JUNE 25, 1980
APPENDIX D

Survey Instrument for Teachers of the Hearing Impaired to Rate Needed Competencies
INQUIRY FORM FOR TEACHERS OF STUDENTS WHO ARE HEARING IMPAIRED/DEAF

1. Your Name ____________________________ Date __________________

2. Mailing Address ______________________________________________________
   City __________________________ State _______ Zip Code __________

3. ______ Male
   ______ Female

4. Check the appropriate age group:
   ______ 20-25 years of age
   ______ 26-30 years of age
   ______ 31-35 years of age
   ______ 36-40 years of age
   ______ 41-45 years of age
   ______ 46-50 years of age
   ______ over 51 years of age

5. Years of teaching experience with hearing impaired students (check one):
   ______ 0-2 years
   ______ 3-5 years
   ______ 6-8 years
   ______ 9-11 years
   ______ 12-14 years
   ______ over 15 years

6. Name and location of the school in which you teach __________________________

7. Indicate the type of school organization in which you teach by checking ONE of the following:
   ______ Residential school for hearing impaired children
   ______ Special day school program for hearing impaired children
   ______ Center of two or more special classes for hearing impaired children in a regular school
   ______ Single special class for hearing impaired children in a regular school
   ______ Itinerant program for hearing impaired students
   ______ Other (please specify) ________________________________________________
8. Indicate the period in which you took the MAJOR part of your SPECIALIZED preparation which led to your initial certification as a teacher of the hearing impaired by checking ONE of the following:

- Prior to December 31, 1969
- Since January 1, 1970

9. Indicate by checking the appropriate category(ies) which professional certification you currently hold:

- Teacher of the hearing impaired
  - (check one: infant, 0 to 3 years preschool, 3-6 years
elementary grades K-12 grades birth-12 grades)
- Audiolologist
- Other (please specify)

10. Indicate by checking which degree(s) you have completed:

- BA/BS
- MA/MS
- PhD/EdD

11. Have you had regular classroom teaching experience?

- Yes
- No

12. Are you: (check one)

- Deaf
- Hard-of-hearing
- Normally hearing

13. Please describe your MAJOR area of study prior to entering your first professional position by checking ONE of the following categories:

- Early childhood education, "normal" children
- Early childhood education, hearing impaired children
- Elementary education, "normal" children
- Elementary education, hearing impaired children
- Secondary education, "normal" children
- Secondary education, hearing impaired children
- Audiology
- Speech and Hearing
- Other (please specify)

PLEASE SEND ME AN ABSTRACT OF YOUR FINDINGS UPON COMPLETION OF YOUR DISSERTATION.

Name
Address
COMPETENCIES NEEDED BY TEACHERS OF THE DEAF/HEARING IMPAIRED

This survey is designed to determine how important it is for you in your present position as a teacher of deaf/hearing impaired children to have the following competencies and how you rate your proficiency in each of the items.

**Directions:** In the left hand column (Importance) encircle the letter which best indicates how important it is that you have the competency stated. Use the following codes:

- A = Very Important
- B = Important
- C = Less Important
- D = Not Important

In the right hand column (Proficiency) encircle the letter which best indicates how you rate your own ability/proficiency in each of the items. Use the following codes:

- 1 = Not Prepared
- 2 = Fair
- 3 = Good
- 4 = Very Good

<table>
<thead>
<tr>
<th>IMPORTANCE</th>
<th>THE ABILITY:</th>
<th>PROFICIENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A B C D</td>
<td>to administer to deaf children--</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D</td>
<td>1. pure-tone audiometric tests.</td>
<td></td>
</tr>
<tr>
<td>A B C D</td>
<td>2. standardized group achievement tests.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D</td>
<td>3. group nonlanguage tests of mental ability.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D</td>
<td>4. individual performance tests of mental ability.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D</td>
<td>5. individual diagnostic tests of reading and arithmetic disability.</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>

| A B C D    | to draw educational interpretations from-- | 1 2 3 4 |
| A B C D    | 6. audiograms. | |
| A B C D    | 7. otological and other medical reports. | 1 2 3 4 |
| A B C D    | 8. reports of social workers. | 1 2 3 4 |
| A B C D    | 9. psychological reports. | 1 2 3 4 |
| A B C D    | 10. case records and histories. | 1 2 3 4 |

<p>| A B C D    | 11. to develop and make use of individual educational records of deaf children. | 1 2 3 4 |
| A B C D    | 12. to recognize possible causes of social, educational, and emotional maladjustments of deaf children and to participate in planning courses of action aimed at alleviating these. | 1 2 3 4 |
| A B C D    | 13. to recognize the individual differences of each deaf pupil and to make provision for these. | 1 2 3 4 |
| A B C D    | 14. to teach speech development and voice improvement to deaf pupils by one or more methods such as the elements, syllables, whole words, kinesthetic, auditory method. | 1 2 3 4 |
| A B C D    | 15. to use the visual speech technique developed by the Bell Telephone Laboratories. | 1 2 3 4 |
| A B C D    | 16. to teach language development by one or more methods, such as the Fitzgerald Key, Barry Five Slate, Wing's Symbols, the Natural Method. | 1 2 3 4 |</p>
<table>
<thead>
<tr>
<th>Importance</th>
<th>Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>A B C D 17. to teach speechreading (lipreading) by one or more methods such as Nitchie, Jena, Kinzie, Newer, Muller-Walle, and so on.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 18. to teach auditory training by one or more methods such as Goldstein's Acoustic Technique, the Whitehurst Method, and so on.</td>
<td>1 2 3 4</td>
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<td>A B C D 19. to help deaf children use visual clues in analyzing a situation and in communicating with others.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 20. to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 21. to organize and develop a curriculum around socially useful and meaningful central themes or units of experience.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>to provide for deaf pupils opportunities in the curriculum for experiences in---</td>
<td></td>
</tr>
<tr>
<td>A B C D 22. dramatic arts (play-acting, etc.).</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 23. arts and crafts (leatherwork, weaving, etc.).</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 24. fine arts (finger painting, clay modeling, etc.).</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 25. domestic arts (cooking, sewing, etc.).</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 26. industrial arts (woodworking, power tools, etc.).</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 27. music (rhythm, instrumental, etc.).</td>
<td>1 2 3 4</td>
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<tr>
<td>A B C D 28. physical education (play and recreation).</td>
<td>1 2 3 4</td>
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<tr>
<td>A B C D 29. health education (healthful living, etc.).</td>
<td>1 2 3 4</td>
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<tr>
<td>A B C D 30. to take responsibility for, or to assist with one or more of such activities as the Boy or Girl Scouts, photographic club, and so on.</td>
<td>1 2 3 4</td>
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<tr>
<td>A B C D 31. to plan and carry out an assembly program.</td>
<td>1 2 3 4</td>
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<tr>
<td>A B C D 32. to organize and carry out field trips.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 33. to encourage and create situations in school in which deaf children have an opportunity to converse naturally and freely with normally hearing persons.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 34. to create a wide range of visual experiences to compensate for the deaf child's hearing disability.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 35. to provide opportunities for a wide range of social experiences for deaf pupils in order to further their social and intellectual development.</td>
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<tr>
<td>A B C D 36. to teach a multi-grade class of deaf children.</td>
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</tr>
<tr>
<td>A B C D 37. to teach deaf pupils with multiple atypical conditions such as giftedness, mental retardation, visual loss, etc.</td>
<td>1 2 3 4</td>
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<tr>
<td>A B C D 38. to help deaf children develop socially acceptable patterns of personal hygiene and behavior.</td>
<td>1 2 3 4</td>
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<tr>
<td>A B C D 39. to operate amplifiers and other audio-aids.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 40. to operate filmstrip and motion picture projectors, and other visual aids.</td>
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<tr>
<td>A B C D 41. to give first aid to hearing aids.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 42. to work with architects and school administrators in planning and securing classroom and other special school equipment and housing facilities for deaf children.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 43. to administer an educational program for deaf children (selection of personnel, finance, organizing and integrating services, reporting, recording, and so on).</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>A B C D 44. to contribute to community leadership in establishing an educational program for deaf children.</td>
<td>1 2 3 4</td>
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</table>
IMPORTANCE

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>43.</td>
<td>their educational problems.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>44.</td>
<td>their vocational problems and life goals.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>45.</td>
<td>their emotional problems and personal attitudes toward their handicap.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>46.</td>
<td>their social problems.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

A to counsel deaf children with respect to:
- their educational problems.
- their vocational problems and life goals.
- their emotional problems and personal attitudes toward their handicap.
- their social problems.

A to cooperate with special teachers and regular school personnel in developing an integrated program for each deaf pupil.

A to work as a member of a team with other professional workers (such as medical and psychological personnel) in making a case study of a deaf child aimed at planning a program suited to his needs and abilities.

PROFICIENCY

<table>
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<tr>
<th>A</th>
<th>B</th>
<th>C</th>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</table>

A to participate with other members of a professional team in helping parents with problems related to the deaf child's:
- limitations and potentialities.
- social and emotional problems.
- occupational placement.
- school placement.
- to help parents get information which will assist them in facing the problems arising from having a deaf child in the family.

A to interpret educational programs for, and the problems and abilities of the deaf to:
- the general public.
- normally hearing children.
- teachers of normally hearing children.
- nonprofessional school workers such as bus attendants, school custodians, etc.
- to work effectively with P.T.A., alumni groups, and other organizations associated with the school.
- to read lips (teacher's own ability).
- to use the manual alphabet in teaching.
- to use sign language in teaching.
- to enunciate clearly and pronounce correctly.
- to write clearly (cursive and manuscript styles) on charts, paper and blackboard.
- to play a piano and to develop and direct a rhythm band.

A KNOWLEDGE AND/OR UNDERSTANDING OF:

<table>
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<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

A the causes of the various types of hearing disability.
A the general plan of medical treatment of the different types of hearing disabilities.
A the general meaning of the diagnosis and the prognosis for each individual deaf pupil in your class.
A recent developments in theories and controversies on diagnosis and treatment of different conditions resulting in deafness.

A the significance of:
- the age of onset of deafness.
- the amount of usable hearing.

A the anatomy and physiology of:
- the speech mechanisms.
- the hearing mechanisms.
159

Importance

75. the possible effect of the socio-economic conditions and emotional climate of the home on the deaf child's social, emotional, and intellectual development.

76. the basic theory of electronics as applied to amplifiers and hearing aids.

Proficiency

1 2 3 4

77. the methods and/or techniques of teaching—

78. the so-called normal child.

79. the gifted child.

80. the mentally retarded.

81. the blind.

82. the athetoid.

83. the socially and emotionally disturbed.

84. the methods of teaching and the various instruments used for this purpose.

85. the factors involved in fitting hearing aids.

86. materials useful in teaching lipreading to the deaf.

87. reference materials and professional literature on the education and psychology of the deaf.

88. sources of procurement of special educational materials and equipment for deaf children.

89. the educational provisions for deaf children under existing Federal, State, and local laws and regulations.

90. the purposes, services, and locations of national organizations concerned with the education and/or general welfare of the deaf such as the Council for Exceptional Children, the Volta Association, and the Convention of American Instructors of the Deaf.

91. the locations of services offered by non-school organizations such as clinics, health departments, and vocational rehabilitation agencies, for deaf children and their parents.

92. the findings of research studies which have bearing on the education, psychology and social status of the deaf.

93. the history of education of the deaf.
APPENDIX E

Second Letter to Administrators of Programs for the Hearing Impaired
Dear

Thank you very much for sending me a list of the names of teachers of the hearing impaired in your program who were willing to participate in my doctoral study. Enclosed you will find a copy of the instrument that was mailed to the teachers.

Now I would like to ask you for about 20 minutes of your time to rate how important you consider each competency on the attached list for a teacher of the hearing impaired to possess. For the purposes of this instrument, the term "deaf" is used to refer to any students who have educationally significant hearing losses.

I can assure you of my interest in assuring you confidentiality as a respondent to the attached instrument.

Thank you for your cooperation and prompt response.

Sincerely,

Paula L. Scott
3571 Dryden Road
Ft. Worth, TX 76109
817/923-6523

PLEASE RETURN INSTRUMENT

ON OR BEFORE JUNE 25, 1980
APPENDIX F

Survey Instrument for Administrators
This survey is designed to determine how you as an administrator of a program for hearing impaired students rate the following competencies needed by teachers of the hearing impaired in your program.

**Directions:** In the left hand column (Importance) encircle the letter which best indicates how important you think it is for a teacher of the hearing impaired to have the competency stated. Use the following codes:

- **A** = Very Important
- **B** = Important
- **C** = Less Important
- **D** = Not Important

<table>
<thead>
<tr>
<th>Importance</th>
<th>Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>to administer pure-tone audiometric tests.</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td><strong>2.</strong> standardized group achievement tests.</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td><strong>3.</strong> group non-language tests of mental ability.</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td><strong>4.</strong> individual performance tests of mental ability.</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td><strong>5.</strong> individual diagnostic tests of reading and arithmetic disability.</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td><strong>1.</strong> to draw educational interpretations from audiograms.</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td><strong>6.</strong> otological and other medical reports.</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td><strong>7.</strong> reports of social workers.</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td><strong>8.</strong> psychological reports.</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td><strong>9.</strong> case records and histories.</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td><strong>10.</strong> to develop and make use of individual educational records of deaf children.</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td><strong>11.</strong> to recognize possible causes of social, educational, and emotional maladjustments of deaf children and to participate in planning courses of action aimed at alleviating these.</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td><strong>12.</strong> to recognize the individual differences of each deaf pupil and to make provision for these.</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td><strong>13.</strong> to teach speech development and voice improvement to deaf pupils by one or more methods such as the elements, syllables, whole words, kinesthetic, auditory method.</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td><strong>14.</strong> to use the visual speech technique developed by the Bell Telephone Laboratories.</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td><strong>15.</strong> to teach language development by one or more methods, such as the Fitzgerald Key, Barry Five Slate, Wing's Symbols, the Natural Method.</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td><strong>16.</strong> to teach speechreading (lipreading) by one or more methods such as Nicholson, Jena, Kanzig, Newer, Muller-Walle, and so on.</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td><strong>17.</strong> to teach auditory training by one or more methods such as Goldstein's Acoustic Technique, the Whitehurst Method, and so on.</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td><strong>18.</strong> to help deaf children to use visual clues in analyzing a situation and in communicating with others.</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td><strong>19.</strong> to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities.</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td><strong>20.</strong> to organize and develop a curriculum around socially useful and meaningful central themes or units of experience.</td>
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</tbody>
</table>
IMPORTANCE

to provide for deaf pupils opportunities in the curriculum for experiences in--

22. dramatic arts (play-acting, etc.).
23. arts and crafts (leatherwork, weaving, etc.).
24. fine arts (fingerpainting, clay modeling, etc.).
25. domestic arts (cooking, sewing, etc.).
26. industrial arts (woodworking, power tools, etc.).
27. music (rhythm, instrumental, etc.).
28. physical education (including play and recreation).
29. health education (healthful living, etc.).
30. to take responsibility for, or to assist with one or more of such activities as the Boy or Girl Scouts, photographic club, and so on.
31. to plan and carry out an assembly program.
32. to organize and carry out field trips.
33. to encourage and create situations in school in which deaf children have an opportunity to converse naturally and freely with normally hearing persons.
34. to create a wide range of visual experiences to compensate for the deaf child's hearing disability.
35. to provide opportunities for a wide range of social experiences for deaf pupils in order to further their social and intellectual development.
36. to teach a multi-grade class of deaf children.
37. to teach deaf pupils with multiple atypical conditions such as giftedness, mental retardation, visual loss, etc.
38. to help deaf children develop socially acceptable patterns of personal hygiene and behavior.
39. to operate amplifiers and other audio-aids.
40. to operate filmstrip and motion picture projectors, and other visual aids.
41. to give first aid to hearing aids.
42. to work with architects and school administrators in planning and securing classroom and other special school equipment and housing facilities for deaf children.
43. to administer an educational program for deaf children (selection of personnel, finance, organizing and integrating services, reporting, recording, and so on).
44. to contribute to community leadership in establishing an educational program for deaf children.

A B C D

36. to counsel deaf children with respect to--
37. their educational problems.
38. their vocational problems and life goals.
39. their emotional problems and personal attitudes toward their handicap.
40. their social problems.
41. to cooperate with special teachers and regular school personnel in developing an integrated program for each deaf pupil.
42. to work as a member of a team with other professional workers (such as medical and psychological personnel) in making a case study of a deaf child aimed at planning a program suited to his needs and abilities.
43. to participate with other members of a professional team in helping parents with problems related to the deaf child's--
44. limitations and potentialities.
45. social and emotional problems.
46. occupational placement.
47. school placement.
48. to help parents get information which will assist them in facing the problems arising from having a deaf child in the family.
<p>| | | | | |</p>
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<tbody>
<tr>
<td>1</td>
<td>importance to interpret educational programs for, and the problems and abilities of the deaf to—</td>
<td></td>
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<tr>
<td>2</td>
<td>the general public.</td>
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</tr>
<tr>
<td>3</td>
<td>normally hearing children.</td>
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<tr>
<td>4</td>
<td>teachers of normally hearing children.</td>
<td></td>
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<tr>
<td>5</td>
<td>nonprofessional school workers such as bus attendants, school custodians, etc.</td>
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<td>6</td>
<td>to work effectively with P.T.A., alumni groups, and other organizations associated with the school.</td>
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<tr>
<td>7</td>
<td>to read lips (teacher's own ability).</td>
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<tr>
<td>8</td>
<td>to use the manual alphabet in teaching.</td>
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A 3 C D 90. the locations of services offered by non-school organizations such as clinics, health departments, and vocational rehabilitation agencies, for deaf children and their parents.
A 3 C D 91. the findings of research studies which have bearing on the education, psychology and social status of the deaf.
A 3 C D 92. the history of education of the deaf.

Please send me an abstract of your findings upon completion of your dissertation.

Name________________________________________
Address_______________________________________
APPENDIX G

Data for Importance and Proficiency on the Teachers' Evaluation of Competencies
## Data for Importance and Proficiency on the Teachers' Ratings of Competencies

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| 56 | 116 89 18 8 4 | 3.355 0.772 | 9 50 102 73 1 | 3.021 0.828 |
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| 58 | 135 73 14 10 3 | 3.435 0.794 | 6 26 110 92 1 | 3.231 0.748 |
| 59 | 95 96 29 13 2 | 3.172 0.844 | 9 35 120 68 3 | 3.065 0.762 |
| 60 | 72 103 52 7 1 | 3.026 0.809 | 15 46 112 59 3 | 2.927 0.843 |
| 61 | 27 64 94 48 2 | 2.300 0.931 | 35 90 75 29 6 | 2.428 0.898 |
| 62 | 147 39 19 29 1 | 3.299 1.061 | 35 25 47 127 1 | 3.137 1.114 |
| 63 | 152 34 17 31 1 | 3.312 1.083 | 40 21 53 120 1 | 3.081 1.134 |
| 64 | 167 48 16 1 3 | 3.642 0.606 | 1 6 70 157 1 | 3.637 0.547 |
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| 68 | 60 92 72 10 1 | 2.863 0.852 | 13 81 109 32 0 | 2.681 0.779 |
| 69 | 122 95 17 1 0 | 3.438 0.649 | 3 26 140 66 0 | 3.145 0.651 |
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| 71 | 174 53 8 0 0 | 3.706 0.527 | 1 4 83 145 2 | 3.597 0.550 |
| 72 | 194 38 3 0 0 | 3.813 0.422 | 7 80 146 2 0 | 3.579 0.541 |
| 73 | 73 108 42 11 1 | 3.038 0.825 | 5 60 115 54 1 | 2.932 0.753 |
| 74 | 87 109 33 6 0 | 3.179 0.766 | 1 3 116 81 2 | 3.189 0.698 |
| 75 | 149 74 12 0 0 | 3.583 0.582 | 1 19 110 93 2 | 3.266 0.686 |
| 76 | 29 74 96 36 0 | 2.409 0.899 | 58 91 63 19 4 | 2.186 0.907 |
| 77 | 117 99 17 2 0 | 3.409 0.665 | 4 25 106 96 4 | 3.273 0.724 |
| 78 | 42 121 60 12 0 | 2.821 0.777 | 43 87 84 17 4 | 2.325 0.864 |
| 79 | 57 124 42 12 0 | 2.962 0.796 | 25 91 88 31 0 | 2.532 0.858 |
| 80 | 19 77 86 53 0 | 2.264 0.904 | 121 78 26 10 0 | 1.681 0.822 |
| 81 | 22 66 86 40 21 | 2.327 0.901 | 122 64 19 10 20 | 1.614 0.819 |
| 82 | 69 137 22 7 0 | 3.140 0.701 | 33 93 75 31 3 | 2.448 0.895 |
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| 88 | 138 77 16 4 0 | 3.485 0.697 | 10 53 108 64 0 | 2.962 0.823 |
APPENDIX H

Data for Importance on the Administrators' Ratings of Competencies
Data for Importance on the Administrators' Ratings of Competencies

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